Table of Contents

# Title 33
# ENVIRONMENTAL QUALITY

## Part V. Hazardous Waste and Hazardous Materials

## Subpart 1. Department of Environmental Quality—Hazardous Waste


Chapter 1. General Provisions and Definitions ..... 1
§101. Authority ..... 1
§103. Purpose ..... 1
§105. Program Scope ..... 1
§106. Hazardous Waste Determination for Contaminated Media ..... 16
§107. Enforcement ..... 19
§108. Special Requirements for Hazardous Waste Generated by Conditionally Exempt Small Quantity Generators ..... 19
§109. Definitions ..... 21
§110. References ..... 40
§111. Use of Number and Gender in These Regulations ..... 41
§199. Appendices—Appendices A and B ..... 41
Chapter 3. General Conditions for Treatment, Storage, and Disposal Facility Permits ..... 46
§301. Authority ..... 46
§303. Overview of the Permit Program ..... 46
§305. Scope of the Permit ..... 49
§307. Effect of a Permit ..... 51
§309. Conditions Applicable to All Permits ..... 52
§311. Establishing Permit Conditions ..... 54
§313. Requirements for Recording and Reporting of Monitoring Results ..... 55
§315. Duration of Permit ..... 55
§317. Availability and Retention of Records ..... 55
§319. Confidentiality ..... 55
§321. Modification of Permits ..... 56
§322. Classification of Permit Modifications ..... 61
§323. Suspension, Modification or Revocation and Reissuance, and Termination of Permits ..... 68
§325. Compliance Schedule for Facilities Existing on the Effective Date of These Regulations ..... 70
§327. Fees ..... 71
§329. Research, Development, and Demonstration Permits ..... 71
Chapter 4. Requirements for Commercial Treatment, Storage, and Disposal Facility Permits ..... 71
§401. Applicability ..... 71
§403. Definitions ..... 72
§405. Requirements for Commercial TSD Facilities ..... 72
§407. Guidelines for the Infrastructure Assessment Report Prepared by Local Government ..... 74
§409. Departmental Action on Commercial Hazardous Waste TSD Permit Applications ..... 74

Table of Contents

Chapter 5. Permit Application Contents ..... 75
Subchapter A. General Requirements for Permit Applications ..... 75
§501. Permit Application ..... 75
§503. Completeness ..... 75
§505. Recordkeeping ..... 75
Subchapter B. Signatories to Permit Applications and Reports, Changes of Authorizations, and Certifications ..... 76
§507. Applications ..... 76
§509. Reports ..... 76
§511. Changes in Authorization ..... 76
§513. Certification ..... 76
Subchapter C. Permit Applications: Parts I and II ..... 77
§515. Part I Information Requirements ..... 77
Subchapter D. Part II General Permit Information Requirements ..... 78
§516. Information Requirements for Solid Waste Management Units ..... 78
§517. Part II Information Requirements (the Formal Permit Application) ..... 78
Subchapter E. Specific Information Requirements ..... 82
§519. Contents of Part II: General Requirements ..... 82
§520. Specific Part II Information Requirements for Groundwater Protection ..... 83
§521. Specific Part II Information Requirements for Containers ..... 84
§523. Specific Part II Information Requirements for Tanks ..... 85
§525. Specific Part II Information Requirements for Surface Impoundments ..... 85
§526. Specific Part II Information Requirements for Air Emission Controls for Tanks, Surface Impoundments, and Containers ..... 86
§527. Specific Part II Information Requirements for Waste Piles ..... 87
§528. Part II Information Requirements for Post-Closure Permits ..... 88
§529. Specific Part II Information Requirements for Incinerators ..... 88
§530. Specific Part II Information Requirements for Process Vents ..... 89
§531. Specific Part II Information Requirements for Land Treatment Facilities ..... 90
§532. Special Part II Information Requirements for Drip Pads ..... 91
§533. Specific Part II Information Requirements for Landfills ..... 92
§534. Specific Part II Information Requirements for Miscellaneous Units ..... 93
§535. Specific Part II Information Requirements for Boilers and Industrial Furnaces Burning Hazardous Waste for Energy or Material Recovery and Not for Destruction ..... 93
§536. Specific Part II Information Requirements for Equipment ..... 96
Subchapter F. Special Forms of Permits ..... 97
§537. Permits for Boiler and Industrial Furnaces Burning Hazardous Waste for Recycling Purposes Only (Boilers and industrial furnaces burning hazardous waste for destruction are subject to permit requirements for incinerators.) ..... 97
§540. Remedial Action Plans (RAPs) ..... 100
Subchapter G. Remedial Action Plans (RAPs) - General Information ..... 100
§545. Why is this Subchapter written in a special format? ..... 100

§550. What is a RAP? ..... 100
§555. When do I need a RAP? ..... 101
§560. Does my RAP grant me any rights or relieve me of any obligations? ..... 101
§565. How do I apply for a RAP? ..... 101
§570. Who must obtain a RAP? ..... 101
§575. Who must sign the application and any required reports for a RAP? ..... 101
§580. What must I include in my application for a RAP? ..... 101
§585. What if I want to keep this information confidential? ..... 102
§590. To whom must I submit my RAP application? ..... 102
§595. If I submit my RAP application as part of another document, what must I do? ..... 102
§600. What is the process for approving or denying my application for a RAP? ..... 102
§605. What must the administrative authority include in a draft RAP? ..... 102
§610. What else must the administrative authority prepare in addition to the draft RAP or Notice of Intent to Deny? ..... 103
§615. What are the procedures for public comment on the draft RAP or Notice of Intent to Deny? ..... 103
§620. How will the administrative authority make a final decision on my RAP application? ..... 104
§625. May the decision to approve or deny my RAP application be administratively appealed? ..... 104
§630. When does my RAP become effective? ..... 104
§635. When may I begin physical construction of new units permitted under the RAP? ..... 105
§640. After my RAP is issued, how may it be modified, revoked and reissued, or terminated? ..... 105
§645. For what reasons may the administrative authority choose to modify my final RAP? ..... 105
§650. For what reasons may the administrative authority choose to revoke and reissue my final RAP? ..... 105
§655. For what reasons may the administrative authority choose to terminate my final RAP, or deny my renewal application? ..... 106
§660. May the decision to approve or deny a modification, revocation and reissuance, or termination of my RAP be administratively appealed? ..... 106
§665. When will my RAP expire? ..... 106
§670. How may I renew my RAP if it is expiring? ..... 106
§675. What happens if I have applied correctly for a RAP renewal but have not received approval by the time my old RAP expires? ..... 106
§680. What records must I maintain concerning my RAP? ..... 106
§685. How are time periods in the requirements in this Subchapter and my RAP computed? ..... 106
§690. How may I transfer my RAP to a new owner or operator? ..... 107
§695. What must the state or EPA region report about noncompliance with RAPs? ..... 107
§699. May I perform remediation waste management activities under a RAP at a location removed from the area where the remediation wastes originated? ..... 107
Chapter 7. Administrative Procedures for Treatment, Storage, and Disposal Facility Permits ..... 108
Subchapter A. Permits ..... 108
§701. Emergency Permits ..... 108
§703. Permit Evaluation ..... 108

§705. Issuance and Effective Date of Permit ..... 110
§706. Permit Denial ..... 110
Subchapter B. Hearings ..... 110
§707. Public Comments and Requests for Public Hearings ..... 110
§708. Preapplication Public Meeting and Notice, Public Notice Requirements at the Application Stage, and Information Repository ..... 110
§709. Evidentiary Hearings on Operating Permit Applications for Commercial Hazardous Waste Treatment, Storage, Disposal, or Recycling Facilities ..... 112
§711. Public Hearings ..... 113
Subchapter C. Public Notice of Permit Actions and Public Comment Period ..... 113
§713. Scope ..... 113
§715. Timing ..... 114
§717. Methods ..... 114
§719. Contents ..... 114
§721. Additional Information ..... 115
Chapter 11. Generators ..... 115
Subchapter A. General ..... 115
§1101. Applicability ..... 115
§1103. Hazardous Waste Determination ..... 115
§1105. EPA Identification Numbers ..... 116
§1107. The Manifest System ..... 116
§1108. Manifest Tracking Numbers, Manifest Printing, and Obtaining Manifests ..... 118
§1109. Pre-Transport Requirements ..... 118
§1111. Recordkeeping and Reporting ..... 121
§1113. Exports of Hazardous Waste ..... 122
§1121. Spills ..... 125
§1123. Imports of Foreign Hazardous Waste ..... 125
§1125. Unmanifested Foreign Hazardous Waste ..... 126
Subchapter B. Transfrontier Shipments of Hazardous Waste ..... 126
§1127. Transfrontier Shipments of Hazardous Waste for Recovery within the OECD ..... 126
§1199. Appendix A—Uniform Hazardous Waste Manifest and Instructions (DEQ Form HW-3 and Its Instructions) ..... 132
Chapter 13. Transporters ..... 134
§1301. Applicability ..... 134
§1303. EPA Identification Number ..... 135
§1305. Transfer Facility Requirements ..... 135
§1307. The Manifest System ..... 135
§1309. Compliance with the Manifest ..... 137
§1311. Recordkeeping ..... 138
§1313. Financial Responsibility ..... 138
§1315. Spills ..... 138
§1317. Discharge Cleanup ..... 139

§1319. Use and Reuse of Containers ..... 139
§1321. Hazardous Waste That Is Also a Hazardous Material ..... 139
§1323. Vehicle Markings and Placards ..... 139
Chapter 15. Treatment, Storage, and Disposal Facilities ..... 139
§1501. Applicability ..... 139
§1503. Site Requirements ..... 142
§1504. Construction Quality Assurance Program ..... 143
§1505. Discharges from the Site ..... 144
§1507. Security ..... 144
§1509. General Inspection Requirements ..... 145
§1511. Preparedness and Prevention ..... 145
§1513. Contingency Plan and Emergency Procedures ..... 146
§1515. Personnel Training ..... 148
§1516. Manifest System for Treatment, Storage, and Disposal (TSD) Facilities ..... 149
§1517. General Requirements for Ignitable, Reactive, or Incompatible Wastes ..... 152
§1519. General Waste Analysis ..... 152
§1521. Chemical, Physical, and Biological Treatment Facilities (Wastes Only) ..... 153
§1523. Surveillance and Monitoring ..... 154
§1525. Emergency Response ..... 154
§1527. Receiving and Monitoring Incoming Waste ..... 154
§1529. Operating Record and Reporting Requirements ..... 155
§1531. Required Notices ..... 158
§1533. Relationship to Interim Status Standards ..... 158
§1535. Imminent Hazard Action ..... 158
Chapter 17. Air Emission Standards ..... 159
§1701. Applicability ..... 159
§1703. Definitions ..... 159
Subchapter A. Process Vents ..... 162
§1705. Applicability ..... 162
§1707. Standards: Process Vents ..... 162
§1709. Standards: Closed-Vent Systems and Control Devices ..... 163
§1711. Test Methods and Procedures ..... 167
§1713. Recordkeeping Requirements ..... 169
§1715. Reporting Requirements ..... 172
Subchapter B. Equipment Leaks ..... 172
§1717. Applicability ..... 172
§1719. Standards: Pumps in Light Liquid Service ..... 173
§1721. Standards: Compressors ..... 174
§1723. Standards: Pressure Relief Devices in Gas/Vapor Service ..... 174
§1725. Standards: Sampling Connection Systems ..... 175
§1727. Standards: Open-Ended Valves or Lines ..... 175

§1729. Standards: Valves in Gas/Vapor Service or in Light Liquid Service ..... 175
§1731. Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors ..... 176
§1733. Standards: Delay of Repair ..... 176
§1735. Standards: Closed-Vent Systems and Control Devices ..... 177
§1737. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak ..... 177
§1739. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair ..... 178
§1741. Test Methods and Procedures ..... 178
§1743. Recordkeeping Requirements ..... 179
§1745. Reporting Requirements ..... 181
Subchapter C. Air Emission Standards for Tanks, Surface Impoundments, and Containers ..... 181
§1747. Applicability ..... 181
§1749. Definitions ..... 182
§1751. Standards: General ..... 182
§1753. Waste Determination Procedures ..... 185
§1755. Standards: Tanks ..... 186
§1757. Standards: Surface Impoundments ..... 193
§1759. Standards: Containers ..... 195
§1761. Standards: Closed-Vent Systems and Control Devices ..... 199
§1763. Inspection and Monitoring Requirements ..... 201
§1765. Recordkeeping Requirements ..... 201
§1767. Reporting Requirements ..... 204
§1799. Appendix—Table 1, Compounds with Henry's Law Constant Less than 0.1 Y/X [At 25°C] ..... 205
Chapter 18. Containment Buildings ..... 206
§1801. Applicability ..... 206
§1802. Design and Operating Standards ..... 207
§1803. Closure and Post-Closure Care ..... 209
Chapter 19. Tanks ..... 209
§1901. Applicability ..... 209
§1903. Assessment of Existing Tank System's Integrity ..... 210
§1905. Design and Installation of New Tank Systems or Components ..... 210
§1907. Containment and Detection of Releases ..... 212
§1909. General Operating Requirements ..... 215
§1911. Inspections ..... 215
§1913. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems ..... 216
§1915. Closure and Post-Closure Care ..... 217
§1917. Special Requirements for Ignitable or Reactive Wastes ..... 217
§1919. Special Requirements for Incompatible Wastes ..... 218
§1921. Air Emission Standards ..... 218

Table of Contents

Chapter 20. Integration with Maximum Achievable Control Technology (MACT) Standards ..... 218
§2001. Options for Incinerators, Cement and Lightweight Aggregate Kilns, Solid Fuel and Liquid Fuel Boilers, and Hydrochloric Acid Production Furnaces to Minimize Emissions from Startup, Shutdown, and Malfunction Events ..... 218
Chapter 21. Containers ..... 220
§2101. Applicability ..... 220
§2103. Condition of Containers ..... 220
§2105. Compatibility of Waste with Containers ..... 220
§2107. Management of Containers ..... 220
§2109. Inspections ..... 220
§2111. Containment ..... 221
§2113. Special Requirements for Ignitable or Reactive Wastes ..... 221
§2115. Special Requirements for Incompatible Wastes ..... 221
§2117. Closure ..... 221
§2119. Air Emission Standards ..... 222
Chapter 22. Prohibitions on Land Disposal ..... 222
Subchapter A. Land Disposal Restrictions ..... 222
§2201. Purpose, Scope, and Applicability ..... 222
§2203. Definitions Applicable to This Chapter ..... 223
§2205. Storage of Prohibited Wastes ..... 225
§2207. Dilution Prohibited as a Substitute for Treatment ..... 225
§2208. Waste-Specific Prohibitions—Dyes and/or Pigments Production Wastes ..... 226
§2209. Waste-Specific Prohibitions—Wood Preserving Wastes ..... 226
§2211. Waste-Specific Prohibitions—Dioxin-Containing Wastes ..... 227
§2213. Waste-Specific Prohibitions—Chlorinated Aliphatic Wastes ..... 227
§2215. Waste Specific Prohibitions—Soils Exhibiting the Toxicity Characteristic for Metals and Containing PCBs ..... 228
§2216. Waste-Specific Prohibitions—Toxicity Characteristic Metal Wastes ..... 228
§2218. Waste Specific Prohibitions—Petroleum Refining Wastes ..... 229
§2219. Waste Specific Prohibitions—Inorganic Chemical Wastes ..... 229
§2221. Schedule of Wastes Identified or Listed after November 8, 1984 ..... 229
§2223. Applicability of Treatment Standards ..... 231
§2227. Treatment Standards Expressed as Specified Technologies ..... 232
§2230. Treatment Standards for Hazardous Debris ..... 233
§2231. Variance from a Treatment Standard ..... 234
§2233. Universal Treatment Standards ..... 236
§2236. Alternative Land Disposal Restriction (LDR) Treatment Standards for Contaminated Soil ..... 236
§2237. Exemption for Surface Impoundments Treating Hazardous Waste ..... 237
§2239. Procedures for Case-by-Case Extensions of an Effective Date ..... 238
§2241. Exemptions to Allow Land Disposal of a Prohibited Waste Except by Deep Well Injection ..... 240

§2243. Administrative Procedures for Exemptions under LAC 33:V.2241 and 2271, No-Alternative Determinations under LAC 33:V.2273, and Case-by-Case Extensions of an Effective Date under LAC 33:V.2239 ..... 243
§2245. Generators' Waste Analysis, Recordkeeping, and Notice Requirements ..... 243
§2246. Special Rules Regarding Wastes That Exhibit a Characteristic ..... 246
§2247. Owners or Operators of Treatment or Disposal Facilities: Testing, Waste Minimization, Recordkeeping and Notice Requirements ..... 247
Subchapter B. Hazardous Waste Injection Restrictions ..... 249
§2249. Purpose, Scope, and Applicability ..... 249
§2251. Dilution Prohibited as a Substitute for Treatment ..... 249
§2253. Procedures for Case-by-Case Extensions to an Effective Date ..... 249
§2255. Waste Analysis ..... 249
§2257. Waste-Specific Prohibitions—Solvent Wastes ..... 249
§2259. Waste-Specific Prohibitions—Dioxin-Containing Wastes ..... 250
§2261. Waste-Specific Prohibitions—California List Wastes ..... 250
§2263. Waste-Specific Prohibitions—First Third Wastes ..... 251
§2265. Waste-Specific Prohibitions—Second Third Wastes ..... 251
§2267. Waste-Specific Prohibitions—Third Third Wastes ..... 252
§2269. Waste-Specific Prohibitions—Newly Listed Wastes ..... 252
§2271. Exemptions to Allow Land Disposal of a Prohibited Waste by Deep Well Injections ..... 253
§2273. Petition for Determinations Concerning No Alternatives to Land Disposal of a Prohibited Waste by Deep Well Injection ..... 257
§2299. Appendix—Tables 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 ..... 260
Chapter 23. Waste Piles ..... 344
§2301. Applicability ..... 344
§2303. Design and Operating Requirements ..... 345
§2304. Action Leakage Rate ..... 347
§2305. Exemptions ..... 347
§2306. Response Actions ..... 347
§2307. Inspection of Synthetic Liners ..... 348
§2309. Monitoring and Inspection ..... 348
§2311. Special Requirements for Ignitable or Reactive Waste ..... 348
§2313. Special Requirements for Incompatible Wastes ..... 349
§2315. Closure and Post-Closure Care ..... 349
§2317. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027 ..... 349
Chapter 24. Hazardous Waste Munitions and Explosives Storage ..... 350
§2401. Applicability ..... 350
§2403. Design and Operating Standards ..... 350
§2405. Closure and Post-Closure Care ..... 350
Chapter 25. Landfills ..... 351
§2501. Applicability ..... 351
§2503. Design and Operating Requirements ..... 351

§2504. Action Leakage Rate ..... 353
§2505. Exemption ..... 354
§2507. Monitoring and Inspection ..... 354
§2508. Response Actions ..... 354
§2509. Surveying and Recordkeeping ..... 355
§2511. Special Requirements for Ignitable or Reactive Waste ..... 355
§2513. Special Requirements for Incompatible Wastes ..... 355
§2515. Special Requirements for Bulk and Containerized Liquids ..... 355
§2517. Special Requirements for Containers ..... 356
§2519. Disposal of Small Containers of Hazardous Waste in Overpacked Drums (Lab Packs) ..... 356
§2521. Closure and Post-Closure Care ..... 357
§2523. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027 ..... 357
Chapter 26. Corrective Action Management Units and Special Provisions for Cleanup ..... 358
§2601. Applicability of Corrective Action Management Unit (CAMU) Regulations ..... 358
§2602. Grandfathered Corrective Action Management Units (CAMUs) ..... 358
§2603. Corrective Action Management Units (CAMUs) ..... 359
§2604. Temporary Units (TU) ..... 364
§2605. Staging Piles ..... 364
§2607. Disposal of CAMU-Eligible Wastes in Permitted Hazardous Waste Landfills ..... 366
Chapter 27. Land Treatment ..... 367
§2701. Applicability ..... 367
§2703. Design and Operating Requirements ..... 367
§2705. Treatment Program ..... 368
§2707. Treatment Demonstration ..... 369
§2709. Food-Chain Crops ..... 370
§2711. Unsaturated Zone Monitoring ..... 370
§2713. Recordkeeping ..... 372
§2715. Special Requirements for Ignitable or Reactive Waste ..... 372
§2717. Special Requirements for Incompatible Wastes ..... 372
§2719. Closure and Post-Closure Care ..... 372
§2723. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026 and F027 ..... 373
Chapter 28. Drip Pads ..... 373
§2801. Applicability ..... 373
§2803. Assessment of Existing Drip Pad Integrity ..... 374
§2804. Design and Installation of New Drip Pads ..... 374
§2805. Design and Operating Requirements ..... 374
§2807. Inspections ..... 376
§2809. Closure ..... 376
Chapter 29. Surface Impoundments ..... 377
§2901. Applicability ..... 377
§2903. Design and Operating Requirements ..... 377

§2904. Action Leakage Rate ..... 380
§2905. Exemption ..... 380
§2906. Response Actions ..... 380
§2907. Monitoring and Inspection ..... 380
§2909. Emergency Repairs; Contingency Plans ..... 381
§2911. Closure and Post-Closure Care ..... 382
§2913. Special Requirements for Ignitable or Reactive Waste ..... 383
§2915. Special Requirements for Incompatible Wastes ..... 383
§2917. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027 ..... 383
§2919. Air Emission Standards ..... 383
Chapter 30. Hazardous Waste Burned in Boilers and Industrial Furnaces ..... 383
§3001. Applicability ..... 383
§3003. Management Prior to Burning ..... 386
§3005. Permit Standards for Burners ..... 386
§3007. Interim Status Standards for Burners ..... 391
§3009. Standards to Control Organic Emissions ..... 402
§3011. Standards to Control Particulate Matter ..... 404
§3013. Standards to Control Metals Emissions ..... 405
§3015. Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas ($Cl_2$) Emissions ..... 408
§3017. Small Quantity On-Site Burner Exemption ..... 409
§3019. Low Risk Waste Exemption ..... 411
§3021. Waiver of DRE Trial Burn for Boilers ..... 412
§3023. Standards for Direct Transfer ..... 412
§3025. Regulation of Residues ..... 414
§3099. Appendices—Appendix A, B, C, D, E, F, G, H, I, J, K, and L ..... 416
Chapter 31. Incinerators ..... 417
§3101. Purpose ..... 417
§3103. General Requirements ..... 417
§3105. Applicability ..... 417
§3107. Waste Analysis ..... 433
§3109. Principal Organic Hazardous Constituents (POHCs) ..... 433
§3111. Performance Standards ..... 433
§3113. Hazardous Waste Permits ..... 434
§3115. Incinerator Permits for New or Modified Facilities ..... 434
§3117. Operating Requirements ..... 437
§3119. Monitoring and Inspections ..... 437
§3121. Closure ..... 438
Chapter 32. Miscellaneous Units ..... 438
§3201. Applicability ..... 438
§3203. Environmental Performance Standards ..... 438
§3205. Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action ..... 439

§3207. Closure and Post-Closure Care ..... 439
Chapter 33. Groundwater Protection ..... 440
§3301. Applicability ..... 440
§3303. Required Programs ..... 441
§3305. Groundwater Protection Standard ..... 441
§3307. Hazardous Constituents ..... 442
§3309. Concentration Limits ..... 443
§3311. Point of Compliance ..... 444
§3313. Compliance Period ..... 444
§3315. General Groundwater Monitoring Requirements ..... 444
§3317. Detection Monitoring Program ..... 446
§3319. Compliance Monitoring Program ..... 448
§3321. Corrective Action Program ..... 449
§3322. Corrective Action ..... 450
§3323. Monitoring Well Abandonment and Sealing of Bore Holes ..... 450
§3325. Groundwater Monitoring List ..... 451
Chapter 35. Closure and Post-Closure ..... 454
§3501. Applicability ..... 454
§3503. Notification of Intention to Close a Facility ..... 454
Subchapter A. Closure Requirements ..... 455
§3505. Closure Procedures ..... 455
§3507. Closure Performance Standards ..... 455
§3509. Closure Financial Responsibility ..... 455
§3511. Closure Plan; Amendment of Plan ..... 455
§3513. Closure; Time Allowed for Closure ..... 457
§3515. Disposal or Decontamination of Equipment, Structures and Soils ..... 459
§3517. Certification of Closure ..... 459
Subchapter B. Post-Closure Requirements ..... 460
§3519. Post-Closure Procedures ..... 460
§3521. Post-Closure Care and Use of Property ..... 460
§3523. Post-Closure Plan, Amendment of Plan ..... 460
§3525. Post-Closure Notices ..... 462
§3527. Certification of Completion of Post-Closure Care ..... 462
Chapter 37. Financial Requirements ..... 463
§3701. Applicability ..... 463
§3703. Definitions of Terms as Used in This Chapter ..... 463
Subchapter A. Closure Requirements ..... 464
§3705. Cost Estimate for Closure ..... 464
§3707. Financial Assurance for Closure ..... 465
Subchapter B. Post-Closure Requirements ..... 472
§3709. Cost Estimate for Post-Closure Care ..... 472

§3711. Financial Assurance for Post-Closure Care ..... 472
Subchapter C. Common Closure and Post-Closure Requirements ..... 479
§3713. Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care ..... 479
Subchapter D. Insurance Requirements ..... 480
§3715. Liability Requirements ..... 480
Subchapter E. Incapacity Regulations ..... 484
§3717. Incapacity of Owners or Operators, Guarantors, or Financial Institutions ..... 484
Subchapter F. Financial and Insurance Instruments ..... 484
§3719. Wording of the Instruments ..... 484
Chapter 38. Universal Wastes ..... 502
Subchapter A. General ..... 502
§3801. Scope and Applicability ..... 502
§3803. Applicability—Batteries ..... 502
§3805. Applicability—Pesticides ..... 503
§3807. Applicability—Mercury-Containing Equipment ..... 503
§3809. Applicability—Lamps ..... 504
§3810. Applicability—Electronics ..... 504
§3811. Applicability—Antifreeze ..... 504
§3813. Definitions ..... 505
Subchapter B. Standards for Small Quantity Handlers of Universal Waste ..... 506
§3815. Applicability ..... 506
§3817. Prohibitions ..... 506
§3819. Notification ..... 506
§3821. Waste Management ..... 506
§3823. Labeling/Marking ..... 508
§3825. Accumulation Time Limits ..... 509
§3827. Employee Training ..... 509
§3829. Response to Releases ..... 509
§3831. Off-Site Shipments ..... 510
§3833. Tracking Universal Waste Shipments ..... 510
§3835. Exports ..... 510
Subchapter C. Standards for Large Quantity Handlers of Universal Waste ..... 511
§3837. Applicability ..... 511
§3839. Prohibitions ..... 511
§3841. Notification ..... 511
§3843. Waste Management ..... 511
§3845. Labeling/Marking ..... 513
§3847. Accumulation Time Limits ..... 514
§3849. Employee Training ..... 514
§3851. Response to Releases ..... 514
§3853. Off-Site Shipments ..... 515

§3855. Tracking Universal Waste Shipments ..... 515
§3857. Exports ..... 516
Subchapter D. Standards for Universal Waste Transporters ..... 516
§3859. Applicability ..... 516
§3861. Prohibitions ..... 516
§3863. Waste Management ..... 516
§3865. Storage Time Limits ..... 516
§3867. Response to Releases ..... 516
§3869. Off-Site Shipments ..... 516
§3871. Exports ..... 517
Subchapter E. Standards for Destination Facilities ..... 517
§3873. Applicability ..... 517
§3875. Off-Site Shipments ..... 517
§3877. Tracking Universal Waste Shipments ..... 517
Subchapter F. Import Requirements ..... 518
§3879. Imports ..... 518
Subchapter G. Petitions to Include Other Wastes under This Chapter ..... 518
§3881. General ..... 518
§3883. Factors for Petitions to Include Other Wastes under This Chapter ..... 518
Chapter 39. Reserved ..... 519
Chapter 40. Used Oil ..... 519
§4001. Definitions ..... 519
Subchapter A. Materials Regulated as Used Oil ..... 520
§4003. Applicability ..... 520
§4005. Used Oil Specifications ..... 522
§4007. Prohibitions ..... 522
Subchapter B. Standards for Used Oil Generators ..... 522
§4009. Applicability ..... 522
§4011. Hazardous Waste Mixing ..... 523
§4013. Used Oil Storage ..... 523
§4015. On-Site Burning in Space Heaters ..... 524
§4017. Off-Site Shipments ..... 524
Subchapter C. Standards for Used Oil Collection Centers and Aggregation Points ..... 524
§4019. Do-It-Yourselfer Used Oil Collection Centers ..... 524
§4021. Used Oil Collection Centers ..... 524
§4023. Used Oil Aggregation Points Owned by the Generator ..... 525
Subchapter D. Standards for Used Oil Transporter and Transfer Facilities ..... 525
§4025. Applicability ..... 525
§4027. Restrictions on Transporters Who Are Not Also Processors or Re-Refiners ..... 525
§4029. Notification ..... 526
§4031. Used Oil Transportation ..... 526

§4033. Rebuttable Presumption for Used Oil ..... 526
§4035. Used Oil Storage at Transfer Facilities ..... 527
§4037. Tracking ..... 528
§4039. Management of Residues ..... 528
Subchapter E. Standards for Used Oil Processors and Re-Refiners ..... 528
§4041. Applicability ..... 528
§4043. Notification ..... 529
§4045. General Facility Standards ..... 529
§4047. Rebuttable Presumption for Used Oil ..... 532
§4049. Used Oil Management ..... 532
§4051. Analysis Plan ..... 533
§4053. Tracking ..... 534
§4055. Operating Record and Reporting ..... 534
§4057. Off-Site Shipments of Used Oil ..... 535
§4059. Management of Residues ..... 535
Subchapter F. Standards for Used Oil Burners That Burn Off-Specification Used Oil for Energy Recovery ..... 535
§4061. Applicability ..... 535
§4063. Restrictions on Burning ..... 535
§4065. Notification ..... 535
§4067. Rebuttable Presumption for Used Oil ..... 536
§4069. Used Oil Storage ..... 536
§4071. Tracking ..... 537
§4073. Notices ..... 537
§4075. Management of Residues ..... 537
Subchapter G. Standards for Used Oil Fuel Marketers ..... 538
§4077. Applicability ..... 538
§4079. Prohibitions ..... 538
§4081. On-Specification Used Oil Fuel ..... 538
§4083. Notification ..... 538
§4085. Tracking ..... 538
§4087. Notices ..... 539
Subchapter H. Standards for Disposal of Used Oil and Use as a Dust Suppressant ..... 539
§4089. Applicability ..... 539
§4091. Disposal ..... 539
§4093. Use as a Dust Suppressant ..... 539
Chapter 41. Recyclable Materials ..... 539
§4101. Applicability ..... 539
§4105. Requirements for Recyclable Material ..... 540
§4139. Recyclable Materials Used in a Manner Constituting Disposal ..... 541
§4141. General Requirements for Recyclable Materials Used in a Manner Constituting Disposal ..... 541

§4143. Recyclable Materials Utilized for Precious Metal Recovery ..... 542
§4145. Spent Lead-Acid Batteries Being Reclaimed ..... 542
Chapter 42. Conditional Exemption for Low-Level Mixed Waste Storage, Treatment, Transportation, and Disposal ..... 543
§4201. What definitions apply to this Chapter? ..... 543
§4203. What does a storage and treatment conditional exemption do? ..... 544
§4205. What wastes are eligible for the storage and treatment conditional exemption? ..... 544
§4207. What conditions must you meet for your LLMW to qualify for and maintain a storage and treatment exemption? ..... 544
§4209. What waste treatment does the storage and treatment conditional exemption allow? ..... 544
§4211. How could you lose the conditional exemption for your LLMW and what action must you take? ..... 545
§4213. If you lose the storage and treatment conditional exemption for your LLMW, can the exemption be reclaimed? ..... 545
§4215. What records must you keep at your facility and for how long? ..... 545
§4217. When is your LLMW no longer eligible for the storage and treatment conditional exemption? ..... 546
§4219. Do closure requirements apply to units that stored LLMW prior to the effective date of this Chapter? ..... 546
§4221. What does the transportation and disposal conditional exemption do? ..... 546
§4223. What wastes are eligible for the transportation and disposal conditional exemption? ..... 546
§4225. What are the conditions you must meet for your waste to qualify for and maintain the transportation and disposal conditional exemption? ..... 546
§4227. What treatment standards must your eligible waste meet? ..... 547
§4229. Are you subject to the manifest and transportation condition in LAC 33:V.4225.A.2? ..... 547
§4231. When does the transportation and disposal exemption take effect? ..... 547
§4233. Where must your exempted waste be disposed of? ..... 547
§4235. What type of container must be used for disposal of exempted waste? ..... 547
§4237. Whom must you notify? ..... 547
§4239. What records must you keep at your facility and for how long? ..... 548
§4241. How could you lose the transportation and disposal conditional exemption for your waste and what actions must you take? ..... 548
§4243. If you lose the transportation and disposal conditional exemption for a waste, can the exemption be reclaimed? ..... 548
Chapter 43. Interim Status ..... 549
§4301. Purpose and Applicability ..... 549
§4302. Operation during Interim Status ..... 551
§4303. Changes during Interim Status ..... 551
§4305. Termination of Interim Status ..... 552
§4306. Imminent Hazard Action ..... 552
Subchapter A. General Facility Standards ..... 553
§4307. Applicability ..... 553
§4309. Identification Number ..... 553

§4311. Required Notices ..... 553
§4313. General Waste Analysis ..... 553
§4315. Security ..... 554
§4317. General Inspection Requirements ..... 554
§4319. Personnel Training ..... 555
§4320. Construction Quality Assurance Program ..... 555
§4321. General Requirements for Ignitable, Reactive, or Incompatible Wastes ..... 556
§4322. Location Standards ..... 556
Subchapter B. Preparedness and Prevention ..... 556
§4323. Applicability ..... 556
§4325. Maintenance and Operation of Facility ..... 556
§4327. Required Equipment ..... 556
§4329. Testing and Maintenance of Equipment ..... 556
§4331. Access to Communications or Alarm Systems ..... 557
§4333. Required Aisle Space ..... 557
§4335. Arrangements with Local Authorities ..... 557
Subchapter C. Contingency Plan and Emergency Procedures ..... 557
§4337. Applicability ..... 557
§4339. Purpose and Implementation of Contingency Plan ..... 557
§4341. Content of Contingency Plan ..... 557
§4343. Copies of Contingency Plan ..... 557
§4345. Amendment of Contingency Plan ..... 557
§4347. Emergency Coordinator ..... 557
§4349. Emergency Procedures ..... 557
Subchapter D. Manifest System, Recordkeeping, and Reporting ..... 557
§4351. Applicability ..... 557
§4353. Use of the Manifest System ..... 558
§4355. Manifest Discrepancies ..... 558
§4356. Unmanifested Waste Report ..... 558
§4357. Operating Record ..... 558
§4359. Availability, Retention, and Disposition of Records ..... 560
§4361. Annual Report ..... 560
§4363. Unmanifested Waste Report ..... 560
§4365. Additional Reports ..... 560
Subchapter E. Groundwater Monitoring ..... 561
§4367. Applicability ..... 561
§4369. Groundwater Monitoring System ..... 561
§4371. Sampling and Analysis ..... 562
§4373. Preparation, Evaluation, and Response ..... 563
§4375. Recordkeeping and Reporting ..... 564
Subchapter F. Closure and Post-Closure ..... 565

§4377. Applicability ..... 565
§4379. Closure Performance Standard ..... 565
§4381. Closure Plan; Amendment of Plan ..... 566
§4383. Closure; Time Allowed for Closure ..... 568
§4385. Disposal or Decontamination of Equipment, Structures and Soils ..... 570
§4387. Certification of Closure ..... 570
§4389. Post-Closure Care and Use of Property ..... 570
§4391. Post-Closure Plan; Amendment of Plan ..... 571
§4393. Post-Closure Notices ..... 573
§4395. Certification of Completion of Post-Closure Care ..... 574
§4396. Post-Closure Requirements for Facilities That Obtain Enforceable Documents in Lieu of Post-Closure Permits ..... 574
Subchapter G. Financial Requirements ..... 574
§4397. Applicability ..... 574
§4399. Definitions of Terms as Used in This Subpart ..... 575
§4401. Cost Estimate for Closure ..... 576
§4403. Financial Assurance for Closure ..... 576
§4405. Cost Estimate for Post-Closure Care ..... 582
§4407. Financial Assurance for Post-Closure Care ..... 583
§4409. Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care ..... 589
§4411. Liability Requirements ..... 589
§4413. Incapacity of Owners or Operators, Guarantors, or Financial Institutions ..... 594
Subchapter H. Containers ..... 594
§4417. Applicability ..... 594
§4419. Condition of Containers ..... 594
§4421. Compatibility of Waste with Containers ..... 594
§4423. Management of Containers ..... 594
§4425. Inspections ..... 594
§4427. Special Requirements for Ignitable or Reactive Waste ..... 594
§4429. Special Requirements for Incompatible Wastes ..... 594
§4430. Air Emission Standards ..... 595
Subchapter I. Tanks ..... 595
§4431. Applicability ..... 595
§4433. Assessment of Existing Tank System's Integrity ..... 595
§4435. Design and Installation of New Tank Systems or Components ..... 595
§4437. Containment and Detection of Releases ..... 597
§4438. Special Requirements for Generators of between 100 and 1,000 kg/month That Accumulate Hazardous Waste in Tanks ..... 600
§4439. General Operating Requirements ..... 601
§4440. Inspections ..... 601
§4441. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems ..... 602

§4442. Closure and Post-Closure Care ..... 603
§4443. Special Requirements for Ignitable or Reactive Wastes ..... 603
§4444. Special Requirements for Incompatible Wastes ..... 603
§4445. Waste Analysis and Trial Tests ..... 603
§4446. Air Emission Standards ..... 603
Subchapter J. Surface Impoundments ..... 603
§4447. Applicability ..... 603
§4449. Action Leakage Rate ..... 603
§4452. Response Actions ..... 604
§4453. Waste Analysis and Trial Tests ..... 604
§4455. Monitoring and Inspection ..... 604
§4456. Air Emission Standards ..... 605
§4457. Closure and Post-Closure ..... 605
§4459. Special Requirements for Ignitable or Reactive Waste ..... 606
§4461. Special Requirements for Incompatible Wastes ..... 606
§4462. Design Requirements ..... 606
Subchapter K. Waste Piles ..... 607
§4463. Applicability ..... 607
§4465. Protection from Wind ..... 607
§4467. Waste Analysis ..... 607
§4469. Containment ..... 607
§4470. Monitoring and Inspection ..... 608
§4471. Special Requirements for Ignitable or Reactive Waste ..... 608
§4472. Response Actions ..... 608
§4473. Special Requirements for Incompatible Wastes ..... 608
§4474. Action Leakage Rates ..... 608
§4475. Closure and Post-Closure Care ..... 609
§4476. Design and Operating Requirements ..... 609
Subchapter L. Land Treatment ..... 609
§4477. Applicability ..... 609
§4479. General Operating Requirements ..... 609
§4481. Waste Analysis ..... 610
§4483. Food-Chain Crops ..... 610
§4485. Unsaturated Zone (Zone of Aeration) Monitoring ..... 610
§4487. Recordkeeping ..... 610
§4489. Closure and Post-Closure ..... 610
§4491. Special Requirements for Ignitable or Reactive Waste ..... 611
§4493. Special Requirements for Incompatible Wastes ..... 611
Subchapter M. Landfills ..... 612
§4495. Applicability ..... 612
§4497. Action Leakage Rate ..... 612

§4498. Response Actions ..... 612
§4499. Surveying and Recordkeeping ..... 613
§4501. Closure and Post-Closure ..... 613
§4502. Monitoring and Inspection ..... 613
§4503. Special Requirements for Ignitable or Reactive Waste ..... 614
§4505. Special Requirements for Incompatible Wastes ..... 614
§4507. Special Requirements for Liquid Waste ..... 614
§4509. Special Requirements for Containers ..... 615
§4511. Disposal of Small Containers of Hazardous Waste in Overpacked Drums (Lab Packs) ..... 615
§4512. Design and Operating Requirements ..... 616
Subchapter N. Incinerators ..... 616
§4513. Applicability ..... 616
§4515. Waste Analysis ..... 617
§4517. General Operating Requirements ..... 617
§4519. Monitoring and Inspections ..... 617
§4521. Closure ..... 617
§4522. Interim Status Incinerators Burning Particular Hazardous Wastes ..... 618
Subchapter O. Thermal Treatment ..... 618
§4523. Applicability ..... 618
§4525. General Operating Requirements ..... 618
§4527. Waste Analysis ..... 618
§4529. Monitoring and Inspections ..... 618
§4531. Closure ..... 619
§4533. Open Burning; Waste Explosives ..... 619
§4534. Interim Status Thermal Treatment Devices Burning Particular Hazardous Waste ..... 619
Subchapter P. Chemical, Physical, and Biological Treatment ..... 619
§4535. Applicability ..... 619
§4537. General Operating Requirements ..... 620
§4539. Waste Analysis and Trial Tests ..... 620
§4541. Inspections ..... 620
§4543. Closure ..... 620
§4545. Special Requirements for Ignitable or Reactive Waste ..... 620
§4547. Special Requirements for Incompatible Wastes ..... 621
Subchapter Q. Air Emission Standards for Process Vents ..... 621
§4549. Applicability ..... 621
§4551. Definitions ..... 621
§4553. Standards: Process Vents ..... 621
§4555. Standards: Closed-Vent Systems and Control Devices ..... 621
§4557. Test Methods and Procedures ..... 621
§4559. Recordkeeping Requirements ..... 621
Subchapter R. Air Emission Standards for Equipment Leaks ..... 622

§4561. Applicability ..... 622
§4563. Definitions ..... 622
§4565. Standard: Pumps in Light Liquid Service ..... 622
§4567. Standard: Compressors ..... 622
§4569. Standards: Pressure Relief Devices in Gas/Vapor Service ..... 622
§4571. Standards: Sampling Connection Systems ..... 622
§4573. Standards: Open-Ended Valves or Lines ..... 622
§4575. Standards: Valves in Gas/Vapor Service or in Light Liquid Service ..... 623
§4577. Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors ..... 623
§4579. Standards: Delay of Repair ..... 623
§4581. Standards: Closed-Vent Systems and Control Devices ..... 623
§4583. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak ..... 623
§4585. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair ..... 623
§4587. Test Methods and Procedures ..... 623
§4589. Recordkeeping Requirements ..... 623
Subchapter S. Drip Pads ..... 623
§4591. Applicability ..... 623
§4593. Assessment of Existing Drip Pad Integrity ..... 623
§4595. Design and Installation of New Drip Pads ..... 623
§4597. Design and Operating Requirements ..... 623
§4599. Inspections ..... 624
§4601. Closure ..... 624
Subchapter T. Containment Buildings ..... 624
§4701. Applicability ..... 624
§4703. Design and Operating Standards ..... 624
§4705. Closure and Post-Closure Care ..... 626
Subchapter U. Hazardous Waste Munitions and Explosives Storage ..... 626
§4707. Applicability ..... 626
§4709. Design and Operating Standards ..... 627
§4711. Closure and Post-Closure Care ..... 627
Subchapter V. Air Emission Standards for Tanks, Surface Impoundments, and Containers ..... 628
§4719. Applicability ..... 628
§4721. Definitions ..... 628
§4723. Schedule for Implementation of Air Emission Standards ..... 628
§4725. Standards: General ..... 629
§4727. Waste Determination Procedures ..... 629
§4729. Standards: Tanks ..... 636
§4731. Standards: Surface Impoundments ..... 636
§4733. Standards: Containers ..... 636

§4735. Standards: Closed-Vent Systems and Control Devices ..... 636
§4737. Inspection and Monitoring Requirements ..... 636
§4739. Recordkeeping Requirements ..... 636
Chapter 49. Lists of Hazardous Wastes ..... 636
§4901. Category I Hazardous Wastes ..... 636
§4903. Category II Hazardous Wastes ..... 677
§4907. Criteria for Listing Hazardous Waste ..... 679
§4909. Comparable/Syngas Fuel Exclusion ..... 680
§4911. Conditional Exclusion for Used, Broken Cathode Ray Tubes (CRTs) Undergoing Recycling ..... 688
§4913. Conditional Exclusion for Used, Intact Cathode Ray Tubes (CRTs) Exported for Recycling ..... 689
§4915. Notification and Recordkeeping for Used, Intact Cathode Ray Tubes (CRTs) Exported for Reuse ..... 689
§4999. Appendices—Appendix A, B, C, D, E, and F ..... 689
Chapter 51. Fee Schedules ..... 702
§5101. Applicability ..... 702
§5103. Scope and Purpose ..... 703
§5105. Authority ..... 703
§5107. Definitions ..... 703
§5109. Application Fees ..... 703
§5111. Calculation of Application Fees ..... 703
§5113. Provision for Collection of Additional Fees Should Application Fees Paid Be Less Than Program Costs ..... 703
§5115. Provision of Funds Collected in Excess of Program Costs ..... 704
§5117. Annual Monitoring and Maintenance Fees—Treaters, Storers, and/or Disposers ..... 704
§5119. Calculation of Annual Maintenance Fees ..... 704
§5120. Land Disposal Prohibition Petition Fees ..... 704
§5121. Generators of Hazardous Waste ..... 705
§5123. Registration Fees, HW-1 ..... 705
§5125. Annual Monitoring and Maintenance Fee ..... 705
§5127. Methods of Payment ..... 705
§5129. Late Payment Fee ..... 705
§5131. Failure to Pay ..... 706
§5133. Effective Date ..... 706
§5135. Transporter Fee ..... 706
§5137. Conditionally Exempt Small Quantity Generator Fee ..... 706
§5139. Groundwater Protection Permit Review Fee ..... 706
§5141. Incinerator and Boiler/Industrial Furnace Inspection and Monitoring Fee ..... 707
§5143. Annual Landfill Inspection and Monitoring Fee ..... 707
§5145. Annual Land Treatment Unsaturated Zone Monitoring Inspection Fee ..... 707
§5147. Fee for NHEM Determination for Contaminated Environmental Media ..... 707

Table of Contents

Chapter 53. Military Munitions ..... 707
§5301. Applicability ..... 707
§5303. Definition of Military Munitions as a Solid Waste ..... 708
§5305. Standards Applicable to the Transportation of Solid Waste Military Munitions ..... 708
§5307. Standards Applicable to Emergency Responses ..... 709
§5309. Standards Applicable to the Storage of Solid Waste Military Munitions ..... 709
§5311. Standards Applicable to the Treatment and Disposal of Waste Military Munitions ..... 710

# Title 33
# ENVIRONMENTAL QUALITY
## Part V. Hazardous Waste and Hazardous Materials
## Subpart 1. Department of Environmental Quality—Hazardous Waste
## Chapter 1. General Provisions and Definitions

### §101. Authority

A. Rules and regulations for a hazardous waste management system are hereby established by the Department of Natural Resources as mandated by Act 449 of the 1979 Legislature as amended, which is the state's response to P.L. 94-580, the Resource Conservation and Recovery Act of 1976 (RCRA).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §103. Purpose

A. These rules and regulations serve a fourfold purpose:

1. first, to protect the health and well-being of the people of the state of Louisiana and to prevent damage to property or to the environment by the improper management of hazardous waste;

2. second, to provide incentives for the maximum recovery and reuse of substances in hazardous waste streams that are possible through the use of the most advanced technology;

3. third, to carefully consider the impact of the program on the economic vitality of the state and to achieve a proper balance that protects the health of the citizens and the environment of the state while meeting the needs of industry; and

4. fourth, to establish minimum state standards that define the acceptable management of hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §105. Program Scope

These rules and regulations apply to owners and operators of all facilities that generate, transport, treat, store, or dispose of hazardous waste, except as specifically provided otherwise herein. The procedures of these regulations also apply to the denial of a permit for the active life of a hazardous waste management facility or TSD unit under LAC 33:V.706. Definitions appropriate to these rules and regulations, including *solid waste* and *hazardous waste*, appear in LAC 33:V.109. Wastes that are excluded from regulation are found in this Section.

A. Notification of Hazardous Waste Activity

1. Within 90 days after the promulgation of these regulations anyone subject to these regulations who has not previously notified the department on the Notification of Hazardous Waste Activity Form HW-1, or whose notification on Form HW-1 is not approved, must notify the Office of Environmental Services, using Form HW-1. Within 90 days after changes in waste characteristics or changes in these regulations that result in changes in the notification, interim status facilities must revise their notification form by resubmitting a corrected copy of Form HW-1.

2. All notifications received must be in accordance with EPA notification procedures and must receive an EPA identification number issued through the state of Louisiana.

3. All facilities with an active EPA identification number shall be subject to requirements in LAC 33:V.Subpart 1.

B. Classification of Hazardous Wastes. Hazardous wastes are classified into two categories.

1. Category I wastes are those known chemicals and process streams whose hazardous nature has been prescribed by prior determination and which are presented in LAC 33:V.Chapter 49.

2. Category II wastes are those wastes possessing any of the characteristics of the hazard classes listed in LAC 33:V.Chapter 49. Hazard classes of concern for these wastes are ignitability, corrosivity, reactivity and toxicity.

C. Control of Wastes. Wastes generated, transported, treated, stored, and/or disposed of in Louisiana are controlled by the state of Louisiana according to the appropriate statutes of the state of Louisiana as follows, and provided that nothing contained herein shall limit the authority granted to the Department of Natural Resources (hereinafter referred to as the department) under Title 30 of the Louisiana revised statutes or to its successor (scheduled to be the Department of Environmental Quality after February 1, 1984).

1. The department's hazardous waste program is responsible for the following, subject to these rules and regulations and to Title 30 of the Louisiana Revised Statutes:

a. surface installations and areas associated with the disposal of wastes in injection wells, excluding the injection well proper;

b. all wastes listed as hazardous in LAC 33:V.Chapter 49 or having the hazardous characteristics identified in LAC 33:V.Chapter 49, which are generated, treated, stored, and/or disposed of in Louisiana.

2. The Office of Environmental Services is responsible for nonhazardous solid wastes treated, stored, and/or disposed of in public and private solid waste facilities.

3. The Department of Natural Resources, Office of Conservation, which is under the authority of the commissioner, is subject to rules and regulations promulgated by the Office of Conservation. Their responsibilities include:

a. salt water injection wells including related surface installations, mud pits, and other areas associated with the exploration and production of oil and gas; and

b. injection wells, less related surface installations and areas, for industrial on-site or commercial disposal of hazardous wastes, until the effective date of Act 97 of 1983 (scheduled to be February 1, 1984), after which time they shall be regulated by the Department of Environmental Quality in accordance with the provisions of Title 30 of the Louisiana Revised Statutes.

4. The department is responsible for radioactive materials.

5. The Louisiana Department of Public Safety (LDPS) is responsible for transportation of wastes.

6. The Department of Agriculture is responsible for waste pesticides, including pesticide containers at point of mixing, loading, application, equipment cleansing or base of operation.

D. Exclusions

1. Materials That Are Not Solid Wastes. The following materials are not solid wastes for the purpose of this Subpart:

a.i. domestic sewage; and

ii. any mixture of domestic sewage and other wastes that pass through a sewer system to a publicly owned treatment works (POTW) for treatment. *Domestic Sewage* means untreated sanitary wastes that pass through a sewer system;

b. industrial wastewater discharges that are point source discharges subject to regulation under Section 402 of the Clean Water Act, as amended;

[Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored, or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.]

c. irrigation return flows;

d. source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.;

e. material subjected to in-situ mining techniques that are not removed from the ground as part of the extraction process;

f. pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless they are *accumulated speculatively* as defined in LAC 33:V.109.*Solid Waste*;

g. spent sulfuric acid used to produce virgin sulfuric acid, unless it is *accumulated speculatively* as defined in LAC 33:V.109.*Solid Waste*;

h. secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

i. only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

ii. reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);

iii. the secondary materials are never accumulated in such tanks for over 12 months without being reclaimed; and

iv. the reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal;

i.i. spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose;

ii. wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood; and

iii. prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in Clauses D.1.i.i and ii of this Section, so long as they meet all of the following conditions:

(a). the wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for their original intended purpose;

(b). prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or groundwater or both;

(c). any unit used to manage wastewaters and/or spent wood preserving solutions, prior to reuse, can be visually or otherwise determined to prevent such releases;

(d). any drip pad used to manage the wastewaters and/or spent wood preserving solutions, prior to reuse, complies with the standards in LAC 33:V.Chapter 43.Subchapter S, regardless of whether the plant generates a total of less than 100 kg/month of hazardous waste; and

(e). prior to operating pursuant to this exclusion, the plant owner or operator submits to the Office of Environmental Services a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language:

"I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation."

The plant must maintain a copy of that document in its on-site records until closure of the facility. The exclusion applies so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the administrative authority for reinstatement. The administrative authority may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions and that violations are not likely to recur;

j. EPA Hazardous Waste Numbers K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that are hazardous only because they exhibit the toxicity characteristic (TC) specified in LAC 33:V.4903.E when, subsequent to generation, these materials are recycled to coke ovens, or to the tar recovery process as a feedstock to produce coal tar, or mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens, tar recovery, or refining processes, or mixed with coal tar;

k. nonwastewater splash condenser dross residue from the treatment of K061 in high-temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery;

l.i. oil-bearing hazardous secondary materials (i.e., sludges, by-products, or spent materials) that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process (SIC code 2911—including, but not limited to, distillation, catalytic cracking, fractionation, *gasification* (as defined in LAC 33:V.109), or thermal cracking units (i.e., cokers)) unless the material is placed on the land or speculatively accumulated before being so recycled. Materials inserted into thermal cracking units are excluded under this Paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision. Except as provided in Clause D.1.l.ii of this Section, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (i.e., from sources other than petroleum refineries) are not excluded under this Section. Residuals generated from processing or recycling materials excluded under this Subsection, where such materials as generated would have otherwise met a listing under LAC 33:V.Chapter 49, are designated as F037 listed wastes when disposed of or intended for disposal;

ii. recovered oil that is recycled in the same manner and with the same conditions as described in Clause D.1.l.i of this Section. Recovered oil is oil that has been reclaimed from secondary materials (including wastewater) generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto (SIC codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4922, 4923, 4789, 5171, and 5172). Recovered oil does not include oil-bearing hazardous wastes listed in LAC 33:V.Chapter 49; however, oil recovered from such wastes may be considered recovered oil. Recovered oil does not include *used oil* as defined in LAC 33:V.4001;

m. excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled;

n. shredded circuit boards being recycled provided that they are:

i. stored in containers sufficient to prevent a release to the environment prior to recovery; and

ii. free of mercury switches, mercury relays, nickel-cadmium batteries, and lithium batteries;

o. condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates;

p. *spent materials* (as defined in LAC 33:V.109) (other than hazardous wastes listed in LAC 33:V.Chapter 49) generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation, provided that:

i. the spent material is legitimately recycled to recover minerals, acids, cyanide, water, or other values;

ii. the spent material is not accumulated speculatively;

iii. except as provided in Clause D.1.p.iv of this Section, the spent material is stored in tanks, containers, or buildings meeting the following minimum integrity standards: a building must be an engineered structure with a floor, walls, and a roof all of which are made of nonearthen materials providing structural support (except smelter buildings may have partially earthen floors provided the secondary material is stored on the nonearthen portion) and have a roof suitable for diverting rainwater away from the foundation; a tank must be freestanding, not be a *surface impoundment* (as defined in LAC 33:V.109), and be manufactured of a material suitable for containment of its contents; a container must be free standing and be manufactured of a material suitable for containment of its contents. If tanks or containers contain any particulate that may be subject to wind dispersal, the owner/operator must operate these units in a manner that controls fugitive dust. Tanks, containers, and buildings must be designed, constructed, and operated to prevent significant releases to the environment of these materials;

iv. the administrative authority may make a site-specific determination, after public review and comment,

that only solid mineral processing spent materials may be placed on pads, rather than in tanks, containers, or buildings. Solid mineral processing spent materials do not contain any free liquid. The decision-maker must affirm that pads are designed, constructed, and operated to prevent significant releases of the spent material into the environment. Pads must provide the same degree of containment afforded by the non-RCRA tanks, containers, and buildings eligible for exclusion:

(a). the decision-maker must also consider if storage on pads poses the potential for significant releases via groundwater, surface water, and air exposure pathways. Factors to be considered for assessing the groundwater, surface water, air exposure pathways are: the volume and physical and chemical properties of the spent material, including its potential for migration off the pad; the potential for human or environmental exposure to hazardous constituents migrating from the pad via each exposure pathway; and the possibility and extent of harm to human and environmental receptors via each exposure pathway;

(b). pads must meet the following minimum standards: be designed of nonearthen material that is compatible with the chemical nature of the mineral processing spent material; be capable of withstanding physical stresses associated with placement and removal; have run-on/runoff controls; be operated in a manner which controls fugitive dust; and have integrity assurance through inspections and maintenance programs;

(c). before making a determination under this Subsection, the administrative authority must provide notice and the opportunity for comment to all persons potentially interested in the determination. This can be accomplished by placing notice of this action in major local newspapers or broadcasting notice over local radio stations;

v. the owner or operator provides notice to the Office of Environmental Services, providing the following information: the types of materials to be recycled; the type and location of the storage units and recycling processes; and the annual quantities expected to be placed in land-based units. This notification must be updated when there is a change in the type of materials recycled or the location of the recycling process; and

vi. for purposes of Subparagraph D.2.h of this Section, mineral processing spent materials must be the result of mineral processing and may not include any listed hazardous wastes. Listed hazardous wastes and characteristic hazardous wastes generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of solid waste;

q. comparable fuels or comparable syngas fuels (i.e., comparable/syngas fuels) that meet the requirements of LAC 33:V.4909;

r. petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process (SIC code 2911) along with normal petroleum refinery process streams, provided:

i. the oil is hazardous only because it exhibits the characteristic of *ignitability* (as defined in LAC 33:V.4903.B) and/or toxicity for benzene (LAC 33:V.4903.E, waste code D018); and

ii. the oil generated by the organic chemical manufacturing facility is not placed on the land, or speculatively accumulated before being recycled into the petroleum refining process. An *associated organic chemical manufacturing facility* is a facility: where the primary SIC code is 2869, but where operations may also include SIC codes 2821, 2822, and 2865; and is physically co-located with a petroleum refinery; and where the petroleum refinery to which the oil being recycled is returned also provides hydrocarbon feedstocks to the organic chemical manufacturing facility. *Petrochemical recovered oil* is oil that has been reclaimed from secondary materials (i.e., sludges, by-products, or spent materials, including wastewater) from normal organic chemical manufacturing operations, as well as oil recovered from organic chemical manufacturing processes;

s. spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid, unless the material is placed on the land or *accumulated speculatively*, as defined in LAC 33:V.109;

t. hazardous secondary materials used to make zinc fertilizers, provided that the following conditions are satisfied:

i. hazardous secondary materials used to make zinc micronutrient fertilizers must not be *accumulated speculatively*, as defined in LAC 33:V.109;

ii. generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers must:

(a). submit a one-time notice to the Office of Environmental Services that contains the name, address, and EPA ID number of the generator or intermediate handler facility, provides a brief description of the secondary material that will be subject to the exclusion, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in this Subparagraph;

(b). store the excluded secondary material in tanks, containers, or buildings that are constructed and maintained in a way that prevents releases of the secondary materials into the environment. At a minimum, any building used for this purpose must be an engineered structure made of non-earthen materials that provide structural support and must have a floor, walls, and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose must be structurally sound and, if outdoors, must have roofs or covers that prevent contact with wind and rain. Containers used for this purpose must be kept closed except when it is necessary to add or remove material and must be

in sound condition. Containers that are stored outdoors must be managed within storage areas that:

(i). have containment structures or systems sufficiently impervious to contain leaks, spills, and accumulated precipitation;

(ii). provide for effective drainage and removal of leaks, spills, and accumulated precipitation; and

(iii). prevent run-on into the containment system;

(c). with each off-site shipment of excluded hazardous secondary materials, provide written notice to the receiving facility that the material is subject to the conditions of this Subparagraph;

(d). maintain, at the generator's or intermediate handler's facility, for no less than three years, records of all shipments of excluded hazardous secondary materials. For each shipment these records must, at a minimum, contain the following information:

(i). the name of the transporter and the date of the shipment;

(ii). the name and address of the facility that received the excluded material and documentation confirming receipt of the shipment; and

(iii). the type and quantity of excluded secondary material in each shipment;

iii. manufacturers of zinc fertilizers or zinc fertilizer ingredients made from excluded hazardous secondary materials must:

(a). store excluded hazardous secondary materials in accordance with the storage requirements for generators and intermediate handlers, as specified in Subclause D.1.t.ii.(b) of this Section;

(b). submit a one-time notification to the Office of Environmental Services that, at a minimum, specifies the name, address, and EPA ID number of the manufacturing facility and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in this Subparagraph;

(c). maintain, for a minimum of three years, records of all shipments of excluded hazardous secondary materials received by the manufacturer that must, at a minimum, identify for each shipment the name and address of the generating facility, the name of the transporter, the date the materials were received, the quantity received, and a brief description of the industrial process that generated the material; and

(d). submit to the Office of Environmental Services an annual report that identifies the total quantities of all excluded hazardous secondary materials that were used to manufacture zinc fertilizers or zinc fertilizer ingredients in the previous year, the name and address of each generating facility, and the industrial processes from which they were generated;

iv. nothing in this Section preempts, overrides, or otherwise negates the provision in LAC 33:V.1103 that requires any person who generates a solid waste to determine if that waste is a hazardous waste; and

v. interim status and permitted storage units that have been used to store only zinc-bearing hazardous wastes prior to the submission of the one-time notice described in Subclause D.1.t.iii.(b) of this Section, and that afterward will be used only to store hazardous secondary materials excluded under this Subparagraph, are not subject to the closure requirements of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37 and 43;

u. zinc fertilizers made from hazardous wastes or hazardous secondary materials that are excluded under this Paragraph, provided that:

i. the fertilizer meets the following contaminant limits:

(a). for metal contaminants:

| Constituent | Maximum Allowable Total Concentration in Fertilizer, per Unit (1%) of Zinc (ppm) |
|---|---|
| Arsenic | 0.3 |
| Cadmium | 1.4 |
| Chromium | 0.6 |
| Lead | 2.8 |
| Mercury | 0.3 |

(b). for dioxin contaminants, the fertilizer must contain no more than 8 parts per trillion of dioxin, measured as toxic equivalent (TEQ);

ii. the manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals no less than every 6 months, and for dioxins no less than every 12 months. Testing must also be performed whenever changes occur to manufacturing processes or ingredients that could significantly affect the amounts of contaminants in the fertilizer product. The manufacturer may use any reliable analytical method to demonstrate that no constituent of concern is present in the product at a concentration above the applicable limit. It is the responsibility of the manufacturer to ensure that the sampling and analysis are unbiased, precise, and representative of the products introduced into commerce; and

iii. the manufacturer maintains, for no less than three years, records of all sampling and analyses performed for purposes of determining compliance with the requirements of Clause D.1.u.ii of this Section. Such records must, at a minimum, include:

(a). the dates and times product samples were taken and the dates the samples were analyzed;

(b). the names and qualifications of the persons taking the samples;

(c). a description of the methods and equipment used to take the samples;

(d). the name and address of the laboratory facility at which analyses of the samples were performed;

(e). a description of the analytical methods used, including any cleanup and sample preparation; and

(f). all laboratory analytical results used to determine compliance with the contaminant limits specified in this Subparagraph;

v. used cathode ray tubes (CRTs) meeting the following requirements:

i. *used, intact CRTs* as defined in LAC 33:V.109.*Cathode Ray Tube or CRT*, unless they are disposed, or unless they are *accumulated speculatively* as defined in LAC 33:V.109 by CRT collectors or glass processors;

ii. used, intact CRTs that are exported for recycling provided that they meet the requirements of LAC 33:V.4913;

iii. *used, broken CRTs* as defined in LAC 33:V.109.*Cathode Ray Tube or CRT* that meet the requirements of LAC 33:V.4911;

iv. glass removed from CRTs, provided that it meets the requirements of LAC 33:V.4911.

2. Solid Wastes That Are Not Hazardous Wastes. The following solid wastes are not hazardous wastes:

a. household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel), or reused. *Household waste* means any material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day use recreation areas). A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under this Subpart if such facility:

i. receives and burns only:

(a). household waste (from single and multiple dwellings, hotels, motels, and other residential sources); and

(b). solid waste from commercial or industrial sources that does not contain hazardous waste; and

ii. such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility;

b. solid wastes generated by any of the following and which are returned to the soils as fertilizers:

i. the growing and harvesting of agricultural crops; and

ii. the raising of animals, including animal manures;

c. mining overburden returned to the mine site;

d. fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste, generated primarily from the combustion of coal or other fossil fuels, except as provided in LAC 33:V.3025 for facilities that burn or process hazardous waste;

e. drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy;

f. wastes that fail the test for the toxicity characteristic because chromium is present or are listed in LAC 33:V.Chapter 49, due to the presence of chromium, which do not fail the test for the toxicity characteristic for any other constituent, or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or waste generators that:

i. the chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

ii. the waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

iii. the waste is typically and frequently managed in nonoxidizing environments;

g. specific wastes which meet the standard in Clauses D.1.f.i, ii and iii (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic) are:

i. chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling;

ii. chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling;

iii. buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue;

iv. sewer screenings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling;

v. wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing

industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling;

vi. wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue;

vii. waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries; and

viii. wastewater treatment sludges from the production of $TiO_2$ pigment using chromium-bearing ores by the chloride process;

h. solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock, and overburden from the mining of uranium ore), except as provided in LAC 33:V.3025 for facilities that burn or process hazardous waste:

i. for purposes of this Paragraph, beneficiation of ores and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting and/or autoclaving and/or chlorination/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching;

ii. for the purpose of this Paragraph, solid waste from the processing of ores and minerals includes only the following wastes as generated:

(a). slag from primary copper processing;

(b). slag from primary lead processing;

(c). red and brown muds from bauxite refining;

(d). phosphogypsum from phosphoric acid production;

(e). slag from elemental phosphorus production;

(f). gasifier ash from coal gasification;

(g). process wastewater from coal gasification;

(h). calcium sulfate wastewater treatment plant sludge from primary copper processing;

(i). slag tailings from primary copper processing;

(j). fluorogypsum from hydrofluoric acid production;

(k). process wastewater from hydrofluoric acid production;

(l). air pollution control dust/sludge from iron blast furnaces;

(m). iron blast furnace slag;

(n). treated residue from roasting/leaching of chrome ore;

(o). process wastewater from primary magnesium processing by the anhydrous process;

(p). process wastewater from phosphoric acid production;

(q). basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;

(r). basic oxygen furnace and open hearth furnace slag from carbon steel production;

(s). chloride process waste solids from titanium tetrachloride production; and

(t). slag from primary zinc processing;

iii. a residue derived from coprocessing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remains excluded under Subclause D.2.h.iii.(b) of this Section if the owner or operator:

(a). processes at least 50 percent by weight normal beneficiation raw materials or normal mineral processing raw materials; and

(b). legitimately reclaims the secondary mineral processing materials;

i. cement kiln dust waste, except as provided in LAC 33:V.3025 for facilities that burn or process hazardous waste;

j. solid waste that consists of discarded arsenical-treated wood or wood products which fails the test for the toxicity characteristic for Hazardous Waste Codes D004–D017 and which is not a hazardous waste for any other reason, if the waste is generated by persons who utilize the arsenical-treated wood and wood product for these materials' intended end use;

k. petroleum-contaminated media and debris that fail the test for the toxicity characteristic (Hazardous Waste Numbers D018-D043 only) and are subject to the corrective action regulations under underground storage tanks rules and regulations (LAC 33:XI);

l. injected groundwater that is hazardous only because it exhibits the toxicity characteristic (Hazardous Waste Codes D018-D043 only) in LAC 33:V.4903.E and that is re-injected through an underground injection well pursuant to free phase hydrocarbon recovery operations undertaken at petroleum refineries, petroleum marketing terminals, petroleum bulk plants, petroleum pipelines, and petroleum transportation spill sites until January 25, 1993. This extension applies to recovery operations in existence, or for which contracts have been issued, on or before March

25, 1991. Groundwater that is returned through infiltration galleries from such operations at petroleum refineries, marketing terminals, and bulk plants, is not a hazardous waste until January 1, 1993. New operations involving injection wells (beginning after March 25, 1991) will qualify for this compliance date extension (until January 25, 1993) only if:

i. operations are performed pursuant to a written state agreement that includes a provision to assess the groundwater and the need for further remediation once the free phase recovery is completed; and

ii. a copy of the written agreement has been submitted to: Characteristics Section (OS-333), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave, NW, Washington, DC 20460;

m. used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use;

n. non-terneplated used oil filters that are not mixed with wastes listed in LAC 33:V.4901 if these oil filters have been gravity hot-drained using one of the following methods:

i. puncturing the filter anti-drain back valve or the filter dome end and hot-draining;

ii. hot-draining and crushing;

iii. dismantling and hot-draining; or

iv. any other equivalent hot-draining method that will remove used oil; and

o. used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products;

p. leachate or gas condensate collected from landfills where certain solid wastes have been disposed, provided that:

i. the solid wastes disposed would meet one or more of the listing descriptions for Hazardous Waste Codes K169, K170, K171, K172, K174, K175, K176, K177, K178, and K181 if these wastes had been generated after the effective date of the listing;

ii. the solid wastes described in Clause D.2.p.i of this Section were disposed prior to the effective date of the listing;

iii. the leachate or gas condensate do not exhibit any characteristic of hazardous waste nor are derived from any other listed hazardous waste;

iv. discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a POTW by truck, rail, or dedicated pipe, is subject to regulation under Sections 307(b) or 402 of the Clean Water Act; and

v. as of February 13, 2001, the leachate or gas condensate derived from K169-K172 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. After November 21, 2003, leachate or gas condensate derived from K176, K177, and K178 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. After February 26, 2007, leachate or gas condensate derived from K181 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. There is one exception: if the surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation (e.g., shutdown of wastewater treatment system), provided the impoundment has a double liner, and provided the leachate or gas condensate is removed from the impoundment and continues to be managed in compliance with the conditions of this Clause after the emergency ends.

3. Hazardous Wastes That Are Exempted from Certain Regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under LAC 33:V.Subpart 1 or to the notification requirements of Subsection A of this Section, until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

4. Samples

a. Except as provided in Subparagraph D.4.b of this Section, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of LAC 33:V.Subpart 1 or to the notification requirements of Subsection A of this Section, when:

i. the sample is being transported to a laboratory for the purpose of testing; or

ii. the sample is being transported back to the sample collector after testing; or

iii. the sample is being stored by the sample collector before transport to a laboratory for testing; or

iv. the sample is being stored in a laboratory before testing; or

v. the sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

vi. the sample is being stored temporarily in the laboratory after testing for a specific purpose (e.g., until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

b. In order to qualify for the exemption in Clauses D.4.a.i-ii of this Section, a sample collector shipping

samples to a laboratory and a laboratory returning samples to a sample collector must:

i. comply with Louisiana Department of Public Safety (LDPS), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

ii. comply with the following requirements if the sample collector determines that LDPS, USPS, or other shipping requirements do not apply to the shipment of the sample:

(a). assure that the following information accompanies the sample:

(i). the sample collector's name, mailing address, and telephone number;

(ii). the laboratory's name, mailing address, and telephone number;

(iii). the quantity of the sample;

(iv). the date of shipment; and

(v). a description of the sample; and

(b). package the sample so that it does not leak, spill, or vaporize from its packaging.

c. This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in Subparagraph D.4.a of this Section.

5. Treatability Study Samples

a. Except as provided in Subparagraph D.5.b of this Section, persons who generate or collect samples for the purpose of conducting *treatability studies* as defined in LAC 33:V.109 are not subject to any requirement of LAC 33:V.Chapters 11, 13, 15, or 49, or to the notification requirements of Subsection A of this Section, nor are such samples included in the quantity determinations of LAC 33:V.108 and 1109.E.7 when:

i. the sample is being collected and prepared for transportation by the generator or sample collector; or

ii. the sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility; or

iii. the sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

b. The exemption in Subparagraph D.5.a of this Section is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies, provided that:

i. the generator or sample collector uses (in "treatability studies") no more than 10,000 kg of media contaminated with nonacute hazardous waste, 1,000 kg of nonacute hazardous waste other than contaminated media, 1 kg of acute hazardous waste, or 2,500 kg of media contaminated with acute hazardous waste for each process being evaluated for each generated waste stream; and

ii. the mass of each sample shipment does not exceed 10,000 kg; the 10,000 kg quantity may be all media contaminated with nonacute hazardous waste, or may include 2,500 kg of media contaminated with acute hazardous waste, 1,000 kg of hazardous waste, and 1 kg of acute hazardous waste; and

iii. the sample is packaged so that it will not leak, spill, or vaporize from its packaging during shipment, and the requirements of Subclause D.5.b.iii.(a) or (b) of this Section are met:

(a). the transportation of each sample shipment complies with the shipping requirements of the LDPS and USPS, or any other applicable shipping requirements; or

(b). if the LDPS, the USPS, or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:

(i). the name, mailing address, and telephone number of the originator of the sample;

(ii). the name, address, and telephone number of the facility that will perform the treatability study;

(iii). the quantity of the sample;

(iv). the date of shipment; and

(v). a description of the sample, including its EPA Hazardous Waste Number;

iv. the sample is shipped to a laboratory or testing facility that is exempt under Paragraph D.6 of this Section or has an appropriate LAC 33:V.Subpart 1 permit or interim status;

v. the generator or sample collector maintains the following records for a period ending three years after completion of the treatability study:

(a). copies of the shipping documents;

(b). a copy of the contract with the facility conducting the treatability study; and

(c). documentation showing:

(i). the amount of waste shipped under this exemption;

(ii). the name, address, and EPA identification number of the laboratory or testing facility that received the waste;

(iii). the date the shipment was made;

(iv). whether or not unused samples and residues were returned to the generator; and

vi. the generator reports the information required under Subclause D.5.b.v.(c) of this Section in its biennial report.

c. The administrative authority may grant requests on a case-by-case basis for up to an additional two years for

treatability studies involving bioremediation. The administrative authority may grant requests on a case-by-case basis for quantity limits in excess of those specified in Clauses D.5.b.i and ii and Subparagraph D.6.d of this Section for up to an additional 5,000 kg of media contaminated with nonacute hazardous waste, 500 kg of nonacute hazardous waste, 2,500 kg of media contaminated with acute hazardous waste, and 1 kg of acute hazardous waste:

i. in response to requests for authorization to ship, store, and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process (e.g., batch versus continuous), the size of the unit undergoing testing (particularly in relation to scale-up considerations), the time/quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations;

ii. in response to requests for authorization to ship, store, and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies when: there has been an equipment or mechanical failure during the conduct of a treatability study; there is a need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment; and

iii. the additional quantities and time frames allowed in Clauses D.5.c.i and ii of this Section are subject to all the provisions in Subparagraph D.5.a and Clauses D.5.b.iii-vi of this Section. The generator or sample collector must apply to the Office of Environmental Services and provide in writing the following information:

(a). the reason why the generator or sample collector requires additional time or quantity of sample for the treatability study evaluation and the additional time or quantity needed;

(b). documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results of each treatability study;

(c). a description of the technical modifications or change in specifications that will be evaluated and the expected results;

(d). if such further study is being required due to equipment or mechanical failure, the applicant must include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protect against further breakdowns; and

(e). such other information that the administrative authority considers necessary.

6. Samples Undergoing Treatability Studies at Laboratories and Testing Facilities. Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to LAC 33:V.Subpart 1 requirements) are not subject to any requirement of LAC 33:V.Chapters 3, 5, 11, 13, 15, 22, 41, and 43 or to the notification requirements of Subsection A of this Section, provided that the following conditions are met. A mobile treatment unit may qualify as a testing facility subject to Subparagraphs D.6.a-k of this Section. Where a group of mobile treatment units is located at the same site, the limitations specified in Subparagraphs D.6.a-k of this Section apply to the entire group of mobile treatment units collectively as if the group were one mobile treatment unit:

a. no less than 45 days before conducting treatability studies, the facility notifies the Office of Environmental Services in writing that it intends to conduct treatability studies under this Subsection;

b. the laboratory or testing facility conducting the treatability study has an EPA identification number;

c. no more than a total of 10,000 kg of "as received" media contaminated with nonacute hazardous waste, 2,500 kg of media contaminated with acute hazardous waste, or 250 kg of other "as received" hazardous waste is subjected to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector;

d. the quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 10,000 kg, the total of which can include 10,000 kg of media contaminated with nonacute hazardous waste, 2,500 kg of media contaminated with acute hazardous waste, 1,000 kg of nonacute hazardous wastes other than contaminated media, and 1 kg of acute hazardous waste. This quantity limitation does not include treatment materials (including nonhazardous solid waste) added to "as received" hazardous waste;

e. no more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year (two years for treatability studies involving bioremediation) has elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to 500 kg of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility;

f. the treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste;

g. the facility maintains records for three years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:

i. the name, address, and EPA identification number of the generator or sample collector of each waste sample;

ii. the date shipment was received;

iii. the quantity of waste accepted;

iv. the quantity of "as received" waste in storage each day;

v. the date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;

vi. the date the treatability study was concluded; and

vii. the date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number;

h. the facility keeps, on-site, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending three years from the completion date of each treatability study;

i. the facility prepares and submits a report to the Office of Environmental Services, by March 15 of each year, that includes the following information for the previous calendar year:

i. the name, address, and EPA identification number of the facility conducting the treatability studies;

ii. the types (by process) of treatability studies conducted;

iii. the names and addresses of persons for whom studies have been conducted (including their EPA identification numbers);

iv. the total quantity of waste in storage each day;

v. the quantity and types of waste subjected to treatability studies;

vi. when each treatability study was conducted; and

vii. the final disposition of residues and unused sample from each treatability study;

j. the facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under LAC 33:V.109.*Hazardous Waste* and, if so, are subject to LAC 33:V.Chapters 3, 5, 11, 13, 15, 22, 41, 43, and 49, unless the residue and unused samples are returned to the sample originator under the Paragraph D.5 of this Section exemption; and

k. the facility notifies the Office of Environmental Services by letter when the facility is no longer planning to conduct any treatability studies at the site.

7. The following wastes are exempt from regulation under this Subpart, except as specified in LAC 33:V.Chapter 38, and therefore, are not fully regulated as hazardous waste. The wastes listed in this Section are subject to regulation under LAC 33:V.Chapter 38:

a. batteries as described in LAC 33:V.3803;

b. pesticides as described in LAC 33:V.3805;

c. mercury-containing equipment as described in LAC 33:V.3807;

d. lamps as described in LAC 33:V.3809; and

e. antifreeze as described in LAC 33:V.3811.

8. PCB Wastes Regulated under Toxic Substance Control Act. PCB-containing dielectric fluid and electric equipment containing such fluid authorized for use and regulated by the United States Environmental Protection Agency under 40 CFR 761, and that are hazardous only because they fail the test for the toxicity characteristic (Hazardous Waste Numbers D018-D043 only) are exempt from regulation under LAC 33:V.Subpart 1.

9. Dredged Material That Is Not a Hazardous Waste. Dredged material that is subject to the requirements of a permit that has been issued under Section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344) or Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste. For this Subsection, the following definitions apply:

a. the term *dredged material* has the same meaning as defined in 40 CFR 232.2; and

b. the term *permit* means:

i. a permit issued by the U.S. Army Corps of Engineers (Corps) or an approved state under Section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344);

ii. a permit issued by the Corps under Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413); or

iii. in the case of Corps civil works projects, the administrative equivalent of the permits referred to in Clauses D.9.b.i and ii of this Section, as provided for in Corps regulations (for example, see 33 CFR 336.1, 336.2, and 337.6).

E. Judicial Review. Any person has the right to file a lawsuit to reverse any act or failure to act by the administrative authority pursuant to these regulations or the act in accordance with the provisions of the Administrative

Procedure Act (R.S. 49:951 et seq.) or any other applicable provision of law.

F. Relationship to Interim Status Standards. A facility owner or operator who has fully complied with the requirements for interim status must comply with these regulations until final administrative disposition of his permit application is made. After the effective date of these regulations, the treatment, storage, or disposal of hazardous waste is prohibited except in accordance with a permit (standard or interim). The administrative authority may provide for the continued operation of an existing facility which meets the requirements of these regulations and certain conditions until final administrative disposition of the owner's or operator's permit application is made.

G. Imminent Hazard Action. Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to the Act.

H. General Procedures to Petition the Administrative Authority. The procedure that must be followed to petition for rulemaking can be found in LAC 33:I.Chapter 9 and other applicable chapters in this Subpart.

I. Petitions for Equivalent Testing or Analytical Methods

1. Any person seeking approval of an equivalent testing or analytical method may petition for a regulatory amendment under this Subsection and LAC 33:I.Chapter 9. To be successful, the petitioner must demonstrate to the satisfaction of the administrative authority that the proposed method is equal to or superior to the corresponding method prescribed in these regulations, in terms of its sensitivity, accuracy, and precision (i.e., reproducibility).

2. In addition to the information required by LAC 33:I.Chapter 9, each petition must include:

a. a full description of the proposed method, including all procedural steps and equipment used in the method;

b. a description of the types of wastes or waste matrices for which the proposed method may be used;

c. comparative results obtained from using the proposed method with those obtained from using the relevant or corresponding methods prescribed in these regulations;

d. an assessment of any factors which may interfere with or limit the use of the proposed method; and

e. a description of the quality control procedures necessary to ensure the sensitivity, accuracy, and precision of the proposed method.

3. After receiving a petition for an equivalent method, the administrative authority may request any additional information on the proposed method which it may reasonably require to evaluate the method.

J. Discharge Reporting Requirements

1. Emergency Conditions. For any unauthorized discharge of a Hazardous Waste, in contravention of the Louisiana Hazardous Waste Control Law (R.S. 30:2171 et seq.) or of the regulations, or of the terms and conditions of a permit or license issued thereunder, which results or threatens to result in an emergency condition (a condition which could reasonably be expected to endanger the health and safety of the public, cause significant adverse impact to the land, water or air environment, or cause severe damage to property), the discharger shall immediately, but in no case later than one hour, notify the Department of Public Safety 24-hour Louisiana Emergency Hazardous Materials Hotline at (225) 925-6595 (collect calls accepted 24 hours a day) and in accordance with other provisions of LAC 33:I.Chapter 39.

2. Non-Emergency Conditions. For any unauthorized discharge of a hazardous waste that does not cause an emergency condition, the discharger shall notify SPOC within 24 hours of learning of the discharge and in accordance with other provisions of LAC 33:I.Chapter 39.

K. Variance to be Classified as a Boiler

1. Variance to be Classified as a Boiler. In accordance with the standards and criteria in LAC 33:V.109.*Boiler* and the procedures in Paragraph K.2 of this Section, the administrative authority may determine on a case-by-case basis that certain enclosed devices using controlled flame combustion are boilers, even though they do not otherwise meet the definition of boiler contained in LAC 33:V.109 after considering the following criteria:

a. the extent to which the unit has provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and

b. the extent to which the combustion chamber and energy recovery are of integral design; and

c. the efficiency of energy recovery, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

d. the extent to which exported energy is utilized; and

e. the extent to which the device is in common and customary use as a "boiler" functioning primarily to produce steam, heated fluids, or heated gases; and

f. other factors, as appropriate.

2. Procedures for Variances from Classification as a Solid Waste or to be Classified as a Boiler. The administrative authority will use the following procedures in evaluating applications for variances from classification as a solid waste or applications to classify particular enclosed controlled flame combustion devices as boilers as provided in this Subsection:

a. the applicant must apply to the administrative authority. The application must address the relevant criteria contained in this Subsection; and

b. the administrative authority will evaluate the application and issue a draft notice tentatively granting or

denying the application. Notification of this tentative decision will be provided by newspaper advertisement and/or radio broadcast in the locality where the recycler is located. The administrative authority will accept comment on the tentative decision for 30 days and may also hold a public hearing upon request or at his discretion. The administrative authority will issue a final decision after receipt of comments and after a hearing (if any).

L. Additional Regulation of Certain Hazardous Waste Recycling Activities on a Case-by-Case Basis

1. Additional Regulation of Certain Hazardous Waste Recycling Activities on a Case-by-Case Basis. The administrative authority may decide on a case-by-case basis that persons accumulating or storing the recyclable materials described in LAC 33:V.4143 should be regulated under LAC 33:V.4105.B and C. The basis for this decision is that the materials are being accumulated or stored in a manner that does not protect human health and the environment because the materials or their toxic constituents have not been adequately contained, or because the materials being accumulated or stored together are incompatible. In making this decision, the administrative authority will consider the following factors:

a. the types of materials accumulated or stored and the amounts accumulated or stored;

b. the method of accumulation or storage;

c. the length of time the materials have been accumulated or stored before being reclaimed;

d. whether any contaminants are being released into the environment, or are likely to be so released; and

e. other relevant factors.

2. Procedures for Case-by-Case Regulation of Hazardous Waste Recycling Activities. The administrative authority will use the following procedures when determining whether to regulate hazardous waste recycling activities described in LAC 33:V.4143 under the provisions of LAC 33:V.4105.B and C, rather than under the provisions of LAC 33:V.4143:

a. if a generator is accumulating the waste, the administrative authority will issue a notice setting forth the factual basis for the decision and stating that the person must comply with the applicable requirements of LAC 33:V.1101, 1109.A, 1111.A, and 1113.A. The notice will become final within 30 days, unless the person served requests a public hearing to challenge the decision. Upon receiving such a request, the administrative authority will hold a public hearing. The administrative authority will provide notice of the hearing to the public and allow public participation at the hearing. The administrative authority will issue a final order after the hearing stating whether or not compliance with LAC 33:V.Chapter 11 is required. The order becomes effective 30 days after service of the decision unless the administrative authority specifies a later date or unless review by the administrative authority is requested. The order may be appealed to the administrative authority by any person who participated in the public hearing. The administrative authority may choose to grant or to deny the appeal. Final department action occurs when a final order is issued and department review procedures are exhausted; and

b. if the person is accumulating the recyclable material as a storage facility, the notice will state that the person must obtain a permit in accordance with all applicable provisions of these regulations. The owner or operator of the facility must apply for a permit within no less than 60 days and no more than 180 days of notice, as specified in the notice. If the owner or operator of the facility wishes to challenge the administrative authority's decision, he may do so in his permit application, in a public hearing held on the draft permit, or in comments filed on the draft permit or on the notice of intent to deny the permit. The fact sheet accompanying the permit will specify the reasons for the department's determination. The question of whether the administrative authority's decision was proper will remain open for consideration during the public comment period discussed under LAC 33:V.707 and in any subsequent hearing.

M. Petitions to Exclude a Waste Produced at a Particular Facility

1. Any person seeking to exclude a waste at a particular generating facility from the lists in LAC 33:V.4901 may petition for a regulatory amendment under this Subsection and LAC 33:I.Chapter 9. To be successful:

a. the petitioner must demonstrate to the satisfaction of the administrative authority that the waste produced by a particular generating facility does not meet any of the criteria under which the waste was listed as a hazardous or an acutely hazardous waste;

b. based on a complete application, the administrative authority must determine, where he has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of LAC 33:V.4903; and

c. facilities that have successfully petitioned are listed in LAC 33:V.4999.Appendix E.

2. If the waste is listed with codes "I", "C", "R", or "E", in LAC 33:V.4901:

a. the petitioner must show that the waste does not exhibit the relevant characteristic for which the waste was listed as defined in LAC 33:V.4903 using any applicable methods prescribed therein. The petitioner also must show that the waste does not exhibit any of the other characteristics defined in LAC 33:V.4903 using any applicable methods prescribed therein;

b. based on a complete application, the administrative authority must determine, where he has a reasonable basis to believe that factors (including additional

constituents) other than those for which the waste was listed could cause the waste to be hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of LAC 33:V.4903.

3. If the waste is listed with Code "T" in LAC 33:V.4901:

a. the petitioner must demonstrate that the waste:

i. does not contain the constituent or constituents (as defined in LAC 33:V.4901.G, Table 6) that caused the administrative authority to list the waste; or

ii. although containing one or more of the hazardous constituents (as defined in LAC 33:V.4901.G, Table 6) that caused the administrative authority to list the waste, does not meet the criterion of LAC 33:V.4907.A.3 when considering the factors used by the administrative authority in LAC 33:V.4907.A.3.a-k under which the waste was listed as hazardous; and

b. based on a complete application, the administrative authority must determine, where he has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

c. the petitioner must demonstrate that the waste does not exhibit any of the characteristics defined in LAC 33:V.4903 using any applicable methods prescribed therein;

d. a waste which is so excluded, however, still may be a hazardous waste by operation of LAC 33:V.4903.

4. If the waste is listed with the Code "H" in LAC 33:V.4901:

a. the petitioner must demonstrate that the waste does not meet the criterion of LAC 33:V.4907.A.2; and

b. based on a complete application, the administrative authority must determine, where he has a reasonable basis to believe that additional factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

c. the petitioner must demonstrate that the waste does not exhibit any of the characteristics defined in LAC 33:V.4903 using any applicable methods prescribed therein;

d. a waste which is so excluded, however, still may be a hazardous waste by operation of LAC 33:V.4903.

5. The procedures in LAC 33:V.105.M and LAC 33:I.Chapter 9 may also be used to petition the administrative authority for a regulatory amendment to exclude from LAC 33:V.109.*Hazardous Waste*.2.c or 4, a waste which is described in LAC 33:V.109.*Hazardous Waste*.2.c or 4 and is either a waste listed in LAC 33:V.4901, or is derived from a waste listed in LAC 33:V.4901. This exclusion may only be issued for a particular generating, storage, treatment, or disposal facility. The petitioner must make the same demonstration as required by LAC 33:V.105.M.1. Where the waste is a mixture of solid waste and one or more listed hazardous wastes or is derived from one or more hazardous wastes, his demonstration must be made with respect to the waste mixture as a whole. Analyses must be conducted for not only those constituents for which the listed waste contained in the mixture was listed as hazardous, but also for factors (including additional constituents) that could cause the waste mixture to be a hazardous waste. A waste which is so excluded may still be a hazardous waste by LAC 33:V.4903.

6. Demonstration samples must consist of enough representative samples, but in no case less than four samples, taken over a period of time sufficient to represent the variability or the uniformity of the waste.

7. Each petition must include, in addition to the information required by LAC 33:I.Chapter 9:

a. the name and address of the independent laboratory facility, accredited by the state of Louisiana in accordance with LAC 33:I.Subpart 3, performing the sampling or tests of the waste;

b. the names and qualifications of the persons sampling and testing the waste;

c. the dates of sampling and testing;

d. the location of the generating facility;

e. a description of the manufacturing processes or other operations and feed materials producing the waste and an assessment of whether such processes, operations, or feed materials can or might produce a waste that is not covered by the demonstration;

f. a description of the waste and an estimate of the average and maximum monthly and annual quantities of waste covered by the demonstration;

g. pertinent data on and discussion of the factors delineated in the respective criterion for listing a hazardous waste, where the demonstration is based on the factors in LAC 33:V.4907.A.3;

h. a description of the methodologies and equipment used to obtain the representative samples;

i. a description of the sample handling and preparation techniques, including techniques used for extraction, containerization and preservation of the samples;

j. a description of the tests performed (including results):

i. during the first sampling round, these tests must include the Toxicity Characteristic Leaching Procedure (TCLP) analysis of all the groundwater monitoring constituents listed in LAC 33:V.3325, Table 4 and analysis of total volatiles, semi-volatiles, and metals;

ii. all four sampling rounds must include analyses of dioxins and furans;

iii. all lab data, including instrument tuning, method blanks, field blanks, trip blanks, calibration data, chromatograms, duplicates, matrix spikes, and matrix spike duplicates, must be included;

k. the names and model numbers of the instruments used in performing the tests;

l. a report indicating that the data was reviewed by an independent data validator before being submitted to the department; and

m. the following statement signed by the generator of the waste or his authorized representative:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

8. After receiving a petition for an exclusion, the administrative authority may request any additional information which he may reasonably require to evaluate the petition.

9. An exclusion will only apply to the waste generated at the individual facility covered by the demonstration and will not apply to waste from any other facility.

10. The administrative authority may exclude only part of the waste for which the demonstration is submitted where he has reason to believe that variability of the waste justifies a partial exclusion.

N. Petitions to Amend LAC 33:V.Chapter 38 to Include Additional Hazardous Wastes

1. Any person seeking to add a hazardous waste or a category of hazardous waste to the universal waste regulations of LAC 33:V.Chapter 38 may petition for a regulatory amendment under LAC 33:I.Chapter 9 and LAC 33:V.Chapter 38.

2. To be successful, the petitioner must demonstrate to the satisfaction of the administrative authority that regulation under the universal waste regulations of LAC 33:V.Chapter 38:

a. is appropriate for the waste or category of waste;

b. will improve management practices for the waste or category of waste; and

c. will improve implementation of the hazardous waste program.

3. The petition must include the information required by LAC 33:I.Chapter 9. The petition should also address as many of the factors listed in LAC 33:V.3883 as are appropriate for the waste or category of waste addressed in the petition.

4. The administrative authority will grant or deny a petition using the factors listed in LAC 33:V.3883. The decision will be based on the weight of evidence showing that regulation under LAC 33:V.3883 is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

5. The administrative authority may request additional information needed to evaluate the merits of the petition.

O. Variances from Classification as a Solid Waste

1. In accordance with the standards and criteria in Paragraph O.2 of this Section, the administrative authority may determine on a case-by-case basis that the following recycled materials are not solid waste(s):

a. materials that are *accumulated speculatively* without sufficient amounts being recycled, as defined in LAC 33:V.109;

b. materials that are reclaimed and then reused within the original production process in which they were generated; and

c. materials that have been reclaimed, but must be reclaimed further before the materials are completely recovered.

2. Standards and Criteria for Variances from Classification as a Solid Waste

a. The administrative authority may grant requests for a variance from classifying as a solid waste those materials that are accumulated speculatively without sufficient amounts being recycled if the applicant demonstrates that sufficient amounts of the material will be recycled or transferred for recycling in the following year. If a variance is granted, it is valid only for the following year, but can be renewed, on an annual basis, by filing a new application. The administrative authority's decision will be based on the following criteria:

i. the manner in which the material is expected to be recycled, when the material is expected to be recycled, and whether this expected disposition is likely to occur (e.g., because of past practice, market factors, the nature of the material, or contractual arrangements for recycling);

ii. the reason that the applicant has accumulated the material for one or more years without recycling 75 percent of the volume accumulated at the beginning of the year;

iii. the quantity of material already accumulated and the quantity expected to be generated and accumulated before the material is recycled;

iv. the extent to which the material is handled to minimize loss; and

v. other related factors.

b. The administrative authority may grant requests for a variance from classifying as a solid waste those materials that are reclaimed and then reused as feedstock

within the original primary production process in which the materials were generated if the reclamation operation is an essential part of the production process. This determination will be based on the following criteria:

i. how economically viable the production process would be if it were to use virgin materials, rather than reclaimed materials;

ii. the extent to which the material is handled before reclamation to minimize loss;

iii. the time periods between generating the material and its reclamation and between reclamation and return to the original primary production process;

iv. the location of the reclamation operation in relation to the production process;

v. whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process, and whether it is returned to the process in substantially its original form;

vi. whether the person who generates the material also reclaims it; and

vii. other relevant factors.

c. The administrative authority may grant requests for a variance from classifying as a solid waste those materials that have been reclaimed but must be reclaimed further before recovery is completed if, after initial reclamation, the resulting material is commodity-like (even though it is not yet a commercial product, and has to be reclaimed further). This determination will be based on the following factors:

i. the degree of processing the material has undergone and the degree of further processing that is required;

ii. the value of the material after it has been reclaimed;

iii. the degree to which the reclaimed material is like an analogous raw material;

iv. the extent to which an end market for the reclaimed material is guaranteed;

v. the extent to which the reclaimed material is handled to minimize loss; and

vi. other relevant factors.

P. Criteria for Hazardous Waste Being Managed Within an Area of Contamination. An area of contamination (AOC) is a discrete area of generally dispersed contamination, the designation of which has been approved by the administrative authority. Under certain conditions, environmental media impacted with hazardous waste may be moved within an AOC without triggering land disposal restrictions or minimum technology requirements. This approach encourages and expedites remedial actions where hazardous waste releases have occurred.

1. Any person who proposes to manage contaminated media within an AOC must submit the definition of the project's AOC to the Office of Environmental Services. Approval from the administrative authority concerning the extent of the AOC must occur prior to movement of contaminated media. In general the AOC should be consistent with the area impacted by the release.

2. Use of an AOC to manage hazardous waste may be appropriate where the additional flexibility of a corrective action management unit pursuant to LAC 33:V.Chapter 26 is not needed. Movement and consolidation of contaminated media, treating contaminated media *in situ*, or leaving contaminated media in place in a single area or engineered unit within an AOC will not trigger the hazardous waste land disposal restrictions or minimum technology requirements of LAC 33:V.Subpart 1.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 11:1139 (December 1985), LR 12:319 (May 1986), LR 13:84 (February 1987), LR 13:433 (August 1987), LR 13:651 (November 1987), LR 14:790 (November 1988), LR 15:181 (March 1989), LR 16:47 (January 1990), LR 16:217, LR 16:220 (March 1990), LR 16:398 (May 1990), LR 16:614 (July 1990), LR 17:362, 368 (April 1991), LR 17:478 (May 1991), LR 17:883 (September 1991), LR 18:723 (July 1992), LR 18:1256 (November 1992), LR 18:1375 (December 1992), amended by the Office of the Secretary, LR 19:1022 (August 1993), amended by the Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 21:944 (September 1995), LR 22:813, 831 (September 1996), amended by the Office of the Secretary, LR 23:298 (March 1997), amended by the Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:564, 567 (May 1997), LR 23:721 (June 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:952 (August 1997), LR 23:1511 (November 1997), LR 24:298 (February 1998), LR 24:655 (April 1998), LR 24:1093 (June 1998), LR 24:1687, 1759 (September 1998), LR 25:431 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:268 (February 2000), LR 26:2464 (November 2000), LR 27:291 (March 2001), LR 27:706 (May 2001), LR 29:317 (March 2003), LR 30:1680 (August 2004), amended by the Office of Environmental Assessment, LR 30:2463 (November 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2451 (October 2005), LR 32:605 (April 2006), LR 32:821 (May 2006), LR 33:450 (March 2007), LR 33:2097 (October 2007), LR 34:614 (April 2008), LR 34:1008 (June 2008), LR 34:1893 (September 2008), LR 34:2395 (November 2008), LR 35:1878 (September 2009).

## §106. Hazardous Waste Determination for Contaminated Media

A. Except as otherwise provided in this Section, environmental media that contain hazardous waste subject to regulation under LAC 33:V.4901 or LAC 33:V.4903, shall be managed as hazardous waste. An environmental medium (soil/sediment, surface water, or groundwater) no longer contains a hazardous waste when:

1. the concentration of the hazardous constituent that serves as the basis for the waste being listed as hazardous (as defined in LAC 33:V.109 or as determined by the department on a case-by-case basis, e.g., creosote) remaining in the medium meets the appropriate standards described in this Section; and

2. the medium no longer exhibits any of the characteristics of hazardous waste identified in LAC 33:V.4903. Land disposal treatment standards (LAC 33:V.2299) shall continue to apply to contaminated environmental media that are treated and then determined to no longer contain hazardous waste. Contaminated environmental media determined not to contain any hazardous waste prior to treatment are not subject to any RCRA Subtitle C requirement, including the standards in LAC 33:V.2299.

B. Nonhazardous Environmental Medium (NHEM) Determination

1. Upon written request, the department may make a site-specific determination that an environmental medium contaminated with a listed hazardous waste at a concentration of the hazardous constituent at or below the level described in this Section no longer contains hazardous waste. Such a determination shall be known as a NHEM determination. A site-specific NHEM determination may be granted by the department contingent upon management of the environmental medium in accordance with any institutional control or other requirement described in the letter granting the request.

2. When a NHEM determination would be useful to expedite site remediation, a written request and payment of the fee in accordance with LAC 33:V.5147 may be submitted to the Office of Environmental Services. The request must demonstrate application of the process described in Paragraphs B.3-4 of this Section and that land disposal treatment standards are met when applicable.

3. A NHEM determination does not authorize the placement of contaminated media in, or establish remedial standards for, a particular area. Approval for placement of the contaminated medium in a specific area must be obtained from the Office of Environmental Services, unless it is otherwise allowed by regulation. Remedial standards for areas of contamination shall be established in accordance with the Risk Evaluation/Corrective Action Program (RECAP) as incorporated by reference in LAC 33:I.1307.

4. The identification, development, and application of the standards for media to be determined to no longer contain hazardous waste shall comply with the following process.

a. Determine the area of investigation (AOI). The AOI is a zone contiguous to and including impacted media, defined vertically and horizontally by the presence of one or more constituents in concentrations exceeding a limiting standard.

b. Identify the area of investigation concentration (AOIC). The AOIC is to be identified by the maximum detected concentration of the constituent of concern (COC) in the AOI or the upper bound estimate (e.g. upper confidence limit) of the arithmetic mean concentration of the COC.

[NOTE: The department recommends that the upper bound estimate of the arithmetic mean concentration be identified as the concentration recommended by the *ProUCL* program, a software program available from EPA's Technical Support Center for Monitoring and Site Characterization (www.epa.gov/nerlesd1/tsc/form.htm).]

c. Determine the soil standard ($Soil_{NHEM}$). The soil standards are presented in Table 1 of this Section. For a constituent not included in Table 1, the applicant shall calculate a value using the appropriate equation and input values from LAC 33:V.199.Appendix A. Compare the soil standard to the AOIC. If the AOIC detected for a COC does not exceed the soil standard, then a NHEM determination may be made.

d. Identify the groundwater exposure concentration (EC). The EC shall be identified as the maximum concentration of COC detected in the groundwater AOI.

e. Determine the groundwater standard ($GW_{NHEM}$). The groundwater standards are presented in Table 1 of this Section. If a detected groundwater constituent cannot be found in Table 1, then the maximum contaminant level (MCL), contained in the National Primary Drinking Water regulations (40 CFR Part 141), multiplied by 100 is to be used as the groundwater standard. If an MCL is not available then a groundwater standard is to be calculated in accordance with appropriate equations and input values from LAC 33:V.199.Appendix A. Compare the groundwater EC to the groundwater standard. If quantitative values for constituents are less than the limiting standards, the groundwater may qualify for a NHEM determination.

**Table 1**
**Soil and Groundwater Standards**

| Compound | CAS # | $Soil_{NHEM}$ (mg/kg) | $GW_{NHEM}$ (mg/l) |
|---|---|---|---|
| Acenaphthene | 83-32-9 | 6.1E+05 | 3.7E+02 |
| Acenaphthylene | 208-96-8 | 5.1E+05 | 3.7E+02 |
| Acetone | 67-64-1 | 1.4E+05 | 6.1E+02 |
| Aldrin | 309-00-2 | 1.3E+00 | 3.9E-03 |
| Aniline | 62-53-3 | 1.7E+03 | 1.2E+01 |
| Anthracene | 120-12-7 | 1.0E+06 | 1.8E+03 |
| Antimony | 7440-36-0 | 8.2E+03 | 6.0E-01 |
| Arsenic | 7440-38-2 | 2.7E+01 | 1.0E+00 |
| Barium | 7440-39-3 | 1.0E+06 | 2.0E+02 |
| Benzene | 71-43-2 | 3.1E+01 | 5.0E-01 |
| Benz(a)anthracene | 56-55-3 | 2.9E+01 | 9.1E-02 |
| Benzo(a)pyrene | 50-32-8 | 2.9E+00 | 2.0E-02 |
| Benzo(b)fluoranthene | 205-99-2 | 2.9E+01 | 9.1E-02 |
| Benzo(k)fluoranthene | 207-08-9 | 2.9E+02 | 9.1E-01 |
| Beryllium | 7440-41-7 | 4.1E+04 | 4.0E-01 |
| Biphenyl,1,1- | 92-52-4 | 4.4E+05 | 3.0E+02 |
| Bis(2-chloroethyl)ether | 111-44-4 | 1.1E+01 | 9.6E-03 |

| Table 1 | | | |
|---|---|---|---|
| **Soil and Groundwater Standards** | | | |
| **Compound** | **CAS #** | **$Soil_{NHEM}$ (mg/kg)** | **$GW_{NHEM}$ (mg/l)** |
| Bis(2-chloroisopropyl)ether | 108-60-1 | 1.7E+02 | 2.7E-01 |
| Bis(2-ethyl-hexyl)phthalate | 117-81-7 | 1.7E+03 | 6.0E-01 |
| Bromodichloromethane | 75-27-4 | 4.2E+01 | 1.0E+01 |
| Bromoform | 75-25-2 | 1.8E+03 | 1.0E+01 |
| Bromomethane | 74-83-9 | 3.0E+02 | 8.7E+00 |
| Butyl benzyl phthalate | 85-68-7 | 1.0E+06 | 7.3E+03 |
| Cadmium | 7440-43-9 | 1.0E+04 | 5.0E-01 |
| Carbon Disulfide | 75-15-0 | 2.5E+04 | 1.0E+03 |
| Carbon Tetrachloride | 56-23-5 | 1.1E+01 | 5.0E-01 |
| Chlordane | 57-74-9 | 1.0E+02 | 2.0E-01 |
| Chloroaniline,p- | 106-47-8 | 1.7E+04 | 1.5E+02 |
| Chlorobenzene | 108-90-7 | 1.2E+04 | 1.0E+01 |
| Chlorodibromomethane | 124-48-1 | 5.4E+01 | 1.0E+01 |
| Chloroethane (Ethylchloride) | 75-00-3 | 8.2E+01 | 3.8E+00 |
| Chloroform | 67-66-3 | 1.2E+01 | 1.0E+01 |
| Chloromethane | 74-87-3 | 7.3E+01 | 1.5E+00 |
| Chloronaphthalene,2- | 91-58-7 | 8.3E+05 | 4.9E+02 |
| Chlorophenol,2- | 95-57-8 | 1.4E+04 | 3.0E+01 |
| Chromium(III) | 16065-83-1 | 1.0E+06 | 1.0E+01 |
| Chromium(VI) | 18540-29-97 | 6.1E+04 | 1.0E+01 |
| Chrysene | 218-01-9 | 2.9E+03 | 9.1E+00 |
| Cobalt | 7440-48-4 | 1.0E+06 | 2.2E+03 |
| Copper | 7440-50-8 | 8.2E+05 | 1.3E+02 |
| Cyanide (free) | 57-12-5 | 3.6E+05 | 2.0E+01 |
| DDD | 72-54-8 | 1.6E+02 | 2.8E-01 |
| DDE | 72-55-9 | 1.1E+02 | 2.0E-01 |
| DDT | 50-29-3 | 1.2E+02 | 2.0E-01 |
| Dibenz(a,h)anthracene | 53-70-3 | 2.9E+00 | 9.1E-03 |
| Dibenzofuran | 132-64-9 | 6.5E+04 | 2.4E+01 |
| Dibromo-3-chloropropane,1,2- | 96-12-8 | 1.8E+01 | 2.0E-02 |
| Dichlorobenzene,1,2- | 95-50-1 | 7.4E+04 | 6.0E+01 |
| Dichlorobenzene,1,3- | 541-73-1 | 1.8E+03 | 5.5E+00 |
| Dichlorobenzene,1,4- | 106-46-7 | 1.6E+02 | 7.5E+00 |
| Dichlorobenzidine,3,3- | 91-94-1 | 4.2E+01 | 1.5E-01 |
| Dichloroethane,1,1- | 75-34-3 | 4.7E+04 | 8.1E+02 |
| Dichloroethane,1,2- | 107-06-2 | 1.8E+01 | 5.0E-01 |
| Dichloroethene,1,1- | 75-35-4 | 9.1E+03 | 7.0E-01 |
| Dichloroethene,cis,1,2- | 156-59-2 | 3.4E+03 | 7.0E+00 |
| Dichloroethene,trans,1,2- | 156-60-5 | 4.8E+03 | 1.0E+01 |
| Dichlorophenol,2,4- | 120-83-2 | 2.0E+04 | 1.1E+02 |
| Dichloropropane,1,2- | 78-87-5 | 1.8E+01 | 5.0E-01 |
| Dichloropropene,1,3- | 542-75-6 | 1.0E+02 | 3.9E-01 |
| Dieldrin | 60-57-1 | 1.5E+00 | 4.1E-03 |
| Diethylphthalate | 84-66-2 | 1.0E+06 | 2.9E+04 |
| Dimethylphenol,2,4- | 105-67-9 | 1.1E+05 | 7.3E+02 |

| Table 1 | | | |
|---|---|---|---|
| **Soil and Groundwater Standards** | | | |
| **Compound** | **CAS #** | **$Soil_{NHEM}$ (mg/kg)** | **$GW_{NHEM}$ (mg/l)** |
| Dimethylphthalate | 131-11-3 | 1.0E+06 | 3.7E+05 |
| Di-n-octylphthalate | 117-84-0 | 3.5E+05 | 1.5E+03 |
| Dinitrobenzene,1,3- | 99-65-0 | 5.0E+02 | 3.7E+00 |
| Dinitrophenol,2,4- | 51-28-5 | 6.9E+03 | 7.3E+01 |
| Dinitrotoluene,2,6- | 606-20-2 | 4.6E+03 | 3.7E+01 |
| Dinitrotoluene,2,4- | 121-14-2 | 9.8E+03 | 7.3E+01 |
| Dinoseb | 88-85-7 | 5.4E+03 | 7.0E-01 |
| Endosulfan | 115-29-7 | 4.5E+04 | 2.2E+02 |
| Endrin | 72-20-8 | 2.5E+03 | 2.0E-01 |
| Ethyl benzene | 100-41-4 | 1.3E+05 | 7.0E+01 |
| Fluoranthene | 206-44-0 | 2.9E+05 | 1.5E+03 |
| Fluorene | 86-73-7 | 5.4E+05 | 2.4E+02 |
| Heptachlor | 76-44-8 | 3.5E-01 | 4.0E-02 |
| Heptachlor epoxide | 1024-57-3 | 2.6E+00 | 2.0E-02 |
| Hexachlorobenzene | 118-74-1 | 2.0E+01 | 1.0E-01 |
| Hexachlorobutadiene | 87-68-3 | 1.6E+02 | 8.5E-01 |
| Hexachlorocyclohexane,alpha | 319-84-6 | 4.4E+00 | 1.1E-02 |
| Hexachlorocyclohexane,beta | 319-85-7 | 1.6E+01 | 3.7E-02 |
| Hexachlorocyclohexane,gamma | 58-89-9 | 2.0E+01 | 2.0E-02 |
| Hexachlorocyclopentadiene | 77-47-4 | 9.4E+02 | 5.0E+00 |
| Hexachloroethane | 67-72-1 | 1.4E+03 | 7.9E-01 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.9E+01 | 9.1E-02 |
| Isobutyl alcohol | 78-83-1 | 6.2E+05 | 1.1E+04 |
| Isophorone | 78-59-1 | 1.1E+04 | 7.0E+01 |
| Lead (inorganic) | 7439-92-1 | 3.4E+04 | 1.5E+00 |
| Mercury (inorganic) | 7487-94-7 | 6.1E+03 | 2.0E-01 |
| Methoxychlor | 72-43-5 | 4.3E+04 | 4.0E+00 |
| Methylene chloride | 75-09-2 | 4.4E+02 | 5.0E-01 |
| Methyl ethyl ketone | 78-93-3 | 4.4E+05 | 1.9E+03 |
| Methyl isobutyl ketone | 108-10-1 | 6.3E+05 | 2.0E+03 |
| Methylnaphthalene,2- | 91-57-6 | 1.7E+04 | 6.2E+00 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 4.7E+05 | 2.0E+00 |
| Naphthalene | 91-20-3 | 4.3E+03 | 6.2E+00 |
| Nickel | 7440-02-0 | 4.1E+05 | 7.3E+02 |
| Nitrate | 14797-55-8 | 1.0E+06 | 1.0E+03 |
| Nitrite | 14797-65-0 | 1.0E+06 | 1.0E+02 |
| Nitroaniline,2- | 88-74-4 | 5.2E+01 | 2.1E-01 |
| Nitroaniline,3- | 99-09-2 | 1.4E+04 | 1.8E+01 |
| Nitroaniline,4- | 100-01-6 | 1.0E+04 | 1.1E+02 |
| Nitrobenzene | 98-95-3 | 2.5E+03 | 3.4E+00 |
| Nitrophenol,4- | 100-02-7 | 3.3E+04 | 2.9E+02 |
| Nitrosodi-n-propylamine,n- | 621-64-7 | 1.4E+00 | 9.5E-03 |
| N-nitrosodiphenylamine | 86-30-6 | 4.0E+03 | 1.4E+01 |
| Pentachlorophenol | 87-86-5 | 9.7E+01 | 1.0E-01 |
| Phenanthrene | 85-01-8 | 1.0E+06 | 1.8E+03 |

| Table 1 | | | |
|---|---|---|---|
| Soil and Groundwater Standards | | | |
| Compound | CAS # | $Soil_{NHEM}$ (mg/kg) | $GW_{NHEM}$ (mg/l) |
| Phenol | 108-95-2 | 1.0E+06 | 1.8E+03 |
| Polychlorinated biphenyls | 1336-36-3 | 9.0E+00 | 5.0E-02 |
| Pyrene | 129-00-0 | 5.6E+05 | 1.8E+02 |
| Selenium | 7782-49-2 | 1.0E+05 | 5.0E+00 |
| Silver | 7440-22-4 | 1.0E+05 | 1.8E+02 |
| Styrene | 100-42-5 | 4.3E+05 | 1.0E+01 |
| Tetrachlorobenzene,1,2,4,5- | 95-94-3 | 1.2E+03 | 1.1E+01 |
| Tetrachloroethane,1,1,1,2- | 630-20-6 | 5.9E+01 | 4.3E-01 |
| Tetrachloroethane,1,1,2,2- | 79-34-5 | 2.0E+01 | 5.5E-02 |
| Tetrachloroethylene | 127-18-4 | 3.5E+02 | 5.0E-01 |
| Tetrachlorophenol,2,3,4,6- | 58-90-2 | 1.7E+05 | 1.1E+03 |
| Thallium | 7440-28-0 | 1.4E+03 | 2.0E-01 |
| Toluene | 108-88-3 | 4.7E+04 | 1.0E+02 |
| Toxaphene | 8001-35-2 | 2.2E+01 | 3.0E-01 |
| Trichlorobenzene,1,2,4- | 120-82-1 | 1.2E+05 | 7.0E+00 |
| Trichloroethane,1,1,1- | 71-55-6 | 7.0E+04 | 2.0E+01 |
| Trichloroethane,1,1,2- | 79-00-5 | 4.3E+01 | 5.0E-01 |
| Trichloroethene | 79-01-6 | 2.1E+00 | 5.0E-01 |
| Trichlorofluoromethane | 75-69-4 | 2.6E+04 | 1.3E+03 |
| Trichlorophenol,2,4,5- | 95-95-4 | 6.6E+05 | 3.7E+03 |
| Trichlorophenol,2,4,6- | 88-06-2 | 1.7E+03 | 6.0E+00 |
| Vanadium | 7440-62-2 | 1.4E+05 | 2.6E+02 |
| Vinyl chloride | 75-01-4 | 7.9E+00 | 2.0E-01 |
| Xylene(mixed) | 1330-20-7 | 1.2E+04 | 1.0E+03 |
| Zinc | 7440-66-6 | 1.0E+06 | 1.1E+04 |
| Aliphatics C6-C8 | NA | 1.0E+04 | 3.2E+04 |
| Aliphatics >C8-C10 | NA | 1.0E+04 | 1.3E+03 |
| Aliphatics >C10-C12 | NA | 1.0E+04 | 1.4E+03 |
| Aliphatics >C12-C16 | NA | 1.0E+04 | 1.4E+03 |
| Aliphatics >C16-C35 | NA | 1.0E+04 | 7.3E+04 |
| Aromatics >C8-C10 | NA | 1.0E+04 | 3.4E+02 |
| Aromatics >C10-C12 | NA | 1.0E+04 | 3.4E+02 |
| Aromatics >C12-C16 | NA | 1.0E+04 | 3.4E+02 |
| Aromatics >C16-C21 | NA | 1.0E+04 | 1.1E+03 |
| Aromatics >C21-C35 | NA | 1.0E+04 | 1.1E+03 |
| TPH-GRO (C6-C10) | NA | 1.0E+04 | 3.4E+02 |
| TPH-DRO (C10-C28) | NA | 1.0E+04 | 3.4E+02 |
| TPH-ORO (>C28) | NA | 1.0E+04 | 1.1E+03 |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq. and, in particular, 2186(A)(2).

HISTORICAL NOTE: Promulgated by the Office of the Secretary, Legal Affairs Division, LR 33:450 (March 2007), amended LR 33:2098 (October 2007).

## §107. Enforcement

A. Failure to comply with any of the provisions of these regulations or of the terms and conditions of any permit granted or order issued hereunder constitutes a violation of the Act.

B. Investigations into Reports of Violations

1. Upon the receipt of any information concerning a violation of the requirements of the Act or these regulations, the administrative authority shall cause an investigation to be conducted into the alleged violation within seven days.

2. All facts concerning any violation developed in such an investigation shall be fully documented in a report of investigation and presented to the administrative authority within seven days of completion of the investigation. A copy of this report shall be furnished to the Louisiana Department of Justice for use in any civil or criminal proceedings under the Act.

C. Upon receipt of any report of investigation which substantiates a violation of the requirements of the Act or these regulations, the administrative authority shall commence enforcement proceedings under the Act.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §108. Special Requirements for Hazardous Waste Generated by Conditionally Exempt Small Quantity Generators

A. A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kg of hazardous waste in that month.

B. Except for those wastes identified in Subsections E, F, G, and J of this Section, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Chapters 3-37, 41, 43, and 53, except for LAC 33:V.3105, Table 1, provided the generator complies with the requirements of Subsections F, G, and J of this Section.

C. When making the quantity determinations of this Section and LAC 33:V.Chapter 11, the generator shall include all hazardous waste that it generates, except hazardous waste that:

1. is exempt from regulation under LAC 33:V.105.D.3-6 and 8, 109.*Empty Container*.1, and 4105.A; or

2. is managed immediately upon generation only in on-site *elementary neutralization units*, *wastewater treatment units*, or *totally enclosed treatment facilities* as defined in LAC 33:V.109; or

3. is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under LAC 33:V.4105.D; or

4. is used oil managed under the requirements of LAC 33:V.4105.A.3 and Chapter 40; or

5. is spent lead-acid batteries managed under the requirements of LAC 33:V.4145; or

6. is universal waste managed under LAC 33:V.105.D.7 and Chapter 38.

D. In determining the quantity of hazardous waste generated, a generator need not include:

1. hazardous waste when it is removed from on-site storage; or

2. hazardous waste produced by on-site treatment (including reclamation) of its hazardous waste, so long as the hazardous waste that is treated was counted once; or

3. spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.

E. If a generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to full regulation under the notification requirements of LAC 33:V.105.A and LAC 33:V.Chapters 3-37, 41, 43, 51, and 53:

1. a total of one kg of acute hazardous wastes listed in LAC 33:V.4901.B, C, or E; or

2. a total of 100 kg of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous wastes listed in LAC 33:V.4901.B, C, or E.

[Comment: *Full regulation* means those regulations applicable to generators of greater than 1,000 kg of non-acutely hazardous waste in a calendar month.]

F. In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than those set forth in Paragraph E.1 or 2 of this Section to be excluded from full regulation under this Section, the generator must comply with the following requirements:

1. LAC 33:V.1103;

2. the generator may accumulate acute hazardous wastes on-site. If he accumulates at any time acute hazardous wastes in quantities greater than those set forth in Paragraph E.1 or 2 of this Section, all of those accumulated wastes are subject to regulation under the applicable notification requirements of LAC 33:V.105.A and LAC 33:V.Chapters 3-37, 41, 43, 51, and 53. The time period of LAC 33:V.1109.E, for accumulation of wastes on-site, begins when the accumulated wastes exceed the applicable exclusion limit;

3. a conditionally exempt small quantity generator may either treat or dispose of its acute hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the United States, is:

a. permitted under 40 CFR 270, LAC 33:V.Chapters 3-7, or a RCRA approved hazardous waste program of any other state;

b. in interim status under 40 CFR 270 and 265, LAC 33:V.Chapters 3-7 and 43, or a RCRA approved hazardous waste program of any other state;

c. authorized to manage hazardous waste by a state with a hazardous waste management program approved under 40 CFR 271;

d. permitted, licensed, or registered by a state to manage municipal solid waste and, if managed in a municipal solid waste landfill, is subject to 40 CFR 258;

e. permitted, licensed, or registered by a state to manage nonmunicipal, nonhazardous waste and, if managed in a nonmunicipal, nonhazardous waste disposal unit after January 1, 1998, is subject to the requirements in 40 CFR 257.5-257.30; or

f. a facility which:

i. beneficially uses or reuses, or legitimately recycles or reclaims, its waste; or

ii. treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

g. for universal waste managed under LAC 33:V.Chapter 38, a universal waste handler or destination facility subject to the requirements of 40 CFR 273 or LAC 33:V.Chapter 38;

4. notify the department in accordance with LAC 33:V.105.A; and

5. any and all fees required to be paid by conditionally exempt small quantity generators in accordance with LAC 33:V.5137 must be paid.

G. In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of less than 100 kg of hazardous waste during a calendar month to be excluded from full regulation under this Section, the generator must comply with the following requirements:

1. LAC 33:V.1103;

2. the conditionally exempt small quantity generator may accumulate hazardous waste on-site. If it accumulates at any time more than a total of 1000 kg of its hazardous wastes, all of those accumulated wastes are subject to regulation under the special provisions of LAC 33:V.Chapter 11 applicable to generators of between 100 kg and 1000 kg of hazardous waste in a calendar month as well as the requirements of LAC 33:V.Chapters 3-9, 13-37, 41, 43, 51, and 53, and the applicable notification requirements of LAC 33:V.105.A. The time period of LAC 33:V.1109.E for accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes exceed 1000 kg; and

3. a conditionally exempt small quantity generator may either treat or dispose of his hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the United States, is:

a. permitted under 40 CFR 270, LAC 33:V.Chapters 3-7, or a RCRA approved hazardous waste program of any other state;

b. in interim status under 40 CFR 270 and 265, LAC 33:V.Chapters 3-7 and 43, or a RCRA approved hazardous waste program of any other state;

c. authorized to manage hazardous waste by a state with a hazardous waste management program approved under 40 CFR 271;

d. permitted, licensed, or registered by a state to manage municipal solid waste and, if managed in a municipal solid waste landfill, is subject to 40 CFR 258;

e. permitted, licensed, or registered by a state to manage nonmunicipal, nonhazardous waste and, if managed in a nonmunicipal, nonhazardous waste disposal unit after January 1, 1998, is subject to the requirements in 40 CFR 257.5-257.30; or

f. a facility that:

i. beneficially uses or reuses, or legitimately recycles or reclaims, its waste; or

ii. treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

g. for universal waste managed under LAC 33:V.Chapter 38, a universal waste handler or destination facility subject to the requirements of 40 CFR 273 or LAC 33:V.Chapter 38;

4. notify the department in accordance with LAC 33:V.105.A; and

5. any and all fees required to be paid by conditionally exempt small quantity generators in accordance with LAC 33:V.5137 must be paid.

H. Hazardous waste subject to the reduced requirements of this Section may be mixed with nonhazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this Section, unless the mixture meets any of the characteristics of hazardous waste identified in LAC 33:V.4903.

I. If any person mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of this Section, the mixture is subject to full regulation.

J. If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to LAC 33:V.Chapter 40. Any material produced from such a mixture by processing, blending, or other treatment is also subject to LAC 33:V.Chapter 40.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 27:706, 716 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2540 (October 2005), LR 32:606 (April 2006).

## §109. Definitions

For all purposes of these rules and regulations, the terms defined in this Chapter shall have the following meanings, unless the context of use clearly indicates otherwise.

*Aboveground Tank*—a device meeting the definition of *tank* in this Section and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.

*Accumulated Speculatively*—a material is *accumulated speculatively* if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that, during the calendar year (commencing on January 1), the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under LAC 33:V.105.D.3 are not to be included in making the calculation. (Materials that are already defined as solid wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation for recycling, however.

*Act*—Act 449 of the 1979 Louisiana Legislature which established Sections 1051 et seq., Title 30 of the Louisiana Revised Statutes of 1950 and any subsequent amendments to these sections.

*Active Life*—of a facility means the period from the initial receipt of hazardous waste at the facility until the administrative authority receives certification of final closure.

*Active Portion*—that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after August 1, 1979, and which is not a closed portion. (See also *closed portion* and *inactive portion.*)

*Active Range*—a military range that is currently in service and is being regularly used for range activities.

*Administrative Authority*—the Secretary of the Department of Environmental Quality or his designee or the appropriate assistant secretary or his designee.

*Ancillary Equipment*—any device including, but not limited to, such devices as piping, fittings, flanges, valves and pumps that is used to distribute, meter, or control the flow or hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal off-site.

*Aquifer*—a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs.

*Assets*—all existing and all probable future economic benefits obtained or controlled by a particular entity.

*Authorized Representative*—the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent, or person of equivalent responsibility.

*Barrier*—a physical separation by natural or constructed means which prevents or restricts the penetration to adjacent areas of the harmful effects of hazardous wastes.

*Basin*—any uncovered area constructed to retain hazardous wastes.

*Boiler*—an enclosed device using controlled flame combustion and having the following characteristics:

1. the unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and:

a. the unit's combustion chamber and primary energy recovery section(s) must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s) (such as waterwalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section(s) are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; and

b. while in operation, the unit must maintain a thermal energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

c. the unit must export and utilize at least 75 percent of the recovered energy, calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps); or

2. the unit is one which the administrative authority has determined, on a case-by-case basis, to be a boiler, after considering the standards in LAC 33:V.105.K.

*By-Product*—a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a coproduct that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

*Carbon Regeneration Unit*—any enclosed thermal treatment device used to regenerate spent activated carbon.

*Caretaker Management*—management by the administrative authority, through an appointed manager to operate a hazardous waste facility during the time the permit of the facility is revoked.

*Category I Wastes*—chemicals and process streams whose hazardous nature has been prescribed by prior determination and which are presented in LAC 33:V.Chapter 49, i.e., from non-specific sources, specific sources, acute hazardous wastes and toxic wastes.

*Category II Wastes*—wastes possessing any of the characteristics of the hazard classes listed in LAC 33:V.Chapter 49. Hazard classes of concern for these wastes are ignitability, corrosivity, reactivity and toxicity. Analytical protocols are detailed in LAC 33:V.Chapter 49.

*Cathode Ray Tube or CRT*—a vacuum tube, composed primarily of glass, that is the visual or video display component of an electronic device. A *used, intact CRT* means a CRT whose vacuum has not been released. A *used, broken CRT* means a CRT that has had the glass removed from its housing or casing and whose vacuum has been released.

*Chemical Agents and Munitions*—defined in 50 U.S.C. Section 1521(j)(1).

*Closed Portion*—that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also *active portion* and *inactive portion.*)

*Closure*—the act of securing and rendering harmless a site which has been used to treat, store or dispose of a hazardous waste so that it will pose no significant threat to human health or the environment.

*Closure Plan*—the plan for closure prepared in accordance with the requirements of LAC 33:V.Chapter 35.

*Commercial Boiler*—an industrial boiler that recycles hazardous waste for a fee by means of combustion.

*Commercial Facility*—a hazardous waste treatment, storage or disposal facility which receives, treats, stores or disposes of waste for a fee or other consideration.

*Commercial Industrial Furnace*—an industrial furnace that recycles hazardous waste for a fee by means of combustion.

*Competent Authorities*—the regulatory authorities of concerned countries having jurisdiction over transfrontier movements of wastes destined for recovery operations.

*Compliance Schedule*—remedial measures including an enforceable sequence of events, operations, or milestone actions leading to compliance with these rules and regulations and the Act.

*Component*—either the tank or ancillary equipment of a tank system.

*Component*—any constituent part of a unit or any group of constituent parts of a unit which are assembled to perform a specific function (e.g., a pump seal, pump, kiln liner, kiln thermocouple).

*Concerned Countries*—the exporting and importing Organization for Economic Cooperation and Development (OECD) member countries and any OECD member countries of transit.

*Confined Aquifer*—an aquifer bounded above and below by aquicludes or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined groundwater.

*Consignee*—(as used in LAC 33:V.1127) the person to whom possession or other form of legal control of the waste is assigned at the time the waste is received in the importing country.

*Consignee*—(as used in LAC 33:V.Chapter 11, except §1127) the ultimate treatment, storage, or disposal facility in a receiving country to which the hazardous waste will be sent.

*Constituent* or *Hazardous Waste Constituent*—any substance specified as a hazardous waste in any list in these rules and regulations.

*Container*—any portable device in which a material is stored, transported, treated, disposed of or otherwise handled.

*Containment Building*—a hazardous waste management unit that is used to store or treat hazardous waste under the provisions of LAC 33:V.1801 or 4701.

*Contingency Plan*—a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

*Corrosion Expert*—a person who, by reason of his knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing in the state of Louisiana that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

*Corrosive Waste*—a waste subject to these regulations pursuant to provisions of LAC 33:V.4903.C which, because of such properties as acidity or alkalinity, would tend to weaken or erode a common construction material.

*Country of Transit*—any designated OECD country in LAC 33:V.1113.I.1.a and b other than the exporting or importing country across which a transfrontier movement of wastes is planned or takes place.

*CRT Collector*—a person who receives used, intact CRTs for recycling, repair, resale, or donation.

*CRT Glass Manufacturer*—an operation or part of an operation that uses a furnace to manufacture CRT glass.

*CRT Processing*—conducting any of the following activities:

1. receiving broken or intact CRTs;

2. intentionally breaking intact CRTs or further breaking or separating broken CRTs; or

3. sorting or otherwise managing glass removed from CRTs.

*Current Assets*—cash, other assets, or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

*Current Closure Cost Estimate*—the most recent of the estimates prepared in accordance with LAC 33:V.3705.

*Current Liabilities*—obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

*Current Plugging and Abandonment Cost Estimates*—the most recent cost estimate for plugging and abandonment of disposal wells prepared for 40 CFR 144.62, Office of Conservation, or other substantially equivalent state program(s).

*Current Post-Closure Cost Estimate*—the most recent of the estimates prepared in accordance with LAC 33:V.3709.

*Date of Issuance of the Hazardous Waste Permit*—the date shown on the hazardous waste permit as the date of issue.

*Department*—Department of Natural Resources, or after February 1, 1984, Department of Environmental Quality, pursuant to Act 97 of 1983.

*Designated Facility*—

1. A *designated facility* is a hazardous waste treatment, storage, or disposal facility that:

a. has received a permit (or interim status) in accordance with the requirements of LAC 33:V.Chapters 1, 3, 5, 7, 27, 31, and 43;

b. has received a permit (or interim status) from a state authorized in accordance with 40 CFR 271; or

c. is regulated under the applicable Sections of 40 CFR 266, LAC 33:V.Chapter 41, or equivalent regulation of other states; and

d. has been designated on the manifest by the generator in accordance with LAC 33:V.105.H.

2. *Designated facility* also means a generator site designated on the manifest to receive its waste as a return shipment from a facility that has rejected the waste in accordance with LAC 33:V.1516.C.

3. If a waste is destined for a facility in an authorized state that has not yet obtained authorization to regulate that particular waste as hazardous, then the *designated facility* must be a facility allowed by the receiving state to accept such waste.

*Dike*—an embankment, levee, or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids or other materials.

*Dioxins and Furans (D/F)*—tetra, penta, hexa, hepta, and octa-chlorinated dibenzo dioxins and furans.

*Discarded*—a material is *discarded* if it is abandoned (and not used, re-used, reclaimed, or recycled) by being disposed of; or burned or incinerated, except where the material is being burned as a fuel for the purpose of recovering usable energy; or physically, chemically, or biologically treated (other than burned or incinerated) in lieu of or prior to being disposed of.

*Discharge* or *Hazardous Waste Discharge*—the placing, spilling, releasing, percolating, draining, seeping, disposing, bypassing, or other escaping of pollutants into the air, waters, subsurface water, or the ground as the result of a prior act or omission; or the placing of pollutants into natural or man-made pits or drums, barrels or similar containers under conditions and circumstances that leaking, seeping, draining or escaping of the pollutants can be reasonably anticipated.

*Displacement*—the relative movement of any two sides of a fault measured in any direction.

*Disposal*—the discharge, deposit, injection, dumping, spilling, leaking or placing of any hazardous waste into or on any land or water so that such hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters of the state.

*Disposal Facility*—a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water and at which the waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

*Disposer*—any person or agency who operates a treatment, storage and/or disposal facility.

*Domestic Sewage*—untreated sanitary wastes that pass through a sewer system.

*Drip Pad*—an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.

*Elementary Neutralization Unit*—a device that:

1. is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in LAC 33:V.4903.C, or they are listed in LAC 33:V.4901 only for this reason; and

2. meets the definition of *tank, tank system, container, transport vehicle, or vessel* in LAC 33:V.109.

*Emergency Action*—a situation in which there is no feasible alternative, other than the extraordinary actions authorized, to avoid loss of life, serious injury to human health or the environment, or severe damage to property.

*Empty Container*—

1.a. any hazardous waste remaining in either of the following is not subject to regulation under LAC 33:V.Chapters 1-29, 31-38, 43, 49, or to the notification requirements of LAC 33:V.105.A:

i. an empty container; or

ii. an inner liner removed from an empty container, as defined in Paragraph 2 of this definition;

b. any hazardous waste in either of the following is subject to regulation:

i. a container that is not empty; or

ii. an inner liner removed from a container that is not empty, as defined in Paragraph 2 of this definition;

2.a. a container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acutely hazardous waste listed in LAC 33:V.4901.B, C, or E, is empty if:

i.(a). all wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating; and

(b). no more than 2.5 centimeters (1 inch) of residue remain on the bottom of the container or inner liner; or

ii.(a). no more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or

(b). no more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size;

b. a container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric;

c. a container or an inner liner removed from a container that has held an acutely hazardous waste listed in LAC 33:V.4901.B, C or E, is empty if:

i. the container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

ii. the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

iii. in the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.

*EPA Acknowledgement of Consent*—the cable sent to the EPA from the United States Embassy in a receiving country that acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment.

*EPA Hazardous Waste Number*—the number assigned by EPA to each hazardous waste (see LAC 33:V.Chapter 49).

*EPA Identification Number*—the number assigned by EPA to each generator, transporter, and treatment, storage, or disposal facility.

*Equivalent Method*—any testing or analytical method approved by the administrative authority.

*Excluded Scrap Metal*—processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.

*Existing Facilities*—hazardous waste facilities in operation or for which construction commenced on or before August 1, 1979. A facility has commenced construction if the owner or operator has obtained the federal, state and local approvals or permits necessary to begin physical construction; and either: a continuous on-site, physical construction program has begun; or the owner or operator has entered into contractual obligations (which cannot be canceled or modified without substantial loss) for physical construction of the facility to be completed within a reasonable time.

*Existing Hazardous Waste Management (HWM) Facility* or *Existing Facility*—a facility which was in operation or for which construction commenced on or before November 19, 1980. A facility has commenced construction if:

1. the owner or operator has obtained the federal, state and local approvals or permits necessary to begin physical construction, and either:

a. a continuous on-site, physical construction program has begun; or

b. the owner or operator has entered into contractual obligations which cannot be canceled or modified without substantial loss for physical construction of the facility to be completed within a reasonable time.

*Existing Portion*—that land surface area of an existing waste management unit, included in the original Part I permit application, on which wastes have been placed prior to the issuance of a permit.

*Existing Tank System* or *Existing Component*—a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either:

1. a continuous on-site physical construction or installation program has begun; or

2. the owner or operator has entered into contractual obligations which cannot be canceled or modified without substantial loss for physical construction of the site or installation of the tank system to be completed within a reasonable time.

*Explosives or Munitions Emergency*—a situation involving the suspected or detected presence of unexploded ordnance (UXO), damaged or deteriorated explosives or munitions, an improvised explosive device (IED), other potentially explosive materials or devices, or other potentially harmful military chemical munitions or devices, that creates an actual or potential imminent threat to human health, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. Such situations may require immediate and expeditious action by an explosives or munitions emergency response specialist to control, mitigate, or eliminate the threat.

*Explosives or Munitions Emergency Response*—all immediate response activities by an explosives and munitions emergency response specialist to control, mitigate, or eliminate the actual or potential threat encountered during an explosives or munitions emergency. An explosives or munitions emergency response may include in-place render-safe procedures, treatment or destruction of the explosives or munitions, and/or transporting those items to another location to be rendered safe, treated, or destroyed. Any reasonable delay in the completion of an explosives or munitions emergency response caused by a necessary, unforeseen, or uncontrollable circumstance will not terminate the explosives or munitions emergency. Explosives and munitions emergency responses can occur on either public or private lands and are not limited to responses at RCRA facilities.

*Explosives or Munitions Emergency Response Specialist*—an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. Explosives or munitions emergency response specialists include Department of Defense (DOD) emergency explosive ordnance disposal (EOD), technical escort unit (TEU), DOD-certified civilian or contractor personnel, and other federal, state, or local government or civilian personnel similarly trained in explosives or munitions emergency responses.

*Exporting Country*—any designated OECD member country in LAC 33:V.1113.I.1.a from which a transfrontier movement of wastes is planned or has commenced.

*Facilities*—a group of units (each an individual facility) on a site operated to treat, store, and/or dispose of hazardous waste.

*Facility*—

1. all contiguous land and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, etc.); or

2. for the purpose of implementing corrective action under LAC 33:V.3322, all the contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. This definition also applies to facilities implementing corrective actions under RCRA Section 3008(h);

3. notwithstanding Paragraph 2 of this definition, a remediation waste management site is not a facility that is subject to LAC 33:V.3322, but is subject to corrective action requirements if the site is located within such a facility.

*Facility Mailing List*—the mailing list for a facility maintained by the department in accordance with LAC 33:V.717.A.1.e.

*Fault*—a fracture along which rocks or soils on one side have been displaced with respect to those on the other side.

*Federal Agency*—any department, agency, or other instrumentality of the federal government, any independent agency or establishment of the federal government including any government corporation, and the Government Printing Office.

*Federal, State, and Local Approvals* or *Permits Necessary to Begin Physical Construction*—permits and approvals required under federal, state, or local statutes, regulations or ordinances.

*Final Closure*—the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under LAC 33:V.Chapters 15, 19, 21, 23, 25, 27, 29, 31, 33, 35 and 43 are no longer conducted unless subject to provisions of LAC 33:V.1109.

*Final Permit*—same as *Permit*.

*Food-Chain Crops*—tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

*Foreign Source*—any hazardous waste originating from other than the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands, or any other territory or protectorate.

*Freeboard*—the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

*Free Liquids*—liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

*Fresh-Water Aquifer*—water-bearing formations capable of yielding usable quantities of groundwater with dissolved minerals less than 10,000 mg/L to drinking water wells, pumps, springs, or streams.

*Functionally Equivalent Component*—a component that performs the same function or measurement and that meets or exceeds the performance specifications of another component.

*Gasification*—for the purpose of complying with LAC 33:V.105.D.1.l.i, a process, conducted in an enclosed device or system, designed and operated to process petroleum feedstock, including oil-bearing hazardous secondary materials, through a series of highly controlled steps utilizing thermal decomposition, limited oxidation, and gas cleaning to yield a synthesis gas composed primarily of hydrogen and carbon monoxide gas.

*Generator*—any person, by site, whose act or process produces hazardous waste identified or listed, or whose act first causes a hazardous waste to become subject to regulation.

*Groundwater*—water located beneath the ground surface or below a surface water body in a saturated zone or stratum.

*Hazardous Material*—a material designated under Louisiana Department of Public Safety regulations or its successor agency to be capable of posing an unreasonable risk to health, safety, or property when transported.

*Hazardous Waste*—a *solid waste*, as defined in this Section, is a hazardous waste if:

1. it is not excluded from regulation as a hazardous waste under LAC 33:V.105.D; and

2. it meets any of the following criteria:

a. it exhibits any of the characteristics of hazardous waste identified in LAC 33:V.4903. However, any mixture of a waste from the extraction, beneficiation, or processing of ores and minerals excluded under LAC 33:V.105.D.2.h and any other solid waste exhibiting a characteristic of hazardous waste under LAC 33:V.4903 is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred; or if it continues to exhibit any of the characteristics exhibited by the nonexcluded wastes prior to mixture. Further, for the purposes of applying the toxicity characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in LAC 33:V.4903.E, Table 5 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture;

b. it is listed in LAC 33:V.4901 and has not been excluded from the lists in LAC 33:V.4901 by the

Environmental Protection Agency or the administrative authority;

c. it is a mixture of solid waste and one or more hazardous wastes listed in LAC 33:V.4901 and has not been excluded from Paragraph 2 or Subparagraphs 4.e and f of this definition under LAC 33:V.105.D and M; however, the following mixtures of solid wastes and hazardous wastes listed in LAC 33:V.4901 are not hazardous wastes (except by application of Subparagraph 2.a or b of this definition) if the generator can demonstrate that the mixture consists of wastewater, the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act (including wastewater at facilities that have eliminated the discharge of wastewater) and:

i. one or more of the following spent solvents listed in LAC 33:V.4901.B—benzene, carbon tetrachloride, tetrachloroethylene, trichloroethylene, or scrubber waters derived from the combustion of these spent solvents—provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million, or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR Part 60, 61, or 63, as incorporated by reference at LAC 33:III.3003, 5116, and 5122, respectively, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions) does not exceed 1 part per million on an average weekly basis. Any facility that uses benzene as a solvent and claims this exemption must use an aerated biological wastewater treatment system and must use only lined surface impoundments or tanks prior to secondary clarification in the wastewater treatment system. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the administrative authority. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that the sampling and analysis plan has been received by the administrative authority. The administrative authority may reject the sampling and analysis plan if it finds that the sampling and analysis plan fails to include the above information, or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the administrative authority rejects the sampling and analysis plan or if the administrative authority finds that the facility is not following the sampling and analysis plan, the administrative authority shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

ii. one or more of the following spent solvents listed in LAC 33:V.4901.B—methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents, 2-ethoxyethanol, or the scrubber waters derived from the combustion of these spent solvents—provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 25 parts per million, or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR Part 60, 61, or 63, as incorporated by reference at LAC 33:III.3003, 5116, and 5122, respectively, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions) does not exceed 25 parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the administrative authority. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that the sampling and analysis plan has been received by the administrative authority. The administrative authority may reject the sampling and analysis plan if it finds that the sampling and analysis plan fails to include the above information, or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the administrative authority rejects the sampling and analysis plan or if the administrative authority finds that the facility is not following the sampling and analysis plan, the administrative authority shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

iii. one of the following wastes listed in LAC 33:V.4901.C, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation—heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste Number K050), crude oil storage tank sediment from petroleum refining operations (EPA Hazardous Waste Number K169), clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations (EPA Hazardous Waste Number K170), spent hydrotreating catalyst (EPA Hazardous Waste Number K171), and spent hydrorefining catalyst (EPA Hazardous Waste Number K172); or

iv. a discarded hazardous waste, commercial chemical product, or chemical intermediate listed in LAC 33:V.4901.A, B.1-2, and C-F arising from de minimis

losses of these materials. For purposes of this Clause, de minimis losses are inadvertent releases to a wastewater treatment system, including those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves, or other devices used to transfer materials); minor leaks of process equipment, storage tanks, or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers rendered empty by that rinsing. Any manufacturing facility that claims an exemption for de minimis quantities of wastes listed in LAC 33:V.4901.B and C, or any nonmanufacturing facility that claims an exemption for de minimis quantities of wastes listed in LAC 33:V.Chapter 49, must either have eliminated the discharge of wastewaters or have included in its Clean Water Act permit application or submission to its pretreatment control authority the constituents for which each waste was listed in LAC 33:V.4901.G and the constituents in LAC 33:V.2299.Table 2, Treatment Standards for Hazardous Wastes, for which each waste has a treatment standard (i.e., Land Disposal Restriction constituents). A facility is eligible to claim the exemption once the administrative authority has been notified of possible de minimis releases via the Clean Water Act permit application or the pretreatment control authority submission. A copy of the Clean Water Act permit application or the submission to the pretreatment control authority must be placed in the facility's on-site files; or

v. wastewater resulting from laboratory operations containing toxic (T) wastes listed in LAC 33:V.4901, provided that the annualized average flow of laboratory wastewater does not exceed 1 percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes' combined annualized average concentration does not exceed 1 part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

vi. one or more of the following wastes listed in LAC 33:V.4901.C—wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste Number K157)—provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that cannot be demonstrated to be reacted in the process, destroyed through treatment, or recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilution into the headworks of the facility's wastewater treatment system does not exceed a total of 5 parts per million by weight, or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR Part 60, 61, or 63, as incorporated by reference at LAC 33:III.3003, 5116, and 5122, respectively, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions) does not exceed 5 parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the administrative authority. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that the sampling and analysis plan has been received by the administrative authority. The administrative authority may reject the sampling and analysis plan if it finds that the sampling and analysis plan fails to include the above information, or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the administrative authority rejects the sampling and analysis plan or if the administrative authority finds that the facility is not following the sampling and analysis plan, the administrative authority shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

vii. wastewaters derived from the treatment of one or more of the following wastes listed in LAC 33:V.4901.C—organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste Number K156)—provided that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter, or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR Part 60, 61, or 63, as incorporated by reference at LAC 33:III.3003, 5116, and 5122, respectively, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions) does not exceed 5 milligrams per liter on an average weekly basis. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the administrative authority. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that the sampling and analysis plan has been received by the administrative authority. The administrative authority may reject the sampling and analysis plan if it finds that the sampling and analysis plan fails to include the above information, or the plan parameters

would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the administrative authority rejects the sampling and analysis plan or if the administrative authority finds that the facility is not following the sampling and analysis plan, the administrative authority shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; and

d. Rebuttable Presumption for Used Oil. Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in LAC 33:V.4901. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (e.g., by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in LAC 33:V.3105, Table 1):

i. the rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner or disposed;

ii. the rebuttable presumption does not apply to used oils contaminated with Chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units;

3. a solid waste which is not excluded from regulation under LAC 33:V.105.D becomes a hazardous waste when any of the following events occur:

a. in the case of a waste listed in LAC 33:V.4901, when the waste first meets the listing description set forth in LAC 33:V.4901;

b. in the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in LAC 33:V.4901 is first added to the solid waste; and

c. in the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in LAC 33:V.4903;

4. unless and until a hazardous waste meets the criteria of Paragraph 5 of this definition:

a. a hazardous waste will remain a hazardous waste;

b.i. except as otherwise provided in Clause 4.b.ii, Subparagraph 4.f, or Paragraph 6 of this definition, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation runoff) is a hazardous waste. (However, materials that are reclaimed from solid waste and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.);

ii. the following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of hazardous waste, unless they exhibit one or more of the characteristics of hazardous wastes:

(a). waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332);

(b). waste from burning any of the materials exempted from regulation by LAC 33:V.4105.A.1.c and d.i;

(c).(i). nonwastewater residues, such as slag, resulting from High-Temperature Metals Recovery (HTMR) processing of K061, K062, or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations, or industrial furnaces (as defined in Industrial Furnace, Paragraphs 6, 7 and 13, in this Section), that are disposed of in Subtitle D units, provided that these residues meet the generic exclusion levels identified in Tables A and B of this definition for all constituents and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving, by clear and convincing evidence, that the material meets all of the exclusion requirements;

**Table A**
**Generic Exclusion Levels for K061 and K062 Nonwastewater HTMR Residues**

| Constituent | Maximum for Any Single Composite Sample-TCLP (mg/L) |
|---|---|
| Antimony | 0.10 |
| Arsenic | 0.50 |
| Barium | 7.6 |
| Beryllium | 0.010 |
| Cadmium | 0.050 |
| Chromium (total) | 0.33 |
| Lead | 0.15 |
| Mercury | 0.009 |
| Nickel | 1.0 |
| Selenium | 0.16 |
| Silver | 0.30 |
| Thallium | 0.020 |
| Zinc | 70.0 |

**Table B**
**Generic Exclusion Levels for F006 Nonwastewater HTMR Residues**

| Constituent | Maximum for Any Single Composite Sample-TCLP (mg/L) |
|---|---|
| Antimony | 0.10 |
| Arsenic | 0.50 |
| Barium | 7.6 |
| Beryllium | 0.010 |
| Cadmium | 0.050 |
| Chromium (total) | 0.33 |
| Cyanide (total) (mg/kg) | 1.8 |

| Table B | |
|---|---|
| **Generic Exclusion Levels for F006 Nonwastewater HTMR Residues** | |
| **Constituent** | **Maximum for Any Single Composite Sample-TCLP (mg/L)** |
| Lead | 0.15 |
| Mercury | 0.009 |
| Nickel | 1.0 |
| Selenium | 0.16 |
| Silver | 0.30 |
| Thallium | 0.020 |
| Zinc | 70.0 |

(ii). a one-time notification and certification must be placed in the facility's files and sent to the Office of Environmental Services for K061, K062, or F006 HTMR residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to Subtitle D units. The notification and certification that is placed in the generators' or treaters' files must be updated if the process or operation generating the waste changes and/or if the Subtitle D unit receiving the waste changes. However, the generator or treater needs only to notify the administrative authority on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31. The notification must include the following information:

[a]. the name and address of the Subtitle D unit receiving the waste shipments;

[b]. the EPA hazardous waste number(s) and treatability group(s) at the initial point of generation;

[c]. the treatment standards applicable to the waste at the initial point of generation; and

[d]. the certification must be signed by an authorized representative and must state as follows:

> "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

c. biological treatment sludge from the treatment of one of the following wastes listed in LAC 33:V.4901.C: organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste Number K156), and wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste Number K157);

d. catalyst inert support media separated from one of the following wastes listed in LAC 33:V.4901.C: spent hydrotreating catalyst (EPA Hazardous Waste Number K171) and spent hydrorefining catalyst (EPA Hazardous Waste Number K172);

e. a hazardous waste that is listed in LAC 33:V.4901 solely because it exhibits one or more characteristics of *ignitability* as defined under LAC 33:V.4903.B, *corrosivity* as defined under LAC 33:V.4903.C, or *reactivity* as defined under LAC 33:V.4903.D is not a hazardous waste if the waste no longer exhibits any characteristic of hazardous waste identified in LAC 33:V.4903. The exclusion also pertains to any mixture of a solid waste and a hazardous waste listed in LAC 33:V.4901 solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity, as regulated under Subparagraph 2.c of this definition, and any solid waste generated from treating, storing, or disposing of a hazardous waste listed in LAC 33:V.4901 solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity, as regulated under Clause 4.b.i of this definition. Wastes excluded under this Subparagraph are subject to LAC 33:V.Chapter 22 (as applicable), even if they no longer exhibit a characteristic at the point of land disposal. Any mixture of a solid waste excluded from regulation under LAC 33:V.105.D.2.h and a hazardous waste listed in LAC 33:V.Chapter 49 solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity, as regulated under Subparagraph 2.d of this definition, is not a hazardous waste if the mixture no longer exhibits any characteristic of hazardous waste identified in LAC 33:V.Chapter 49 for which such hazardous waste was listed;

f. hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of LAC 33:V.Chapter 42. This exemption also pertains to any mixture of a solid waste and an eligible radioactive mixed waste and any solid waste generated from treating, storing, or disposing of an eligible radioactive mixed waste. Waste exempted under this Subparagraph must meet the eligibility criteria and specified conditions in LAC 33:V.4205 and 4207 (for storage and treatment) and in LAC 33:V.4223 and 4225 (for transportation and disposal). Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste;

5. any solid waste described in Paragraph 4 of this definition is not a hazardous waste if it meets the following criteria:

a. in the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in LAC 33:V.4903. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of LAC 33:V.Chapter 22, even if they no longer exhibit a characteristic at the point of land disposal);

b. in the case of a waste which is a listed waste under LAC 33:V.4901, contains a waste listed under LAC 33:V.4901 or is derived from a waste listed in LAC 33:V.4901, and it also has been excluded from Paragraph 4 of this definition under LAC 33:V.105.H and M;

6. notwithstanding Paragraphs 1-4 of this definition and provided the *debris* as defined in LAC 33:V.2203 does not exhibit a characteristic identified at LAC 33:V.4903.B-E, the following materials are not subject to regulation under LAC 33:V.Subpart 1:

a. *hazardous debris* as defined in LAC 33:V.2203 that has been treated using one of the required extraction or destruction technologies specified in LAC 33:V.2299.Appendix, Table 8. Persons claiming this exclusion in an enforcement action will have the burden of proving, by clear and convincing evidence, that the material meets all of the exclusion requirements; or

b. *debris* as defined in LAC 33:V.2203 that the administrative authority, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

*Hazardous Waste Management*—the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous wastes.

*Hazardous Waste Management Unit*—is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

*Hazardous Waste Permit*—same as *Permit*.

*Health Care Waste*—infectious or other hazardous waste resulting from operations of a health care facility.

*Holocene*—the most recent epoch of the quaternary period, extending from the end of the Pleistocene to the present.

*Home Scrap Metal*—scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.

*Household Waste*—any waste material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels, and motels).

*Ignitable Waste*—a waste subject to these regulations pursuant to provisions of LAC 33:V.4903.B of such properties as to constitute a potential fire hazard during its management.

*Importing Country*—any designated OECD country in LAC 33:V.1113.I.1.a to which a transfrontier movement of wastes is planned or takes place for the purpose of submitting the wastes to recovery operations therein.

*Inactive Portion*—that portion of a facility which is not operated after August 1, 1979. (See also *active portion* and *closed portion.*)

*Inactive Range*—a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities.

*Incinerator*—any enclosed device that:

1. uses controlled flame combustion that neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or

2. meets the definition of *infrared incinerator* or *plasma arc incinerator*.

*Incompatible Waste*—a hazardous waste that is unsuitable for placement in a particular device or facility because it may cause corrosion or decay of containment materials (e.g., container inner liners or tank walls), or that is unsuitable for commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure; fire or explosion; violent reaction; toxic dusts, mists, fumes, or gases; or flammable fumes or gases. For examples of potentially incompatible wastes, see LAC 33:V.199.Appendix B.

*Individual Generation Site*—the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the property is contiguous.

*Industrial Furnace*—any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy:

1. cement kilns;

2. lime kilns;

3. aggregate kilns;

4. phosphate kilns;

5. coke ovens;

6. blast furnaces;

7. smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces);

8. titanium dioxide chloride process oxidation reactors;

9. methane reforming furnaces;

10. pulping liquor recovery furnaces;

11. combustion devices used in the recovery of sulfur values from spent sulfuric acid;

12. halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least 3 percent, the acid product is used in a manufacturing process and, except for hazardous waste burned as a fuel, hazardous waste fed to the furnace has a minimum halogen content of 20 percent as generated;

13. such other devices as the administrative authority, after notice and comment, adds to this list on the basis of one or more of the following factors:

a. the design and use of the device primarily to accomplish recovery of material products;

b. the use of the device to burn or reduce raw materials to make a material product;

c. the use of the device to burn or reduce secondary materials as effective substitutes for raw materials in processes using raw materials as principal feedstocks;

d. the use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;

e. the use of the device in common industrial practice to produce a material product; and

f. other factors as appropriate.

*Infectious Waste*—a waste which has the potential to endanger humans or other living organisms by the communication of diseases caused by microorganisms and/or viruses.

*Infrared Incinerator*—any enclosed device that uses electric-powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

*Inground Tank*—a device meeting the definition of *tank* in LAC 33:V.109 whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

*Injection Well*—those wells, intended or used for disposal of hazardous waste, drilled to a strata below any fresh-water aquifer and permitted, or required to be permitted, by the Office of Conservation or after February 1, 1984, by the Department of Environmental Quality.

*In Operation*—a facility which is treating, storing or disposing of hazardous waste.

*Inner Liner*—a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

*Installation Inspector*—a person who, by reason of his knowledge of the physical sciences and the principles of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

*Interim Permit*—the hazardous waste permit issued by Louisiana to facilities with interim status.

*Interim Status*—all facilities that have met the requirements established by §3005e of the Resource Conservation and Recovery Act et seq. and as such has been recognized by the U.S. Environmental Protection Agency (EPA) and approved by the administrative authority in accordance with the Louisiana Environmental Affairs Act.

*International Shipment*—the transportation of hazardous waste into or out of the jurisdiction of the United States.

*Lab Pack*—an overpacked container (such as a drum) containing small, tightly-sealed containers of hazardous waste with an absorbent material filling the voids in the outer container (drum).

*Lagoon*—a shallow sound, channel, or pond near, or communicating with, a larger body of water, either natural or man-made.

*Landfarm*—a facility for the application of waste onto land and/or incorporation into the surface soil for the purpose of biological reduction and soil attenuation, including the use of such waste as a fertilizer or soil conditioner.

*Landfill*—a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, land treatment facility, surface impoundment, underground injection well, salt dome formation, salt bed formation, underground mine, cave, or corrective action management unit.

*Landfill Cell*—a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

*Land Treatment Facility*—a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

*Leachate*—any liquid, including any suspended components in the liquid, that has percolated through, or drained from hazardous waste.

*Leak-Detection System*—a system capable of detecting the failure of either the primary or secondary containment structure by the detection of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must employ operational controls (e.g., daily visual inspections for releases into the secondary containment system of aboveground tanks) or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure by the detection of a release of hazardous waste into the secondary containment structure.

*Liner*—a continuous layer of natural or man made materials, beneath and on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

*Management* or *Hazardous Waste Management*—the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous waste.

*Manifest*—the shipping document EPA Form 8700-22 (including, if necessary, EPA Form 8700-22A), originated and signed by the generator or offeror in accordance with the instructions in the Appendix to 40 CFR Part 262 and the applicable requirements of 40 CFR Parts 262 – 265.

*Manifest Tracking Number*—the alphanumeric identification number that is pre-printed in Item 4 of the manifest.

*Military*—the Department of Defense (DOD), the Armed Services, Coast Guard, National Guard, Department of Energy (DOE), or other parties under contract or acting as an agent for the foregoing, who handle military munitions.

*Military Munitions*—all ammunition products and components produced or used by or for the DOD or the U.S. Armed Services for national defense and security, including military munitions under the control of the DOD, the U.S. Coast Guard, the DOE, and National Guard personnel. The term *military munitions* includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DOD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof. Military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term does include non-nuclear components of nuclear devices managed under DOE's nuclear weapons program after all required sanitization operations under the Atomic Energy Act of 1954, as amended, have been completed.

*Military Range*—designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnances, or weapon systems or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.

*Mining Overburden Returned to the Mine Site*—any material overlying an economic mineral deposit, which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

*Miscellaneous Unit*—a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well (with appropriate technical standards under 40 CFR Part 146), containment building, corrective action management unit, unit eligible for a research, development, and demonstration permit under LAC 33:V.329, or staging pile.

*Monitoring*—inspection and collection of data following a predesigned schedule and system on operational parameters of the facility or on the quality of the environment including the air, groundwater, surface water or soils.

*New Hazardous Waste Management Facility* or *New Facility*—a facility which began operation, or for which construction commenced after August 1, 1979.

*New Tank System* or *New Tank Component*—a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986; except, however, for purposes of LAC 33:V.1907.G.2 and 4435, a new tank system is one for which construction commences after July 14, 1986. (See also *Existing Tank System.*)

*Notifier*—the person under the jurisdiction of the exporting country who has, or will have at the time the planned transfrontier movement commences, possession or other forms of legal control of the wastes and who proposes their transfrontier movement for the ultimate purpose of submitting them to recovery operations. When the United States is the exporting country, notifier is interpreted to mean a person domiciled in the United States.

*One-Hundred Year Flood*—a flood that has a 1 percent chance of being equaled or exceeded in any given year.

*One-Hundred Year Floodplain*—the lowland and relatively flat areas adjoining inland and coastal areas of the mainland and off-shore islands, including, at a minimum, areas subject to a 1 percent or greater chance of flooding in any given year.

*Onground Tank*—a device meeting the definition of *tank* in LAC 33:V.109 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

*On-Site*—the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right-of-way. Non-contiguous properties, owned by the same person, but connected by a right-of-way which he controls and to which the public does not have access, are also considered on-site property.

*Open Burning*—the combustion of any material without the following characteristics: control of combustion air to maintain adequate temperature for efficient combustion; containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and control of emission of the gaseous combustion products.

*Operator, Owner, Licensee, Manager, etc.*—whoever has legal authority and responsibility for a facility that generates, transports, treats, stores or disposes of any hazardous waste.

*Organization for Economic Cooperation and Development (OECD) Area*—all land or marine areas under the national jurisdiction of any designated OECD member country in LAC 33:V.1113.I. When the regulations refer to shipments to or from an OECD country, this means OECD area.

*Owner*—the person who owns a facility or part of a facility.

*Parent Corporation*—a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.

*Partial Closure*—the closure of a hazardous waste management unit in accordance with the applicable closure requirements of LAC 33:V.Chapters 11, 13, 15, 17, 18, 19, 23, and 43 at a facility that contains other active hazardous waste management units. For example, a partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

*Permit*—the permit issued by the state of Louisiana to a facility to treat, store, and/or dispose of hazardous waste under the conditions specified in the permit and the conditions required by the Act and these regulations.

*Person*—an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, an interstate body, or the federal government or any agency of the federal government.

*Personnel* or *Facility Personnel*—all persons who work at or oversee the operations of a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37, and 43.

*Petition*—a written request made to the administrative authority.

*Pile*—any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.

*Plasma Arc Incinerator*—any enclosed device using a high-intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

*Point Source*—any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

*Pond*—a confined body of standing water usually smaller than a lake, either natural or man-made.

*Post-Closure Plan*—the plan for the post-closure care prepared in accordance with the requirements of LAC 33:V.Chapter 35.

*Potable-Water Aquifer*—water-bearing formations capable of yielding usable quantities of groundwater with dissolved minerals less than 10,000 mg/L to drinking water wells, pumps, springs or streams.

*Primary Exporter*—any person who is required to originate the manifest for a shipment of hazardous waste in accordance with LAC 33:V.1107, which specifies a treatment, storage or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.

*Processed Scrap Metal*—scrap metal that has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to, scrap metal which has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type (i.e., sorted), and fines, drosses, and related materials which have been agglomerated.

> [NOTE: Shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered under the exclusion from the definition of solid waste for shredded circuit boards being recycled (LAC 33:V.105.D.1.n).]

*Prompt Scrap Metal*—scrap metal as generated by the metal working/fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap is also known as industrial or new scrap metal.

*Proper*—a qualifying adjective requiring consistency with any operating procedures published by the department.

*Public Water Supply Well*—a well of piped water for consumption by the public if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

*Publicly-Owned Treatment Works* or *POTW*—any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by the state, parish, municipality, or other governmental subdivision. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to POTW providing treatment.

*Qualified Groundwater Scientist*—a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgements regarding groundwater monitoring and contaminant fate and transport.

*Reactive Waste*—a waste subject to these regulations pursuant to provisions of LAC 33:V.4903.D which is normally unstable or which may endanger life or property in the presence of other substances likely to be encountered in the management of waste.

*Receiving Country*—a foreign country to which a hazardous waste is sent for the purpose of treatment, storage, or disposal (except short-term storage incidental to transportation).

*Reclaimed Material*—a material is *reclaimed* if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

*Reclaimer*—any person or agency who processes materials or wastes to recover a usable product or who regenerates materials or wastes.

*Recognized Trader*—a person who, with appropriate authorization of concerned countries, acts in the role of principal to purchase and subsequently sell wastes; this person has legal control of such wastes from time of purchase to time of sale; such a person may act to arrange and facilitate transfrontier movements of wastes destined for recovery operations.

*Recovery Facility*—an entity which, under applicable domestic law, is operating or is authorized to operate in the importing country to receive wastes and to perform recovery operations on them.

*Recovery Operations*—activities leading to resource recovery, recycling, reclamation, direct reuse or alternative uses as listed in Table 2.B of the Annex of OECD Council Decision C(88)90(Final) of 27 May 1988, (available from the Environmental Protection Agency, RCRA Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC 20460 (Docket Number F-94-IEHF-FFFFF), or at the National Archives and Records Administration (NARA) by telephone at (202) 741-6030, or at the Organisation for Economic Co-operation and Development, Environment Directorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France), which include the following operations.

| Code | Recovery Operations |
|---|---|
| R1 | Use as a fuel (other than in direct incineration) or other means to generate energy |
| R2 | Solvent reclamation/regeneration |
| R3 | Recycling/reclamation of organic substances that are not used as solvents |
| R4 | Recycling/reclamation of metals and metal compounds |
| R5 | Recycling/reclamation of other inorganic materials |
| R6 | Regeneration of acids or bases |
| R7 | Recovery of components used for pollution control |
| R8 | Recovery of components from catalysts |
| R9 | Used oil re-refining or other reuses of previously used oil |
| R10 | Land treatment resulting in benefit to agriculture or ecological improvement |
| R11 | Uses of residual materials obtained from any of the operations numbered R1-R10 |
| R12 | Exchange of wastes for submission to any of the operations numbered R1-R11 |
| R13 | Accumulation of material intended for any operation in Table 2.B of the Annex of OECD Council Decision |

*Recyclable Material*—a recyclable material is a material meeting the definition of a solid waste and which is used, reused, recycled, or reclaimed.

*Remedial Action Plan (RAP)*—a special form of RCRA permit that a facility owner or operator may obtain instead of a permit issued under LAC 33:V.303-329 and 501-537, to authorize the *treatment*, *storage*, or *disposal* of hazardous remediation waste (as defined in this Section) at a remediation waste management site.

*Remediation Waste*—all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris that are managed for implementing cleanup.

*Remediation Waste Management Site*—a facility where an owner or operator is or will be treating, storing, or disposing of hazardous remediation wastes. A remediation waste management site is not a facility that is subject to corrective action under LAC 33:V.3322, but is subject to corrective action requirements if the site is located in such a facility.

*Replacement Unit*—a landfill, surface impoundment, or waste pile unit from which all or substantially all of the waste is removed and that is subsequently reused to treat, store, or dispose of hazardous waste. *Replacement unit* does not apply to a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with an approved closure plan or EPA- or state-approved corrective action.

*Representative Sample*—a sample of a universe or whole (e.g., waste pile, lagoon, groundwater) which can be expected to exhibit the average properties of the universe or whole.

*Resource Recovery*—recovery of useful material or energy from hazardous waste.

*Reused Material*—see *Used* or *Reused Material*.

*Run-Off*—any rainwater, leachate, or other liquid that drains overland from any part of a facility.

*Run-On*—any rainwater, leachate, or other liquid that drains overland onto any part of a facility.

*Rural*—all areas zoned rural or not zoned at all by a municipality or parish.

*Saturated Zone* or *Zone of Saturation*—that part of the earth's crust in which all voids are filled with water.

*Scrap Metal*—bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

*SIC*—Standard Industrial Classification Code.

*Site*—land area and appurtenances, thereon and thereto, used for the treatment, storage, and/or disposal of hazardous waste.

*Sludge*—any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

*Sludge Dryer*—any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total

thermal input, excluding the heating value of the sludge itself, of 2,500 Btu/lb of sludge treated on a wet-weight basis.

*Small Quantity Generator*—a generator who generates less than 1000 kg of hazardous waste in a calendar month.

*Solid Waste*—

1.a. any discarded material that is not excluded by LAC 33:V.105.D or that is not excluded by a variance granted under LAC 33:V.105.O;

b. a discarded material is any material which is:

i. abandoned as explained in Paragraph 2 of this definition;

ii. recycled as explained in Paragraph 3 of this definition;

iii. considered inherently waste-like, as explained in Paragraph 4 of this definition; or

iv. a military munition identified as a solid waste in LAC 33:V.5303;

2. materials are solid waste if they are abandoned by being:

a. disposed of; or

b. burned or incinerated; or

c. accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated;

3. materials are solid wastes if they are recycled, or accumulated, stored, or treated before recycling, as specified in Subparagraphs 3.a-d of this definition:

a. used in a manner constituting disposal:

i. materials noted with an "*" in Column 1 of Table 1 in this Chapter are solid wastes when they are:

(a). applied to or placed on the land in a manner that constitutes disposal; or

(b). used to produce products that are applied to or placed on the land (in which cases the product itself remains a solid waste);

ii. however, commercial chemical products listed in LAC 33:V.4901.D and E are not solid wastes if they are applied to the land and that is their ordinary manner of use;

b. burning for energy recovery:

i. materials noted with an "*" in Column 2 of Table 1 in this Chapter are solid wastes when they are burned to recover energy, used to produce a fuel, or otherwise contained in fuels (in which case the fuel itself remains a solid waste);

ii. however, commercial chemical products listed in LAC 33:V.4901.D and E are not solid wastes if they are themselves fuels;

c. *reclaimed*—materials noted with an "*" in column 3 of Table 1 in this Chapter are solid wastes when reclaimed (except as provided under LAC 33:V.105.D.1.p). Materials noted with a "---" in column 3 of Table 1 are not solid wastes when reclaimed;

d. *accumulated speculatively*—materials noted with an "*" in Column 4 of Table 1 in this Chapter are solid wastes when accumulated speculatively.

4. Inherently Waste-Like Materials. The following materials are solid wastes when they are recycled in any manner:

a. Hazardous Waste Numbers F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026, and F028;

b. secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in LAC 33:V.4901 or 4903, except for brominated material that meets the following criteria:

i. the material must contain a bromine concentration of at least 45 percent;

ii. the material must contain less than a total of 1 percent of toxic organic compounds listed in LAC 33:V.3105, Table 1; and

iii. the material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping); and

c. the administrative authority will use the following criteria to add wastes to that list:

i. the materials are ordinarily disposed of, burned, or incinerated; or

ii. the materials contain toxic constituents listed in LAC 33:V.3105, Table 1 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

iii. the material may pose a substantial hazard to human health and the environment when recycled;

5. Materials That Are Not Solid Waste When Recycled

a. materials are not solid wastes when they can be shown to be recycled by being:

i. used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or

ii. used or reused as effective substitutes for commercial products; or

iii. returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials. In cases where the original process to

which the material is returned is a secondary process, the materials must be managed such that there is no placement on land. In cases where the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at LAC 33:V.105.D.1.p apply rather than this Paragraph;

b. the following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process (described in preceding paragraphs of this definition):

i. materials used in a manner constituting disposal, or used to produce products that are applied to the land; or

ii. materials burned for energy recovery, used to produce a fuel, or otherwise contained in fuels; or

c. materials accumulated speculatively; or

d. inherently waste-like materials listed in Paragraph 4 of this definition;

6. respondents in actions to enforce regulations who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so:

**Table 1**

| | **Use Constituting Disposal** | **Energy Recovery/ Fuel** | **Reclamation (Except as Provided in LAC 33:V. 105.D.1.p for Mineral Processing Secondary Materials)** | **Speculative Accumulation** |
|---|---|---|---|---|
| | **(1)** | **(2)** | **(3)** | **(4)** |
| Spent Materials | * | * | * | * |
| Sludges (listed in LAC 33:V.4901) | * | * | * | * |
| Sludges exhibiting a characteristic of hazardous waste | * | * | ..... | * |
| By-products (listed in LAC 33:V.4901) | * | * | * | * |
| By-products exhibiting a characteristic of hazardous waste | * | * | ..... | * |
| Commercial chemical products (listed in LAC 33: V.4901.E and F) | * | * | ..... | ..... |

**Table 1**

| | **Use Constituting Disposal** | **Energy Recovery/ Fuel** | **Reclamation (Except as Provided in LAC 33:V. 105.D.1.p for Mineral Processing Secondary Materials)** | **Speculative Accumulation** |
|---|---|---|---|---|
| Scrap Metal other than excluded scrap metal (see excluded scrap metal) | * | * | * | * |

*Sorbent*—a material that is used to soak up free liquids by either adsorption or absorption, or both. *Sorb* means to either adsorb or absorb, or both.

*Spent Material*—a *spent material* is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.

*Spill*—the accidental or intentional spilling, leaking, pumping, pouring, emitting or dumping of hazardous wastes or materials which, when spilled, become hazardous wastes into or on any land, air or water.

*SPOC*—the Office of Environmental Compliance, Emergency and Radiological Services Division, Single Point of Contact (SPOC).

*Staging Pile*—an accumulation of solid, nonflowing *remediation waste* (as defined in this Section) that is not a containment building and that is used only during remedial operations for temporary storage at a facility. Staging piles must be designated by the administrative authority according to the requirements of LAC 33:V.2605.

*Standards*—performance criteria established by department to govern the hazardous waste program.

*Storage*—the containment of hazardous waste for such time as may be permitted by regulations in such a manner as not to constitute disposal of hazardous waste.

*Storage Facility*—any environmentally sound facility used to store hazardous waste.

*Sump*—any pit or reservoir that meets the definition of tank and those troughs/trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that, as used in the landfill, surface impoundment, and waste pile rules, *sump* means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.

*Surface Impoundment* or *Impoundment*—a facility or part of a facility, which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of

liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds and lagoons.

*Tank*—a stationary device designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

*Tank System*—a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

*Temporary Storage*—storage of a generator's waste on-site for less than 90 days.

*TEQ*—toxicity equivalence, the international method of relating the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin.

*Thermal Treatment*—the processing of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also *incinerator* and *open burning.*)

*Totally Enclosed Treatment Facility*—a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

*Toxic Waste*—a waste subject to these regulations pursuant to provisions of LAC 33:V.4903.E which, by its chemical properties, has the potential to endanger human health or other living organisms by means of acute or chronic adverse effects, including poisoning, mutagenic, teratogenic, or carcinogenic effects.

*Transfer Facility*—any transportation-related facility including loading docks, parking areas, storage areas, and other similar areas where shipments of hazardous waste are held during the normal course of transportation.

*Transfrontier Movement*—any shipment of wastes destined for recovery operations from an area under the national jurisdiction of one OECD member country to an area under the national jurisdiction of another OECD member country.

*Transit Country*—any foreign country, other than a receiving country, through which a hazardous waste is transported.

*Transporter*—a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

*Transports* or *Transportation*—the movement of hazardous waste from the point of generation or storage to the point of treatment, storage or disposal by any means of commercial or private transport. The term does not apply to the movement of hazardous wastes on the premises of a hazardous waste generator or on the premises of a permitted hazardous waste treatment, storage or disposal facility.

*Transport Vehicle*—a motor vehicle, aircraft, rail freight car, freight container, cargo tank, portable tank, or vessel used for the transportation of hazardous waste. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.

*Treatability Study*—a study in which a hazardous waste is subjected to a treatment process to determine:

1.a. whether the waste is amenable to the treatment process;

b. what pretreatment (if any) is required;

c. the optimal process conditions needed to achieve the desired treatment;

d. the efficiency of a treatment process for a specific waste or wastes; or

e. the characteristics and volumes of residuals from a particular treatment process;

2. also included in this definition for the purpose of the LAC 33:V.105.D.5 and 6 exemptions are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. A *treatability study* is not a means of commercially treating or disposing of hazardous waste.

*Treatment*—(when used in connection with hazardous waste) any method, technique, or process, including neutralization, designed to change the physical or chemical character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage, or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.

*Treatment Zone*—a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed or immobilized.

*Type of Waste*—waste description by category as classified in LAC 33:V.Chapter 49 to these rules and regulations.

*Underground Injection*—the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also *injection well.*)

*Underground Source of Drinking Water* or *USDW*—an aquifer or its portion:

1. which supplies any public water system; or

2. which contains a sufficient quantity of groundwater to supply a public water system; and

a. currently supplies drinking water for human consumption; or

b. contains fewer than 10,000 mg/L total dissolved solids; and

3. which is not an aquifer exempted by the Department of Natural Resources, Office of Conservation.

*Underground Tank*—a device meeting the definition of *tank* in LAC 33:V.109 whose entire surface area is totally below the surface of and covered by the ground.

*Unexploded Ordnance (UXO)*—military munitions that have been primed, fused, armed, or otherwise prepared for action and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

*Unfit for Use Tank System*—a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

*Unsaturated Zone* or *Zone of Aeration*—the zone between the land surface and the water table.

*Uppermost Aquifer*—the geological formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer.

*Used Oil*—any oil that has been refined from crude oil or any synthetic oil that has been used and, as a result of such use, is contaminated by physical or chemical impurities.

*Used* or *Reused Material*—a material is *used* or *reused* if it is either:

1. employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

2. employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorus precipitant and sludge conditioner in wastewater treatment).

*Vessel*—any type of watercraft used, or capable of being used, as a means of transportation on the water.

*Volatile Waste*—hydrocarbon or other waste with a vapor pressure greater than or equal to 1.5 psia.

*Washout*—the movement of hazardous waste from the active portion of the facility as a result of flooding.

*Waste Reduction*—in-plant practices that reduce, avoid or eliminate the generation of hazardous or solid waste so as to reduce the risks to human health and the environment;

1. when recycling is environmentally acceptable and is an integral part of the waste-generating industrial process or operation, such as a closed-loop application which returns potential waste as it is generated for reuse within the process, it shall be considered waste reduction. Recycling is not considered waste reduction if waste exits a process, exists as a separate identity, undergoes significant handling, or is transported from the waste-generating location;

2. actions that reduce waste volume by concentrating the hazardous content of a waste or that reduce hazard level by diluting the hazardous content are not considered waste reduction;

3. actions that change the chemical composition and the concentrations of the components of the waste, but do not change the degree of hazard of the waste are not considered waste reduction.

*Wastewater Treatment Unit*—a device that:

1. is part of a wastewater treatment facility that is subject to regulation under either Section 402 or 307(b) of the Clean Water Act or subject to regulation under LAC 33:IX.Chapter 3; and

2. receives and treats or stores an influent wastewater that is a *hazardous waste* as defined in LAC 33:V.109, or that generates and accumulates a wastewater treatment sludge that is a *hazardous waste* as defined in LAC 33:V.109, or treats or stores a wastewater treatment sludge that is a *hazardous waste* as defined in LAC 33:V.109; and

3. meets the definition of a tank or tank system in LAC 33:V.109.

All sludges, floats, oils, residues, recovered organics, and inorganics from such units shall be considered to be hazardous and managed according to the applicable regulations, unless the wastes do not exhibit the characteristics of a hazardous waste, except for those specifically listed as hazardous, or the wastes are excluded under LAC 33:V.105.D.

*Well*—any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

*Zone of Engineering Control*—an area under the control of the owner/operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to groundwater or surface water.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 11:1139 (December 1985), LR 12:319 (May 1986), LR 13:84 (February 1987), LR 13:433 (August 1987), LR 13:651 (November 1987), LR 14:790, 791 (November 1988), LR 15:378 (May 1989), LR 15:737 (September 1989), LR 16:218, 220 (March 1990), LR 16:399 (May 1990), LR 16:614 (July 1990), LR 16:683 (August 1990), LR 17:362 (April 1991), LR 17:478 (May 1991), LR 18:723 (July 1992), LR 18:1375 (December 1992), repromulgated by the Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 19:626 (May 1993), amended LR 20:1000 (September 1994), LR 20:1109 (October 1994), LR 21:266 (March 1995), LR 21:944 (September 1995), LR 22:814 (September 1996), LR 23:564 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:655 (April 1998), LR 24:1101 (June 1998), LR 24:1688 (September 1998), LR 25:433 (March 1999), repromulgated LR 25:853 (May 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:269 (February 2000), LR 26:2465 (November 2000), LR 27:291 (March 2001), LR 27:708 (May 2001), LR 28:999 (May 2002), LR 28:1191 (June 2002), LR 29:318 (March 2003); amended by the Office of the Secretary, Legal Affairs Division, LR 31:2452 (October 2005), LR 31:3116 (December 2005), LR 32:606 (April 2006), LR 32:822 (May 2006), LR 33:1625 (August 2007), LR 33:2098 (October 2007), LR 34:71 (January 2008), LR 34:615 (April 2008), LR 34:1009 (June 2008), LR 34:1894 (September 2008), LR 34:2396 (November 2008).

## §110. References

A. When used in LAC 33:V.Subpart 1 the publications and methods listed in this Section shall be used to comply with these regulations.

B. The following materials are available for purchase from the American Society for Testing and Materials, 100 Barr Harbor Drive, Box C700, West Conshohocken, PA 19428-2959, or go to: *http://www.astm.org*:

1. ASTM D-3278-78, "Standard Test Methods for Flash Point for Liquids by Setaflash Closed Tester," approved for LAC 33:V.4903.B;

2. ASTM D-93-79 or D-93-80, "Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester," approved for LAC 33:V.4903.B;

3. ASTM D-1946-82, "Standard Method for Analysis of Reformed Gas by Gas Chromatography," approved for LAC 33:V.1709 and 4555;

4. ASTM D 2382-83, "Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method)," approved for LAC 33:V.1709 and 4555;

5. ASTM E 169-87, "Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis," approved for LAC 33:V.1741;

6. ASTM E 168-88, "Standard Practices for General Techniques of Infrared Quantitative Analysis," approved for LAC 33:V.1741;

7. ASTM E 260-85, "Standard Practice for Packed Column Gas Chromatography," approved for LAC 33:V.1741;

8. ASTM D 2267-88, "Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography," approved for LAC 33:V.1741;

9. ASTM D 2879-92, "Standard Test Method for Vapor Pressure—Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope," approved for LAC 33:V.4727;

10. ASTM E 926-88, "Standard Test Methods for Preparing Refuse-Derived Fuel (RDF) Samples for Analyses of Metals," Test Method C—Bomb, Acid Digestion Method.

C. The following materials are available for purchase from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; or from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512-1800:

1. "APTI Course 415: Control of Gaseous Emissions," EPA Publication EPA-450/2-81-005, December 1981, approved for LAC 33:V.1713 and 4559;

2. "Method 1664, Revision A, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, PB99-121949," approved for LAC 33:V.4999.Appendix E;

3. the following methods as published in the test methods compendium known as *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, Third Edition. A suffix "A" in the method number indicates revision one (the method has been revised once). A suffix "B" in the method number indicates revision two (the method has been revised twice). A suffix "C" in the method number indicates revision three (the method has been revised three times). A suffix "D" in the method number indicates revision four (the method has been revised four times):

a. Method 0010, dated September 1986 and in the Basic Manual, approved for LAC 33:V.4999.Appendix E;

b. Method 0020, dated September 1986 and in the Basic Manual, approved for LAC 33:V.4999.Appendix E;

c. Method 0030, dated September 1986 and in the Basic Manual, approved for LAC 33:V.4999.Appendix E;

d. Method 1320, dated September 1986 and in the Basic Manual, approved for LAC 33:V.4999.Appendix E;

e. Method 1311, dated September 1992 and in Update I, approved for LAC 33:V.2223, 2245, 2247, 4903.E, and 4999.Appendix E;

f. Method 1330A, dated September 1992 and in Update I, approved for LAC 33:V.4999.Appendix E;

g. Method 1312 dated September 1994 and in Update II, approved for LAC 33:V.4999.Appendix E;

h. Method 0011, dated December 1996 and in Update III, approved for LAC 33:V.3099.Appendix I and 4999.Appendix E;

i. Method 0023A, dated December 1996 and in Update III, approved for LAC 33:V.3009, 3099.Appendix I, and 4999.Appendix E;

j. Method 0031, dated December 1996 and in Update III, approved for LAC 33:V.4999.Appendix E;

k. Method 0040, dated December 1996 and in Update III, approved for LAC 33:V.4999.Appendix E;

l. Method 0050, dated December 1996 and in Update III, approved for LAC 33:V.3015, 3099.Appendix I, and 4999.Appendix E;

m. Method 0051, dated December 1996 and in Update III, approved for LAC 33:V.3015, 3099.Appendix I, and 4999.Appendix E;

n. Method 0060, dated December 1996 and in Update III, approved for LAC 33:V.3013, 3099.Appendix I, and 4999.Appendix E;

o. Method 0061, dated December 1996 and in Update III, approved for LAC 33:V.3013, 3099.Appendix I, and 4999.Appendix E;

p. Method 9071B, dated April 1998 and in Update IIIA, approved for LAC 33:V.4999.Appendix E;

q. Method 1010A, dated November 2004 and in Update IIIB, approved for LAC 33:V.4999.Appendix E;

r. Method 1020B, dated November 2004 and in Update IIIB, approved for LAC 33:V.4999.Appendix E;

s. Method 1110A, dated November 2004 and in Update IIIB, approved for LAC 33:V.4903.C and 4999.Appendix E;

t. Method 1310B, dated November 2004 and in Update IIIB, approved for LAC 33:V.4999.Appendix E;

u. Method 9010C, dated November 2004 and in Update IIIB, approved for LAC 33:V.2299, Tables 2, 7, and 10, and 4999.Appendix E;

v. Method 9012B, dated November 2004 and in Update IIIB, approved for LAC 33:V.2299, Tables 2, 7, and 10, and 4999.Appendix E;

w. Method 9040C, dated November 2004 and in Update IIIB, approved for LAC 33:V.4903.C and 4999.Appendix E;

x. Method 9045D, dated November 2004 and in Update IIIB, approved for LAC 33:V.4999.Appendix E;

y. Method 9060A, dated November 2004 and in Update IIIB, approved for LAC 33:V.1711, 1741, 4557, 4587, and 4999.Appendix E;

z. Method 9070A, dated November 2004 and in Update IIIB, approved for LAC 33:V.4999.Appendix E;

aa. Method 9095B, dated November 2004 and in Update IIIB, approved, LAC 33:V.1901, 2515, 4431, 4507, 4721, and 4999.Appendix E.

D. The following materials are available for purchase from the National Fire Protection Association, 1 Batterymarch Park, Box 9101, Quincy, MA 02269-9101:

1. "Flammable and Combustible Liquids Code" (1977 or 1981), approved for LAC 33:V.1917, and 4443;

2. Reserved.

E. The following materials are available for purchase from the American Petroleum Institute, 1220 L Street, Northwest, Washington, DC 20005:

1. API Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," approved for LAC 33:V.4727;

2. Reserved.

F. The following materials are available for purchase from the Environmental Protection Agency, Research Triangle Park, NC:

1. "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised," October 1992, EPA Publication Number EPA-450/R-92-019, approved for LAC 33:V.3099.Appendix I;

2. Reserved.

G. The following materials are available for purchase from the Organisation for Economic Co-operation and Development, Environment Direcorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France:

1. The OECD Green List of Wastes (revised May 1994), the Amber List of Wastes and Red List of Wastes (both revised May 1993) as set forth in Appendix 3, Appendix 4, and Appendix 5, respectively, to the OECD Council Decision C(92)39/FINAL (Concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations), approved for LAC 33:V.1127.I;

2. Reserved.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:814 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:656 (April 1998), LR 24:1690 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:270 (February 2000), LR 27:291 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1010 (June 2008).

## §111. Use of Number and Gender in These Regulations

A. As used in these regulations:

1. words in the masculine gender also include the feminine and neuter genders; and

2. words in the singular include the plural; and

3. words in the plural include the singular.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990).

## §199. Appendices—Appendices A and B

A. Appendix A—Equations for the Development of Soil and Groundwater Standards

$Soil_{NHEM}$—Carcinogenic Effects—Organic Constituents (mg/kg):

(EQ1)

$$\frac{TR \times BW_a \times AT_c \times 365 days/yr}{EF_i \times ED_i \times \left[\left(SF_o \times 10^{-6} \frac{kg}{mg} \times IRS_i\right) + \left(SF_i \times IRA_a \times \left(\frac{1}{VF_i}\right)\right) + \left(SF_o \times SA_i \times AF_i \times ABS \times 10^{-6} \frac{kg}{mg}\right)\right]}$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $Soil_{NHEM}$ | NHEM industrial risk-based chemical concentration in soil/ sediment (mg/kg) | -- |
| TR | Target excess individual lifetime cancer risk (unitless) | $10^{-5}$ |
| $SF_o$ | Oral cancer slope factor ($(mg/kg\text{-}day)^{-1}$) | CS[a] |
| $SF_i$ | Inhalation cancer slope factor ($(mg/kg\text{-}day)^{-1}$) | CS[a] |
| $BW_a$ | Average adult body weight (kg) | 70[b] |
| $AT_c$ | Averaging time - carcinogens (yr) | 70[b] |
| $EF_i$ | Industrial exposure frequency (days/yr) | 250[b] |
| $ED_i$ | Industrial exposure duration (yr) | 25[b] |
| $IRS_i$ | Industrial soil ingestion rate (mg/day) | 50[b] |
| $IRA_a$ | Adult inhalation rate ($m^3$/day) | 20[c] |
| $VF_i$ | Industrial soil-to-air volatilization factor ($m^3$/kg) | CS[d] |
| $SA_i$ | Skin surface area for an industrial worker ($cm^2$/day) | 3,300[c] |
| $AF_i$ | Soil-to-skin adherence factor for an industrial worker ($mg/cm^2$) | 0.2[c] |
| ABS | Dermal absorption factor (unitless) | CS[c] |

[a] Chemical-specific; refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] *Soil Screening Guidance: User's Guide*, EPA 1996.

[c] *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*, EPA/540/R-99/005.

[d] Chemical-specific; refer to EQ5.

[e] Chemical-specific; refer to Table A-1.

$Soil_{NHEM}$—Carcinogenic Effects—Inorganic Constituents (mg/kg):

(EQ2)

$$\frac{TR \times BW_a \times AT_c \times 365 days/yr}{EF_i \times ED_i \times \left[\left(SF_o \times 10^{-6} \frac{kg}{mg} \times IRS_i\right) + \left(SF_o \times SA_i \times AF_i \times ABS \times 10^{-6} \frac{kg}{mg}\right)\right]}$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $Soil_{NHEM}$ | NHEM industrial risk-based chemical concentration in soil/ sediment (mg/kg) | -- |
| TR | Target excess individual lifetime cancer risk (unitless) | $10^{-5}$ |
| $SF_o$ | Oral cancer slope factor ($(mg/kg\text{-}day)^{-1}$) | CS[b] |
| $BW_a$ | Average adult body weight (kg) | 70[b] |
| $AT_c$ | Averaging time - carcinogens (yr) | 70[b] |
| $EF_i$ | Industrial exposure frequency (days/yr) | 250[b] |
| $ED_i$ | Industrial exposure duration (yr) | 25[b] |
| $IRS_i$ | Industrial soil ingestion rate (mg/day) | 50[b] |
| $SA_i$ | Skin surface area for an industrial worker ($cm^2$/day) | 3,300[c] |
| $AF_i$ | Soil-to-skin adherence factor for an industrial worker ($mg/cm^2$) | 0.2[c] |
| ABS | Dermal absorption factor (unitless) | CS[d] |

[a] Chemical-specific; refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] *Soil Screening Guidance: User's Guide*, EPA 1996.

[c] *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*, EPA/540/R-99/005.

[d] Chemical-specific; refer to EQ5.

[e] Chemical-specific; refer to Table A-1.

$Soil_{NHEM}$—Noncarcinogenic Effects—Organic Constituents (mg/kg):

(EQ3)

$$\frac{THQ \times BW_a \times AT_{ni} \times 365 days/yr}{ED_i \times EF_i \times \left[\left(\left(\frac{1}{RfD_o}\right) \times 10^{-6} \frac{kg}{mg} \times IRS_i\right) + \left(\left(\frac{1}{RfD_i}\right) \times IRA_a \times \left(\frac{1}{VF_i}\right)\right) + \left(\left(\frac{1}{RfD_o}\right) \times 10^{-6} \frac{kg}{mg} \times SA_i \times AF_i \times ABS\right)\right]}$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $Soil_{NHEM}$ | NHEM industrial risk-based chemical concentration in soil/ sediment (mg/kg) | -- |
| THQ | Target hazard quotient (unitless) | 10 |
| $RfD_o$ | Oral reference dose (mg/kg-day) | CS[a] |
| $RfD_i$ | Inhalation reference dose (mg/kg-day) | CS[a] |
| $BW_a$ | Average adult body weight (kg) | 70[b] |
| $AT_{ni}$ | Averaging time - noncarcinogens, industrial (yr) | 25[b] |
| $EF_i$ | Industrial exposure frequency (days/yr) | 250[b] |
| $ED_i$ | Industrial exposure duration (yr) | 25[b] |
| $IRS_i$ | Industrial soil ingestion rate (mg/day) | 50[b] |
| $IRA_a$ | Adult inhalation rate ($m^3$/day) | 20[c] |
| $VF_i$ | Industrial soil-to-air volatilization factor ($m^3$/kg) | CS[d] |

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $SA_i$ | Skin surface area for an industrial worker ($cm^2$/day) | 3,300[c] |
| $AF_i$ | Soil-to-skin adherence factor for an industrial worker ($mg/cm^2$) | 0.2[c] |
| ABS | Dermal absorption factor (unitless) | CS[c] |

[a] Chemical-specific; refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] *Soil Screening Guidance: User's Guide*, EPA 1996.

[c] *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*, EPA/540/R-99/005.

[d] Chemical-specific; refer to EQ5.

[e] Chemical-specific; refer to Table A-1.

$Soil_{NHEM}$—Noncarcinogenic Effects—Inorganic Constituents (mg/kg):

(EQ4)

$$\frac{THQxBW_a xAT_{ni} x365 days/yr}{ED_i xEF_i x\left[\left(\left(\frac{1}{RfD_o}\right)x10^{-6}\frac{kg}{mg}xIRS_i\right)+\left(\left(\frac{1}{RfD_o}\right)x10^{-6}\frac{kg}{mg}xSA_i xAF_i xABS\right)\right]}$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $Soil_{NHEM}$ | NHEM industrial risk-based chemical concentration in soil/ sediment (mg/kg) | -- |
| THQ | Target hazard quotient (unitless) | 10 |
| $RfD_o$ | Oral reference dose (mg/kg-day) | CS[a] |
| $BW_a$ | Average adult body weight (kg) | 70[b] |
| $AT_{ni}$ | Averaging time - noncarcinogens, industrial (yr) | 70[b] |
| $EF_i$ | Industrial exposure frequency (days/yr) | 250[b] |
| $ED_i$ | Industrial exposure duration (yr) | 25[b] |
| $IRS_i$ | Industrial soil ingestion rate (mg/day) | 50[b] |
| $SA_i$ | Skin surface area for an industrial worker ($cm^2$/day) | 3,300[c] |
| $AF_i$ | Soil-to-skin adherence factor for an industrial worker ($mg/cm^2$) | 0.2[c] |
| ABS | Dermal absorption factor (unitless) | CS[d] |

[a] Chemical-specific; refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] *Soil Screening Guidance: User's Guide*, EPA 1996.

[c] *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*, EPA/540/R-99/005.

[d] Chemical-specific; refer to EQ5.

[e] Chemical-specific; refer to Table A-1.

$VF_i$—Volatilization Factor—Organic Constituents ($m^3$/kg):

(EQ5)

$$\frac{Q/C\,x(3.14xD_A xT)^{1/2}x10^{-4}(m^2/cm^2)}{(2x\rho_b xD_A)}$$

where:

(EQ6)

$$D_A(cm^2/s)=\frac{[(\theta_a^{10/3}xD_i xH'+\theta_w^{10/3}xD_w)/n^2]}{\rho_b xK_d+\theta_w+\theta_a xH'}$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $VF_i$ | Industrial soil-to-air volatilization factor ($m^3$/kg) | -- |
| $D_A$ | Apparent diffusivity ($cm^2$/s) | -- |
| Q/C | Inverse of the mean concentration at the center of source ($g/m^2$-s per $kg/m^3$) | 79.25 |
| T | Exposure interval – industrial (s) | 7.9E+08[a] |
| $\rho_b$ | Dry soil bulk density ($g/cm^3$) | 1.7[b] |
| $\theta_a$ | Air-filled soil porosity ($L_{air}/L_{soil}$) | $n-\theta_w$ |
| n | Total soil porosity ($L_{pore}/L_{soil}$) | $1-(\rho_b/\rho_s)$ |
| $\theta_w$ | Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.21[b] |
| $\rho_s$ | Soil particle density ($g/cm^3$) | 2.65[b] |
| $D_i$ | Diffusivity in air ($cm^2$/s) | CS[c] |
| H' | Henry's Law Constant (dimensionless) | CS[c,d] |
| $D_w$ | Diffusivity in water ($cm^2$/s) | CS[c] |
| $K_d$ | Soil-water partition coefficient ($cm^3$/g) = $K_{oc}$ x $f_{oc}$ | CS[c] |
| $K_{oc}$ | Soil organic carbon partition coefficient ($cm^3$/g) | CS[c] |
| $f_{oc}$ | Fractional organic carbon in soil (g/g) = percent organic matter/174 (ASTM 2974) | 0.006[b] |

[a] *Soil Screening Guidance: User's Guide*, EPA 1996.

[b] LDEQ default value.

[c] Chemical-specific.

[d] H' = H x 41 where: H = Henry's Law Constant (atm-$m^3$/mol); R = Universal Law Constant (0.0000821 atm-$m^3$/mole-$^o$K); and T = Absolute temperature of soil ($^o$K) [273 + $^o$C (25 $^o$C)].

| Table A-1 | |
|---|---|
| **Dermal Absorption Factors [1]** | |
| **Constituent** | **ABS (unitless)** |
| Arsenic | 0.03 |
| Cadmium | 0.001 |
| Chlordane | 0.04 |
| 2,4-D | 0.05 |
| DDT | 0.03 |
| Gamma-hexachlorocyclohexane | 0.04 |
| TCDD | 0.03 |
| Pentachlorophenol | 0.25 |

| Table A-1 | |
|---|---|
| **Dermal Absorption Factors [1]** | |
| **Constituent** | **ABS (unitless)** |
| Polychlorinated biphenyls | 0.14 |
| Polycyclic aromatic hydrocarbons | 0.13 |
| Other semivolatile organic constituents | 0.10 |
| Other inorganic constituents (metals) | 0 |
| Volatile constituents | 0 |

[1] *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*, Interim Guidance. EPA 2004. EPA/540/R-99/005.

$GW_{NHEM}$—Carcinogenic Effects—Volatile Constituents (mg/l):

(EQ7)

$$\frac{TRxAT_c x365 days/yr}{EF_{ni} x[(SF_i xK_w xIRA_{adj})+(SF_o xIRW_{adj})]} xDF$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $GW_{NHEM}$ | NHEM chemical concentration in groundwater (mg/l) | -- |
| TR | Target excess individual lifetime cancer risk (unitless) | $10^{-5}$ |
| $SF_o$ | Oral cancer slope factor ($(mg/kg\text{-}day)^{-1}$) | CS[a] |
| $SF_i$ | Inhalation cancer slope factor ($(mg/kg\text{-}day)^{-1}$) | CS[a] |
| $AT_c$ | Averaging time - carcinogens (yr) | 70[b] |
| $EF_{ni}$ | Industrial exposure frequency (days/yr) | 350[b] |
| $IRW_{adj}$ | Age-adjusted water ingestion rate (L-yr/kg-day) | 1.1[b] |
| $IRA_{adj}$ | Age-adjusted inhalation rate ($m^3$-yr/kg-day) | 11[b] |
| $K_w$ | Water-to-indoor air volatilization factor ($L/m^3$) | 0.5[c,d] |
| DF | Dilution and Attenuation Factor (unitless) | 100[c] |

[a] Chemical-specific: refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] Human Health Medium-Specific Screening Levels, EPA Region VI, 2003.

[c] *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remedial Goals)*, EPA 1991.

[d] The water-air concentration relationship represented by the volatilization factor ($K_w$) is applicable only to chemicals with a Henry's Law Constant of greater than 1E-05 atm-$m^3$/mole and a molecular weight of less than 200 g/mole.

$GW_{NHEM}$—Noncarcinogenic Effects—Volatile Constituents (mg/l):

(EQ8)

$$\frac{THQxBW_a xAT_{nni} x365 days/yr}{EF_{ni} xED_{ni} x\left[\left(\frac{1}{RfD_i} xK_w xIRA_a\right)+\left(\frac{1}{RfD_o} xIRW_a\right)\right]} xDF$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $GW_{NHEM}$ | NHEM chemical concentration in groundwater (mg/l) | -- |
| THQ | Target hazard quotient (unitless) | 10 |
| $RfD_i$ | Inhalation reference dose (mg/kg-day) | CS[a] |
| $RfD_o$ | Oral reference dose (mg/kg-day) | CS[a] |
| $BW_a$ | Average adult body weight (kg) | 70[b] |
| $AT_{nni}$ | Averaging time - noncarcinogens, non-industrial (yr) | 30[b] |
| $EF_{ni}$ | Non-industrial exposure frequency (days/yr) | 350[b] |
| $ED_{ni}$ | Industrial exposure duration (yr) | 30[b] |
| $IRW_a$ | Adult water ingestion rate (L/day) | 20[b] |
| $IRA_a$ | Adult inhalation rate ($m^3$/day) | 20[b] |
| $K_w$ | Water-to-indoor air volatilization factor ($L/m^3$) | 0.5[c,d] |
| DF | Dilution Factor (unitless) | 100 |

[a] Chemical-specific: refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] Human Health Medium-Specific Screening Levels, EPA Region VI, 2003.

[c] *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remedial Goals)*, EPA 1991.

[d] The water-air concentration relationship represented by the volatilization factor ($K_w$) is applicable only to chemicals with a Henry's Law Constant of greater than 1E-05 atm-$m^3$/mole and a molecular weight of less than 200 g/mole.

$GW_{NHEM}$—Carcinogenic Effects—Non-Volatile Constituents (mg/l):

(EQ9)

$$\frac{TRxAT_c x365 days/yr}{EF_{ni} x(SF_o xIRW_{adj})} xDF$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $GW_{NHEM}$ | NHEM chemical concentration in groundwater (mg/l) | -- |
| TR | Target excess individual lifetime cancer risk (unitless) | $10^{-5}$ [a] |
| $SF_o$ | Oral cancer slope factor ($(mg/kg\text{-}day)^{-1}$) | CS[b] |
| $AT_c$ | Averaging time - carcinogens (yr) | 70[a] |
| $EF_{ni}$ | Non-industrial exposure frequency (days/yr) | 350[a] |
| $IRW_{adj}$ | Age-adjusted water ingestion rate (L-yr/kg-day) | 1.1[a] |
| DF | Dilution Factor (unitless) | 100 |

[a] Chemical-specific; refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] Human Health Medium-Specific Screening Levels, EPA Region VI, 2003.

$GW_{NHEM}$—Noncarcinogenic Effects—Non-Volatile Constituents (mg/l):

(EQ10)

$$\frac{THQ \ x \ BW_a \ x \ AT_{nni} \ x \ 365 \ days/yr}{EF_{ni} \ x \ ED_{ni} \ x \ (1/RfD_o \ x \ IRW_a)} xDF$$

| Parameter | Definition (units) | Input Value |
|---|---|---|
| $GW_{NHEM}$ | NHEM chemical concentration in groundwater (mg/l) | -- |
| THQ | Target hazard quotient (unitless) | 10 |
| $RfD_o$ | Oral reference dose (mg/kg-day) | CS[a] |
| $BW_a$ | Average adult body weight (kg) | 70[b] |
| $AT_{nni}$ | Averaging time - noncarcinogens, non-industrial (yr) | 30[b] |
| $EF_{ni}$ | Non-industrial exposure frequency (days/yr) | 350[b] |
| $ED_{ni}$ | Non-industrial exposure duration (yr) | 30[b] |
| $IRW_a$ | Adult water ingestion rate (L/day) | 2[b] |
| DF | Dilution Factor (unitless) | 100 |

[a] Chemical-specific; refer to EPA's Integrated Risk Information System (http://www.epa.gov/iris/subst/index.html) or other appropriate EPA reference.

[b] Human Health Medium-Specific Screening Levels, EPA Region VI, 2003.

B. Appendix B—Examples of Potentially Incompatible Waste[1]

1. Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects that are harmful to human health and the environment, such as:

a. heat or pressure;

b. fire or explosion;

c. violent reaction;

d. toxic dusts, mists, fumes, or gases; or

e. flammable fumes or gases.

2. Paragraph 5 of this Appendix contains examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences that result from mixing materials in one group with materials in another group. Paragraph 5 is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit-granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

3. The tables in Paragraph 5 are not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the types listed in Paragraph 5, whether they are listed in Paragraph 5 or not.

4. It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

5. In the tables below, the mixing of a Group A material with a Group B material may have the potential consequence as noted.

| Group 1 Materials |
|---|
| **Group 1-A:** |
| Acetylene sludge |
| Alkaline caustic liquids |
| Alkaline cleaner |
| Alkaline corrosive liquids |
| Alkaline corrosive battery fluid |
| Caustic wastewater |
| Lime sludge and other corrosive alkalis |
| Lime wastewater |
| Lime and water |
| Spent caustic |
| **Group 1-B:** |
| Acid sludge |
| Acid and water |
| Battery acid |
| Chemical cleaners |
| Electrolyte, acid |
| Etching acid liquid or solvent |
| Pickling liquor and other corrosive acids |
| Spent acid |
| Spent mixed acid |
| Spent sulfuric acid |
| **Potential Consequences:** |
| Heat generation or violent reaction |

| Group 2 Materials |
|---|
| **Group 2-A:** |
| Aluminum |
| Beryllium |
| Calcium |
| Lithium |
| Magnesium |
| Potassium |
| Sodium |
| Zinc powder |
| Other reactive metals and metal hydrides |
| **Group 2-B:** |
| Any waste in Group 1-A or 1-B |
| **Potential Consequences:** |
| Fire or explosion; generation of flammable hydrogen gas |

| Group 3 Materials |
|---|
| **Group 3-A:** |
| Alcohols |
| Water |
| **Group 3-B:** |
| Any concentrated waste in Group 1-A or 1-B |
| Calcium |
| Lithium |

| Group 3 Materials |
|---|
| Metal hydrides |
| Potassium |
| $SO_2Cl_2$, $SOCl_2$, $PCl_3$, $CH_3SiCl_3$ |
| Other water-reactive waste |
| **Potential Consequences:** |
| Fire, explosion, or heat generation; generation of flammable or toxic gases |

| Group 4 Materials |
|---|
| **Group 4-A:** |
| Alcohols |
| Aldehydes |
| Halogenated hydrocarbons |
| Nitrated hydrocarbons |
| Unsaturated hydrocarbons |
| Other reactive organic compounds and solvents |
| **Group 4-B:** |
| Concentrated Group 1-A or 1-B wastes |
| Group 2-A wastes |
| **Potential Consequences:** |
| Fire, explosion, or violent reaction |

| Group 5 Materials |
|---|
| **Group 5-A:** |
| Spent cyanide and sulfide solutions |
| **Group 5-B:** |
| Group 1-B wastes |
| **Potential Consequences:** |
| Generation of toxic hydrogen cyanide or hydrogen sulfide gas |

| Group 6 Materials |
|---|
| **Group 6-A:** |
| Chlorates |
| Chlorine |
| Chlorites |
| Chromic acid |
| Hypochlorites |
| Nitrates |
| Nitric acid, fuming |
| Perchlorates |
| Permanganates |
| Peroxides |
| Other strong oxidizers |
| **Group 6-B:** |
| Acetic acid and other organic acids |
| Concentrated mineral acids |
| Group 2-A wastes |
| Group 4-A wastes |
| Other flammable and combustible wastes |
| **Potential Consequences:** |
| Fire, explosion, or violent reaction |

[1]Source: "Law, Regulations, and Guidelines for Handling of Hazardous Waste." California Department of Health, February 1975.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq. and, in particular, 2186(A)(2).

HISTORICAL NOTE: Promulgated by the Office of the Secretary, Legal Affairs Division, LR 33:452 (March 2007), amended LR 34:617 (April 2008).

# Chapter 3. General Conditions for Treatment, Storage, and Disposal Facility Permits

## §301. Authority

A. The Louisiana Environmental Affairs Act (Acts 1979, 449) authorizes the department to administer this permit program.

B. This Chapter establishes general conditions for permit standards applicable to treatment, storage, and disposal (TSD) facilities. LAC 33:V.Chapter 5 establishes the contents of the permit application and LAC 33:V.Chapter 7 establishes the administrative procedures for receipt, evaluation, and issuance of TSD permits. LAC 33:V.Chapter 11 establishes standards applicable to generators of hazardous waste. LAC 33:V.Chapter 13 establishes standards applicable to transporters of hazardous waste. LAC 33:V.Chapter 15 establishes general standards for TSD facilities. LAC 33:V.Chapters 19-32 establish specific technical requirements for various disposal facility components.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

## §303. Overview of the Permit Program

A. General Application Requirements

1. Permit Application. Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit an application to the Office of Environmental Services, as described in this Section and LAC 33:V.4301, 4303, and 4305. Persons currently authorized with interim status shall apply for permits when required by the administrative authority. Persons covered by permits by rule (LAC 33:V.305.D) need not apply. Procedures for applications, issuance, and administration of emergency permits are found exclusively in LAC 33:V.701 and 703. Procedures for application, issuance, and administration of research, development, and demonstration permits are found exclusively in LAC 33:V.329.

2. No later than 90 days after the promulgation or revision of these regulations, all generators and transporters of hazardous waste, and all owners or operators of hazardous waste treatment, storage, or disposal facilities must file or have on file a notification of that activity using Notification Form HW-1, available from the Office of Environmental Services or through the department's website. For generators of hazardous waste, the Notification Form HW-1 shall be deemed a registration upon acceptance and approval by the administrative authority.

3. The administrative authority shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. See this

Chapter and LAC 33:V.Chapter 5 for permit standards and requirements for the contents of permit applications.

4. Permit applications must comply with the signature and certification requirements of LAC 33:V.507 and 513.

B. Treatment, storage, or disposal of hazardous waste is prohibited by any person who has not received an interim status or a standard permit.

C. A hazardous waste permit application consists of two parts.

1. Part I requirements are listed in LAC 33:V.515.

2. Part II requirements are listed in LAC 33:V.517.

D. No facility may be used to treat, store, and/or dispose of hazardous waste without a permit for the specific activities, procedures, and classification of waste handled as outlined in their permit, or in emergency situations under the direction of the administrative authority as provided in LAC 33:V.701 or 703.

E. Requirements for Existing TSD Facilities

1. Owners and operators of existing TSD facilities must submit Part I of their permit application requirements listed in LAC 33:V.515 to the administrative authority no later than 30 days after the date they first become subject to the permitting standards set forth in LAC 33:V.Subpart 1. Generators generating greater than 100 kg, but less than 1000 kg, of hazardous waste in a calendar month who treat, store, or dispose of these wastes on-site must submit a Part I RCRA permit application by March 24, 1987.

2. The owner or operator of an existing TSD facility may be required to submit a permit application at any time. Any owner or operator shall be allowed at least six months from the date of request to submit the application. Any owner or operator of an existing TSD facility may voluntarily submit the application at any time.

3. The administrative authority may by compliance order extend the date by which the owner or operator of an existing TSD facility must submit a permit application. In no instance will the administrative authority grant an extension of permit submission for more than 180 days.

4. Failure to furnish a requested Part II application on time, or to finish in full the information required by the Part II application, is grounds for termination of interim status under LAC 33:V.Chapter 43.

F. Part II Formal Permit Application. The formal permit application must follow all outline, numbering system, and other format requirements established by the administrative authority.

G. Requirements for Interim Status Facilities. Facility owners and operators with interim status must comply with interim status standards set forth in LAC 33:V.Chapter 43.

H. Requirements for New TSD Facilities. Owners or operators of new TSD facilities must submit Part I and Part II of the permit application at least 180 days before physical construction is expected to commence except as provided in LAC 33:V.303.H.3.

1. No person shall begin physical construction of a new TSD facility or begin major modifications to an existing facility without having submitted Parts I and II of the permit application and received a final effective TSD permit.

2. An application for a permit for a new TSD facility (including both Parts I and II) may be filed any time after promulgation of these standards, applicable to such facility. The application shall be filed with the Office of Environmental Services.

3. Notwithstanding LAC 33:V.303.H.1, a person may construct a facility for the incineration of polychlorinated biphenyls pursuant to and after an approval issued by the administrative authority under Section (6)(e) of the Toxic Substances Control Act, and any person owning or operating such a facility shall, at any time after construction or operation of such a facility has begun, file an application for a RCRA permit to incinerate hazardous waste authorizing such facility to incinerate waste identified or listed under LAC 33:V.Chapter 49.

4. A new facility must obtain an EPA identification number. EPA identification numbers will be issued only by the EPA. However, application for an EPA Identification Number shall be made by completing the Hazardous Waste Notification form provided by the Office of Environmental Services.

I. No new facility or major modification of an existing facility may commence treatment, storage, or disposal of hazardous waste until the facility is complete and:

1. the permittee has submitted to the administrative authority by certified mail or hand delivery a letter signed by the permittee and an engineer licensed in Louisiana stating that the facility is complete and built in accordance with terms of the permit; and

2. the facility has been inspected by the department following a "request to make final inspection" by the operator, and an order to proceed is issued.

J. Timely Permit Submission. Failure to furnish a requested application on time or failure to furnish in full the information required by the application is grounds for termination of interim status.

K. Updating Permit Applications

1. If any owner or operator of a TSD facility has filed Part I of the permit application and has not yet filed a Part II permit application, the owner or operator shall file an amended Part I permit application.

2. The owner or operator of a facility who fails to comply with the updating requirements of LAC 33:V.303.K may be subject to termination of interim status with respect to those wastes not reported in duly filed notifications.

L. Incomplete Applications. Applications which lack information necessary for proper evaluation will be returned by the administrative authority to the operator within 60

days of receipt of application with a list of additional data required and the timeframe for submission of additional data.

M. Completeness. The administrative authority shall not issue a permit before receiving a complete application for a permit except for permits by rule, or emergency permits. An application for a permit is complete when the administrative authority receives an application form and any supplemental information which are completed to his or her satisfaction. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in LAC 33:V.303.P. The administrative authority may deny a permit for the active life of a hazardous waste management facility or unit before receiving a complete application for a permit. Applications which are complete will be accepted for review. Operators will be notified of such acceptance for review within 60 days of receipt of application.

N. Reapplications. Any TSD facility with an effective permit shall submit a new permit application at least 180 days before the expiration date of the effective permit, unless permission for later filing is granted by the administrative authority. (The administrative authority shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

O. Application Submitted. All formal permit applications (Part II) shall be submitted in quintuplicate in the form presented in LAC 33:V.515, 517, 519, and 521 and in conformance with all requirements established by the administrative authority. An additional 15 copies shall be provided for any application upon which an evidentiary hearing is to be held by the administrative authority.

P. Exposure Information

1. After August 8, 1985, any Part II permit application submitted by an owner or operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or a landfill must be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum, such information must address:

a. reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;

b. the potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described in LAC 33:V.303.P.1.a; and

c. the potential magnitude and nature of the human exposure resulting from such releases.

2. By August 8, 1985, owners and operators of a landfill or a surface impoundment who have already submitted a Part II application must submit the exposure information required in LAC 33:V.303.P.1.

Q. Other Information. The administrative authority may require a permittee or an applicant to submit relevant information in order to establish permit conditions under LAC 33:V.311.E-F and 315.

R. If the administrative authority concludes, based on one or more of the factors listed in Paragraphs R.1-9 of this Section, that compliance with the standards of 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, alone may not be protective of human health or the environment, the administrative authority shall require the additional information or assessment necessary to determine whether additional controls are necessary to ensure protection of human health and the environment. This includes information necessary to evaluate the potential risk to human health and/or the environment resulting from both direct and indirect exposure pathways. The administrative authority may also require a permittee or applicant to provide information necessary to determine whether such an assessment should be required. The administrative authority shall base the evaluation of whether compliance with the standards of 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, alone is protective of human health or the environment on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, any of the following factors:

1. particular site-specific considerations such as proximity to receptors (such as schools, hospitals, nursing homes, day care centers, parks, community activity centers, or other potentially sensitive receptors), unique dispersion patterns, etc.;

2. identities and quantities of emissions of persistent, bioaccumulative, or toxic pollutants considering enforceable controls in place to limit those pollutants;

3. identities and quantities of nondioxin products of incomplete combustion most likely to be emitted and to pose significant risk based on known toxicities (confirmation of which should be made through emissions testing);

4. identities and quantities of other off-site sources of pollutants in proximity to the facility that significantly influence interpretation of a facility-specific risk assessment;

5. presence of significant ecological considerations, such as the proximity of a particularly sensitive ecological area;

6. volume and types of wastes, for example wastes containing highly toxic constituents;

7. other on-site sources of hazardous air pollutants that significantly influence interpretation of the risk posed by the operation of the source in question;

8. the adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk; and

9. such other factors as may be appropriate.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 14:790 (November 1988), LR 16:220 (March 1990), LR 17:478 (May 1991), LR 17:658 (July 1991), LR 20:1000 (September 1994), LR 21:564 (June 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2466 (November 2000), LR 27:708 (May 2001), amended by the Office of Environmental Assessment, LR 30:2023 (September 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2453 (October 2005), LR 33:2099 (October 2007), LR 34:619 (April 2008).

## §305. Scope of the Permit

A. A permit is required for the treatment, storage, and disposal of any hazardous waste as identified or listed in LAC 33:V.Chapter 49. The terms *treatment*, *storage*, *disposal*, and *hazardous waste* are defined in LAC 33:V.109. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit. Owners or operators of surface impoundments, landfills, land treatment units, and waste pile units that received wastes after July 26, 1982, or that certified closure (according to LAC 33:V.4387) after January 26, 1983, must have post-closure permits, unless they demonstrate closure by removal or decontamination as provided under Subsections F and G of this Section, or obtain an enforceable document in lieu of a post-closure permit, as provided under Subsection H of this Section. If a post-closure permit is required, the permit must address applicable groundwater monitoring, unsaturated zone monitoring, corrective action, and post-closure care requirements. The denial of a permit for the active life of a hazardous waste management facility or unit does not affect the requirement to obtain a post-closure permit under this Section.

B. Specific Inclusions. Owners and operators of certain facilities require hazardous waste permits as well as permits under other programs for certain aspects of the facility operation. Permits are required for:

1. facilities which treat, store, and/or dispose of hazardous wastes controlled by this program, as listed in LAC 33:V.105, less listed exclusions in LAC 33:V.105.D;

2. all associated surface facilities for injection wells that treat, store, and/or dispose of hazardous waste;

3. treatment, storage, or disposal of hazardous waste at facilities requiring a National Pollution Discharge Elimination System (NPDES) permit;

4. barges or vessels that dispose of hazardous waste under a valid federal permit by ocean disposal and onshore hazardous waste treatment, or storage facilities associated with an ocean disposal operation. However, the facility will be deemed to have a permit for ocean disposal from the barge or vessel itself if it complies with the requirements of LAC 33:V.305.C.

C. Exclusions. The following persons are not required to obtain a hazardous waste permit:

1. facilities with injection wells that dispose of hazardous waste. Those wells are regulated by the Office of Conservation prior to February 1, 1984. After that date, such permits shall be issued by the Department of Environmental Quality pursuant to Act 97 of 1983;

2. generators who accumulate hazardous waste in an environmentally sound manner, on-site for less than the time periods provided in LAC 33:V.1109.E;

3. farmers who dispose of hazardous waste pesticides from their own use as provided in LAC 33:V.1101.D;

4. persons who own or operate facilities solely for the treatment, storage, or disposal of hazardous waste excluded from regulation under LAC 33:V.105.D or 108 (conditionally exempt small quantity generator exemption);

5. owners or operators of totally enclosed treatment facilities (see definition in LAC 33:V.Chapter 1);

6. owners and operators of elementary neutralization units or wastewater treatment units (see definitions in LAC 33:V.Chapter 1);

7. transporters storing manifested shipments of hazardous waste in containers meeting all applicable requirements at a transfer facility for a period of 10 days or less, if so approved by the administrative authority (see definition in LAC 33:V.109);

8. persons adding absorbent material to waste in a container and persons adding waste to absorbent material, provided that this action occurs at the time waste is first placed in the container and that the action complies with all applicable sections in LAC 33:V.Chapter 21;

9. a person is not required to obtain a permit for those activities he carries out to immediately contain or treat a spill of hazardous waste or material which, when spilled, becomes a hazardous waste. This exclusion is intended to relieve persons of the necessity of obtaining a RCRA permit where the treatment or storage of hazardous waste is undertaken as part of an immediate response to a spill. After the immediate response activities are completed, any treatment, storage, or disposal of spilled material or spill residue or debris that is undertaken must be covered by interim status, permit or emergency permit;

10. owners and operators of facilities granted a research development and demonstration permit under Section 3005(g) of Subtitle C of RCRA, is so specifically exempted by the administrative authority;

11. *universal waste handlers* and *universal waste transporters* (as defined in LAC 33:V.3813) handling the wastes listed below. These handlers are subject to regulation under LAC 33:V.Chapter 38, when handling the below listed universal wastes:

a. batteries as described in LAC 33:V.3803;

b. pesticides as described in LAC 33:V.3805;

c. mercury-containing equipment as described in LAC 33:V.3807;

d. lamps as described in LAC 33:V.3809;

e. electronics as described in LAC 33:V.3810; and

f. antifreeze as described in LAC 33:V.3811;

12. the owner or operator of a facility permitted, licensed, or registered to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation by LAC 33:V.Subpart 1;

13. a person, not required to obtain a RCRA permit for treatment or containment activities taken during immediate response to any of the following situations:

a. a discharge of a hazardous waste;

b. an imminent and substantial threat of a discharge of hazardous waste;

c. a discharge of a material which, when discharged, becomes a hazardous waste;

d. an immediate threat to human health, public safety, property, or the environment from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an *explosives or munitions emergency response specialist* as defined in LAC 33:V.109;

14. any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of LAC 33:V.Chapters 3, 5, and 7 for those activities; or

15. in the case of emergency responses involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

D. RCRA Permits by Rule

1. Notwithstanding any other provision, the following shall be deemed to have a permit if the conditions listed are met.

a. The owner or operator of a barge or other vessel which accepts hazardous waste for ocean disposal, if he or she has a valid federal permit for ocean dumping which is duly authorized and meets permit conditions, hazardous waste regulations, identification numbers, uses the manifest system, reports manifest discrepancies, operating records, annual reports, and reports of any unmanifested waste. Where required by the administrative authority, evidence of the above conditions must be presented. On-shore storage or treatment facilities shall be permitted as required by LAC 33:V.Subpart 1.

b. The owner or operator of an injection well disposing of hazardous waste if he or she has a valid permit for underground injection issued under LAC 43:XVII.Subparts 1 and 2 and is in compliance with such permit and LAC 43:XVII.203.F, and associated surface facilities are permitted under LAC 33:V.Subpart 1. For underground injection permits issued after November 8, 1984, the owner or operator must comply with LAC 33:V.3322. Where the underground injection well is the only unit at a facility which requires a RCRA permit, the owner or operator must comply with LAC 33:V.516 and with the following information requirements for solid waste management units.

i. The following information is required for each solid waste management unit at a facility seeking a permit:

(a). the location of the unit on the topographic map;

(b). designation of type of unit;

(c). general dimensions and structural description (supply any available drawings);

(d). information on when the unit was operated; and

(e). specification of all wastes that have been managed at the unit, to the extent available.

ii. The owner or operator of any facility containing one or more solid waste management units must submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.

iii. The owner/operator must conduct and provide the results of sampling and analysis of groundwater, land surface, and subsurface strata, surface water, or air, which may include the installation of wells, where the administrative authority ascertains it is necessary to complete a RCRA Facility Assessment that will determine if a more complete investigation is necessary.

2. Publicly Owned Treatment Works. The owner or operator of a POTW can accept hazardous waste for treatment, if the owner or operator has an NPDES permit, complies with the conditions of that permit, and complies with the following regulations:

a. receives an identification number as provided in LAC 33:V.303.H.4;

b. receives all hazardous waste under a designated manifest system;

c. provides a mechanism by which discrepancies in manifested discharges and receipts can be reconciled;

d. maintains a description and quantity of each hazardous waste received and subsequent treatment including methods and dates;

e. submits annual reports summarizing activities relating to receptions and treatment of each hazardous waste;

f. submits a complete report within five days of receiving any hazardous waste on an unmanifested basis;

g. complies with all recordkeeping requirements of LAC 33:V.Subpart 1; and

h. for NPDES permits issued after November 8, 1984, complies with LAC 33:V.3322.

3. The owner or operator can accept the hazardous waste if it meets all federal, state, and local pretreatment requirements which would be applicable to the waste and if it is discharged into the POTW through a sewer, pipe, or similar conveyance.

E. Permits for Less Than an Entire Facility. The administrative authority may issue or deny a permit for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility. The interim status of any unit for which a permit has not been issued or denied is not affected by the issuance or denial of a permit to any other unit at the facility.

F. Closure by Removal. Owners/operators of surface impoundments, land treatment units, and waste piles closing by removal or decontamination under LAC 33:V.Chapter 43 standards must obtain a post-closure permit unless they can demonstrate to the administrative authority that the closure met the standards for closure by removal or decontamination in LAC 33:V.2911, 2719.D.4, or 2315, respectively. The demonstration may be made in the following ways.

1. If the owner/operator has submitted an application for a post-closure permit, the owner/operator may request a determination, based on information contained in the application, that LAC 33:V.Subpart 1 closure-by-removal standards were met. If the administrative authority believes that LAC 33:V.Subpart 1 standards were met, he or she will notify the public of this proposed decision, allow for public comment, and reach a final determination according to the procedures in LAC 33:V.305.G.

2. If the owner/operator has not submitted a Part II application for a post-closure permit, the owner/operator may petition the administrative authority for a determination that a post-closure permit is not required because the closure met the applicable LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37 closure standards.

a. The petition must include data demonstrating that closure met removal or decontamination standards, or it must demonstrate that the unit was closed under state requirements that met or exceeded the applicable LAC 33:V.Subpart 1 closure-by-removal standards.

b. The administrative authority shall approve or deny the petition according to the procedures outlined in LAC 33:V.305.G.

G. Procedures for Closure Equivalency Determination

1. If a facility owner/operator seeks an equivalency demonstration under LAC 33:V.305.F, the administrative authority will provide the public through a newspaper notice, the opportunity to submit written comments on the information submitted by the owner/operator within 30 days from the date of the notice. The administrative authority will also, in response to a request or at his or her own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the equivalence of the LAC 33:V.Chapter 43 closure to the LAC 33:V.Chapter 35 closure. The administrative authority will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.)

2. The administrative authority will determine whether the LAC 33:V.Chapter 43 closure met the requirements of LAC 33:V.Chapter 35 closure by removal or decontamination within 90 days of its receipt. If the administrative authority finds that the closure did not meet the applicable LAC 33:V.Chapter 35 standards, he or she will provide the owner/operator with a written statement of the reasons why the closure failed to meet LAC 33:V.Chapter 35 standards. The owner/operator may submit additional information in support of an equivalency demonstration within 30 days after receiving such written statement. The administrative authority will review any additional information submitted and make a final determination within 60 days.

3. If the administrative authority determines that the facility did not close in accordance with LAC 33:V.Chapter 35 closure-by-removal standards, the facility is subject to post-closure permitting requirements.

H. Enforceable Documents for Post-Closure Care. At the discretion of the administrative authority, an owner or operator may obtain, in lieu of a post-closure permit, an enforceable document imposing the requirements of LAC 33:V.4396. *Enforceable document* means an order, plan, or other document issued by EPA or by the department under an authority that meets the requirements of 40 CFR 271.16(e) including, but not limited to, a corrective action order issued by EPA under Section 3008(h), a CERCLA remedial action, or a closure or post-closure plan.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:84 (February 1987), LR 13:433 (August 1987), LR 16:220 (March 1990), LR 16:614 (July 1990), LR 17:658 (July 1991), LR 20:1000 (September 1994), LR 20:1109 (October 1994), LR 21:944 (September 1995), LR 23:567 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1105 (June 1998), LR 24:1690, 1759 (September 1998), LR 25:435 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:708 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3116 (December 2005), LR 33:1625 (August 2007), LR 34:619 (April 2008).

## §307. Effect of a Permit

A. Compliance with a RCRA permit during its term constitutes compliance, for purposes of enforcement, with LAC 33:V.Subpart 1, except for those requirements not included in the permit which:

1. become effective by statute;

2. are promulgated under LAC 33:V.Chapter 22 restricting the placement of hazardous wastes in or on the land;

3. are promulgated under LAC 33:V.Chapters 23, 25, and 29 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, CQA programs, monitoring, action leakage rates, and response action plans and will be implemented through the procedures of LAC 33:V.321.C Class 1 permit modifications; or

4. are promulgated under LAC 33:V.Chapter 43.Subchapters Q, R, and V limiting air emissions.

B. The issuance of a permit does not authorize any injury to persons or property, or invasion of other private rights, or any infringement of state or local law or regulations.

C. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:614 (July 1990), LR 17:658 (July 1991), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:435 (March 1999).

## §309. Conditions Applicable to All Permits

Each permit shall include permit conditions necessary to achieve compliance with the Act and these regulations, including each of the applicable requirements specified in LAC 33:V.Subpart 1. In satisfying this provision, the administrative authority may incorporate applicable requirements of LAC 33:V.Subpart 1 directly into the permit or establish other permit conditions that are based on LAC 33:V.Subpart 1. The following conditions apply to all hazardous waste permits. All conditions applicable to permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit.

A. Duty to Comply. The permittee must comply with all conditions of this permit except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. Any permit noncompliance constitutes a violation of the Act and any amendments and is grounds for enforcement action, permit termination, revocation and reissuance or modification, or denial of a permit renewal application.

B. Duty to Reapply. If the permittee wishes to continue an activity regulated by the permit after the expiration date of the permit, the permittee must reapply for the permit as required in LAC 33:V.303.N. If the administrative authority does not issue a final decision on the reapplication on or before the expiration date of the permit, it shall remain in effect until the administrative authority issues a final decision.

C. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

E. Proper Operation and Maintenance

1. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.

2. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

F. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

G. Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

H. Duty to Provide Information. The permittee shall furnish to the administrative authority, within a reasonable time, any information which may be requested to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish, upon request, copies of records required to be kept by this permit.

I. Inspection and Entry. The permittee shall allow the administrative authority, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate act, any substances or parameters at any location.

J. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, the certification required by LAC 33:V.1529.B.19, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report, certification, or application. This period may be extended by request of the administrative authority at any time. The permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the facilities, and for disposal facilities for the post-closure care period as well.

3. Records of monitoring information shall include:

a. the date, exact place, and time of sampling or measurements;

b. the individual(s) who performed the sampling or measurements;

c. the date(s) analyses were performed;

d. the individual(s) who performed the analyses;

e. the analytical techniques of methods used; and

f. the results of such analyses.

K. Signatory Requirement. All applications, reports, or information submitted to the administrative authority shall be signed and certified (see also LAC 33:V.507).

L. Reporting Requirements

1. Planned Changes. The permittee shall give notice to the Office of Environmental Services, as soon as possible, of any planned physical alterations or additions to the permitted facility.

2. Anticipated Noncompliance. The permittee shall give advance notice to the Office of Environmental Services of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

3. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in LAC 33:V.321.C until:

a. the permittee has submitted to the administrative authority by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and

b. the administrative authority has inspected the newly modified or newly constructed facility and finds it is in compliance with the conditions of the permit or within 15 days of the date of receipt of the letter in LAC 33:V.303.I.1, the permittee has not received notice from the administrative authority of his or her intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.

4. Transfers. The permit is not transferable to any person except with the written approval of the administrative authority. The administrative authority may require modification, or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. In some cases, modification, or revocation and reissuance could be mandatory under LAC 33:V.Subpart 1.

5. Monitoring Reports. Monitoring results shall be reported at the intervals specified elsewhere in LAC 33:V.Subpart 1.

6. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted no later than 14 days after each schedule date.

7. The permittee shall report any noncompliance which may endanger health or the environment within 24 hours except as more immediate notification is required by the "Notification Regulations and Procedures for Unauthorized Discharges" (see LAC 33:I.Chapter 39). At a minimum such notification must include:

a. information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies;

b. any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility, which could threaten the environment or human health outside the facility;

c. the description of the occurrence and its cause shall include:

i. name, address, and telephone number of the owner or operator;

ii. name, address, and telephone number of the facility;

iii. date, time, and type of incident;

iv. name and quantity of material(s) involved;

v. the extent of injuries, if any;

vi. an assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and

vii. estimated quantity and disposition of recovered material that resulted from the incident;

d. a written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The administrative authority may waive the five-day written notice requirement in favor of a written report within 15 days.

8. Manifest Discrepancy Report. If a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy. If not resolved within five days, the permittee must submit a report including a copy of the manifest to the Office of Environmental Services.

9. Unmanifested Waste Report. An unmanifested waste report must be submitted to the Office of Environmental Services within five days of receipt of unmanifested waste.

10. Annual Report. An annual report must be submitted to the Office of Environmental Services covering facility activities during the previous calendar year.

11. Other Noncompliance. The permittee shall report all instances of noncompliance not reported under LAC 33:V.309.L.1, 2, 6, and 7 at the time monitoring reports are submitted. The reports shall contain the information listed in LAC 33:V.309.L.1 and 7.

12. Other Information. If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the administrative authority, he shall promptly submit such facts or information to the Office of Environmental Services.

M. Information Repository. The administrative authority may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in LAC 33:V.708.C.2. The information repository will be governed by the provisions in LAC 33:V.708.C.3-6.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:220 (March 1990), LR 16:614 (July 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 21:944 (September 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:657 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2466 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2453 (October 2005), LR 33:2099 (October 2007).

## §311. Establishing Permit Conditions

A. In addition to conditions required in all permits, the administrative authority shall establish conditions, as required on a case-by-case basis, under duration of permits, schedules of compliance, monitoring, for considerations under federal law, and to provide for and assure compliance with all applicable requirements of LAC 33:V.Subpart 1 and its regulations.

B. New or reissued permits, modified, or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in LAC 33:V.309.

C. All permit conditions shall be incorporated expressly, or with specific citation to the applicable regulations or specific permit requirements.

D. All permits for facilities with pre-existing groundwater contamination shall contain a permit condition containing the concentration limits of hazardous constituents established consistent with LAC 33:V.3305, 3307 and 3309. In no case shall other than background concentration limits be listed in the initial permit. Compliance with corrective action programs required in LAC 33:V.3303, 3319 and 3321 of the chapter will constitute a permitted variance. Corrective action programs shall be reviewed annually and may be based on predictive computer modeling. Alternate concentrations provided in LAC 33:V.3309.A or B may be set by permit amendment should the original concentration limits be unattainable within a 36-month timeframe.

E. Each RCRA permit shall include permit conditions necessary to achieve compliance with Subtitle II of Title 30 of the Louisiana Revised Statutes and LAC 33:V.Chapters 11, 15, 17, 19, 21, 22, 23, 25, 27, 28, 29, 30, 31, 32, 33, 35, 37, and 41. In satisfying this provision the administrative authority may incorporate applicable requirements of LAC 33:V.Chapters 11, 15, 17, 19, 21, 22, 23, 25, 27, 28, 29, 30, 31, 32, 33, 35, 37, and 41 directly by reference into the permit or establish other permit conditions that are based on these regulations. Each permit issued under Subtitle II of Title 30 of the Louisiana Revised Statutes shall contain terms and conditions as the administrative authority determines necessary to protect human health and the environment.

F. RCRA Permits for Hazardous Waste Combustion Units. If, as the result of an assessment or other information, the administrative authority determines that conditions are necessary in addition to those required under 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, or LAC 33:V.Chapters 11, 15, 17, 19, 21, 22, 23, 25, 27, 28, 29, 30, 31, 32, 33, 35, 37, and 41, to ensure protection of human health and the environment, the administrative authority shall include those conditions in a RCRA permit for a hazardous waste combustion unit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 16:220 (March 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994), amended by the Office of the Secretary, Legal Affairs Division, LR 34:619 (April 2008).

## §313. Requirements for Recording and Reporting of Monitoring Results

A. All permits shall specify:

1. requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);

2. required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring; and

3. applicable reporting requirements based upon the impact of the regulated activity as specified in LAC 33:V.Subpart 1. Reporting shall be no less frequent than specified in the regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

## §315. Duration of Permit

Hazardous waste permits shall be effective for a fixed term not to exceed 10 years. Except as provided in LAC 33:V.315.A, the term of a permit shall not be extended by modification beyond the maximum duration specified in this Section. The administrative authority may issue any permit for a duration that is less than the full allowable term under this Section. Each permit for a land disposal facility shall be reviewed by the administrative authority five years after the date of permit issuance or reissuance and shall be modified, suspended, or terminated, as necessary, as provided in LAC 33:V.323.

A. Continuation of Expiring Permits. The conditions of an expired permit continue in force until the effective date of a new permit if:

1. the permittee has submitted a timely application under LAC 33:V.517 and the applicable sections in LAC 33:V.519-533 which is a complete (under LAC 33:V.503) application for a new permit; and

2. the administrative authority through no fault of the permittee, does not issue a new permit with an effective date under LAC 33:V.705 on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints).

B. Effect. Permits continued under this Section remain fully effective and enforceable.

C. Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit, the administrative authority may choose to do any or all of the following:

1. initiate enforcement action based upon the permit which has been continued;

2. issue a notice of intent to deny the new permit under LAC 33:V.703.C.2. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

3. issue a new permit under LAC 33:V.303 with appropriate conditions; or

4. take other actions authorized by these regulations.

D. An EPA issued permit does not continue in force beyond its expiration date under federal law if at that time a state is the permitting authority. States authorized to administer the RCRA program may continue either EPA or state-issued permits until the effective date of the new permits.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:220 (March 1990), LR 20:1000 (September 1994).

## §317. Availability and Retention of Records

A. The administrative authority or his representative, upon presentation of proper credentials, shall have access to the premises of all facilities permitted and to all pertinent records, and shall have the right to take samples from any facility or waste stream covered under this permit, as provided in R.S. 30:2012.

B. File copies of all manifests, annual reports, exception reports, waste tests or analyses, and other logs or records required hereunder shall be kept for department inspection for a period of not less than three years from date of completion or receipt, whichever is later.

C. Any information provided to the administrative authority will be made available to the public to the extent and in the manner authorized by the Freedom of Information Act except as provided otherwise in LAC 33:V.319.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990).

## §319. Confidentiality

A. Provisions for confidential information may be found in LAC 33:I.Chapter 5.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:84 (February 1987), amended by the Office of the Secretary, LR 22:344 (May 1996).

## §321. Modification of Permits

A. Any proposed major modification of a facility or a site, any change in wastes handled in either volume or composition, and any other change in the site, facility, or operations that materially deviates from a permit or materially increases danger to the public health or the environment must be reported in writing to the Office of Environmental Services prior to such an occurrence, and a permit modification must be obtained in accordance with the application, public notice, and permit requirements of this Chapter and in accordance with LAC 33:I.Chapter 15. Any operator or ownership change shall be made in accordance with LAC 33:I.Chapter 19.

B. Transfer of Permits

1. A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued under LAC 33:V.321.B.2 or 323.B.2 to identify the new permittee and incorporate such other requirements as may be necessary.

2. Changes in the ownership or operational control of a facility shall be made in accordance with LAC 33:I.Chapter 19.

C. Permit Modification at the Request of the Permittee

1. Class 1 Modifications

a. Except as provided in LAC 33:V.321.C.1.b, the permittee may put into effect Class 1 modifications listed in LAC 33:V.322 under the following conditions.

i. The permittee must notify the Office of Environmental Services concerning the modification by certified mail or other means that establish proof of delivery within seven calendar days after the change is put into effect. This notice must specify the changes being made to permit conditions or supporting documents referenced by the permit and must explain why they are necessary. Along with the notice, the permittee must provide the applicable information required by LAC 33:V.515-533, 2707, and 3115.

ii. The permittee must send a notice of the modification to all persons on the facility mailing list, maintained by the administrative authority in accordance with LAC 33:V.717.A.1.e, and the appropriate units of state and local government, as specified in LAC 33:V.717.A.1.b and d. This notification must be made within 90 calendar days after the change is put into effect. For the Class 1 modifications that require prior administrative authority approval, the notification must be made within 90 calendar days after the administrative authority approves the request.

iii. Any person may request that the administrative authority review, and the administrative authority may for cause reject, any Class 1 modification. The administrative authority must inform the permittee by certified mail that a Class 1 modification has been rejected, explaining the reasons for the rejection. If a Class 1 modification has been rejected, the permittee must comply with the original permit conditions.

b. Class 1 permit modifications identified in LAC 33:V.322 by a superscript "1" may be made only with the prior written approval of the administrative authority.

c. For a Class 1 permit modification, the permittee may elect to follow the procedures in LAC 33:V.321.C.2 for Class 2 modifications instead of the Class 1 procedures. The permittee must inform the administrative authority of this decision in the notice required in LAC 33:V.321.C.2.a.

2. Class 2 Modifications

a. For Class 2 modifications, listed in LAC 33:V.322, the permittee must submit a modification request to the Office of Environmental Services that:

i. describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;

ii. identifies the modification as a Class 2 modification;

iii. explains why the modification is needed; and

iv. provides the applicable information required by LAC 33:V.515-533, 2707, and 3115.

b. The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the administrative authority and to the appropriate units of state and local government as required in LAC 33:V.717.A.1.b and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within seven days before or after the date of submission of the modification request, and the permittee must provide to the administrative authority evidence of the mailing and publication. The notice must include:

i. announcement of a 60-day comment period, in accordance with LAC 33:V.321.C.2.e, and the name and address of a department contact to whom comments must be sent;

ii. announcement of the date, time, and place for a public meeting held in accordance with LAC 33:V.321.C.2.d;

iii. name and telephone number of the permittee's contact person;

iv. name and telephone number of a department contact person;

v. location where copies of the modification request and any supporting documents can be viewed and copied; and

vi. the following statement:

> "The permittee's compliance history during the life of the permit being modified is available from the department contact person."

c. The permittee must place a copy of the permit modification request and supporting documents in a location

accessible to the public in the vicinity of the permitted facility.

d. The permittee must hold a public meeting no earlier than 15 days after the publication of the notice required in LAC 33:V.321.C.2.b and no later than 15 days before the close of the 60-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.

e. The public shall be provided 60 days to comment on the modification request. The comment period will begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the department contact identified in the public notice.

f. No later than 90 days after receipt of the notification request, the administrative authority must do one of the following:

i. approve the modification request with or without changes, and modify the permit accordingly;

ii. deny the request;

iii. determine that the modification request must follow the procedures in LAC 33:V.321.C.3 for Class 3 modifications for the following reasons:

(a). there is significant public concern about the proposed modification; or

(b). the complex nature of the change requires the more extensive procedures of Class 3;

iv. approve the request, with or without changes, as a temporary authorization having a term of up to 180 days;

v. notify the permittee that the administrative authority will decide the request within the next 30 days.

g. If the administrative authority notifies the permittee of a 30-day extension for a decision, the administrative authority must, no later than 120 days after receipt of the modification request, take one of the following actions:

i. approve the modification request, with or without changes, and modify the permit accordingly;

ii. deny the request;

iii. determine that the modification request must follow the procedures in LAC 33:V.321.C.3 for Class 3 modifications for the following reasons:

(a). there is significant public concern about the proposed modification; or

(b). the complex nature of the change requires the more extensive procedures of Class 3;

iv. approve the request, with or without changes, as a temporary authorization having a term of up to 180 days.

h. If the administrative authority fails to make one of the decisions specified in LAC 33:V.321.C.2.g by the 120th day after receipt of the modification request, the permittee is automatically authorized to conduct the activities described in the modification request for up to 180 days, without formal department action. The authorized activities must be conducted as described in the permit modification request and must be in compliance with all appropriate standards of LAC 33:V.Chapter 43. If the administrative authority approves, with or without changes, or denies the modification request during the term of the temporary or automatic authorization provided for in LAC 33:V.321.C.2.f, g, and h, such action cancels the temporary or automatic authorization.

i. In the case of an automatic authorization under LAC 33:V.321.C.2.h, or a temporary authorization under LAC 33:V.321.C.2.f.iv or C.2.g.iv, if the administrative authority has not made a final approval or denial of the modification request by the date 50 days prior to the end of the temporary or automatic authorization, the permittee must within seven days of that time send a notification to persons on the facility mailing list, and make a reasonable effort to notify other persons who submitted written comments on the modification request, that:

i. the permittee has been authorized temporarily to conduct the activities described in the permit modification request; and

ii. unless the administrative authority acts to give final approval or denial of the request by the end of the authorization period, the permittee will receive authorization to conduct such activities for the life of the permit.

j. If the owner/operator fails to notify the public by the date specified in LAC 33:V.321.C.2.i, the effective date of the permanent authorization will be deferred until 50 days after the owner/operator notifies the public.

k. Except as provided in LAC 33:V.321.C.2.m, if the administrative authority does not finally approve or deny a modification request before the end of the automatic or temporary authorization period or reclassify the modification as a Class 3, the permittee is authorized to conduct the activities described in the permit modification request for up to 180 days. The activities authorized under this Subsection must be conducted as described in the permit modification request and must be in compliance with all appropriate standards of LAC 33:V.Chapter 43.

l. In making a decision to approve or deny a modification request, including a decision to issue a temporary authorization or to reclassify a modification as a Class 3, the administrative authority must consider all written comments submitted to the department during the public comment period and must respond in writing to all significant comments in his or her decision.

m. With the written consent of the permittee, the administrative authority may extend indefinitely or for a specified period the time periods for final approval or denial of a modification request or for reclassifying a modification as a Class 3.

n. The administrative authority may deny or change the terms of a Class 2 permit modification request under LAC 33:V.321.C.2.f-h for the following reasons:

i. the modification request is incomplete;

ii. the requested modification does not comply with the appropriate requirements of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37 or other applicable requirements;

iii. the conditions of the modification fail to protect human health and the environment.

o. The permittee may perform any construction associated with a Class 2 permit modification request beginning 60 days after the submission of the request unless the administrative authority establishes a later date for commencing construction and informs the permittee in writing before day 60.

3. Class 3 Modifications

a. For Class 3 modifications listed in LAC 33:V.322, the permittee must submit a modification request to the administrative authority that:

i. describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;

ii. identifies the modification as a Class 3 modification;

iii. explains why the modification is needed; and

iv. provides the applicable information required by LAC 33:V.515, 516, 517, 519, 520, 521, 523, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 537, 2707, and 3115 and LAC 33:V.Chapter 15.

b. The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the administrative authority and to the appropriate units of state and local government as required in LAC 33:V.717.A.1.b and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within seven days before or after the date of submission of the modification request, and the permittee must provide to the administrative authority evidence of the mailing and publication. The notice must include:

i. announcement of a 60-day comment period, and a name and address of a department contact to whom comments must be sent;

ii. announcement of the date, time, and place for a public meeting on the modification request, in accordance with LAC 33:V.321.C.3.d;

iii. name and telephone number of the permittee's contact person;

iv. name and telephone number of a department contact person;

v. location where copies of the modification request and any supporting documents can be viewed and copied; and

vi. the following statement:

> "The permittee's compliance history during the life of the permit being modified is available from the department contact person."

c. The permittee must place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.

d. The permittee must hold a public meeting no earlier than 15 days after the publication of the notice required in LAC 33:V.321.C.3.b and no later than 15 days before the close of the 60-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.

e. The public shall be provided at least 60 days to comment on the modification request. The comment period will begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the department contact identified in the notice.

f. After the conclusion of the 60-day comment period, the administrative authority must grant or deny the permit modification request according to the permit modification procedures of LAC 33:V.Chapter 3. In addition, the administrative authority must consider and respond to all significant written comments received during the 60-day comment period.

4. Other Modifications

a. In the case of modifications not explicitly listed in LAC 33:V.322, the permittee may submit a Class 3 modification request to the department, or he or she may request a determination by the administrative authority that the modification should be reviewed and approved as a Class 1 or Class 2 modification. If the permittee requests that the modification be classified as a Class 1 or 2 modification, he or she must provide the department with the necessary information to support the requested classification.

b. The administrative authority shall make the determination described in LAC 33:V.321.C.4.a as promptly as practicable. In determining the appropriate class for a specific modification, the administrative authority shall consider the similarity of the modification to other modifications codified in LAC 33:V.322 and the following criteria.

i. Class 1 modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health and the environment. In the case of Class 1 modifications, the administrative authority may require prior approval.

ii. Class 2 modifications apply to changes that are necessary to enable a permittee to respond, in a timely manner, to:

(a). common variations in the types and quantities of the wastes managed under the facility permit;

(b). technological advancements; and

(c). changes necessary to comply with new regulations, where these changes can be implemented without substantially changing design specifications or management practices in the permit.

iii. Class 3 modifications substantially alter the facility or its operation.

5. Temporary Authorizations

a. Upon request of the permittee, the administrative authority may, without prior public notice and comment, grant the permittee a temporary authorization in accordance with this Paragraph. Temporary authorizations must have a term of not more than 180 days.

b. The permittee may request a temporary authorization for:

i. any Class 2 modification meeting the criteria in LAC 33:V.321.C.5.d.ii; and

ii. any Class 3 modification that meets the criteria in LAC 33:V.321.C.5.d.ii.(a) or (b), or that meets the criteria in LAC 33:V.321.C.5.d.ii.(c)-(e) and provides improved management or treatment of a hazardous waste already listed in the facility permit.

c. The temporary authorization request must include:

i. a description of the activities to be conducted under the temporary authorization;

ii. an explanation of why the temporary authorization is necessary;

iii. sufficient information to ensure compliance with LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37 standards; and

iv. the permittee must send a notice about the temporary authorization request to all persons on the facility mailing list maintained by the administrative authority and to appropriate units of state and local governments. This notification must be made within seven days of submission of the authorization request.

d. The administrative authority shall approve or deny the temporary authorization as quickly as practicable. To issue a temporary authorization, the administrative authority must find the following:

i. the authorized activities are in compliance with the standards of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37; and

ii. the temporary authorization is necessary to achieve one of the following objectives before action is likely to be taken on a modification request:

(a). to facilitate timely implementation of closure or corrective action activities;

(b). to allow treatment or storage in tanks, containers, or containment buildings in accordance with LAC 33:V.Chapter 22;

(c). to prevent disruption of ongoing waste management activities;

(d). to enable the permittee to respond to sudden changes in the types or quantities of the wastes managed under the facility permit; or

(e). to facilitate other changes to protect human health and the environment.

e. A temporary authorization may be reissued for one additional term of up to 180 days provided that the permittee has requested a Class 2 or 3 permit modification for the activity covered in the temporary authorization, and:

i. the reissued temporary authorization constitutes the administrative authority's decision on a Class 2 permit modification in accordance with LAC 33:V.321.C.2.f.iv or C.2.g.iv; or

ii. the administrative authority determines that the reissued temporary authorization involving a Class 3 permit modification request is warranted to allow the authorized activities to continue while the modification procedures of LAC 33:V.321.C.3 are conducted.

6. Public Notice and Appeals of Permit Modification Decisions

a. The administrative authority shall notify persons on the facility mailing list and appropriate units of state and local government within 10 days of any decision under this Subsection to grant or deny a Class 2 or 3 permit modification request. The administrative authority shall also notify such persons within 10 days after an automatic authorization for a Class 2 modification goes into effect under LAC 33:V.321.C.2.h or k.

b. The administrative authority's decision to grant or deny a Class 2 or 3 permit modification request under this Subsection may be appealed under the permit appeal procedures of R.S. 30:2024.

c. An automatic authorization that goes into effect under LAC 33:V.321.C.2.h or k may be appealed under the permit appeal procedures of R.S. 30:2024; however, the permittee may continue to conduct the activities pursuant to the automatic authorization until the appeal has been granted pursuant to R.S. 30:2024, notwithstanding the provisions of LAC 33:V.705.B.2.

7. Newly Listed or Identified Wastes

a. The permittee is authorized to continue to manage wastes listed or identified as hazardous under LAC 33:V.Chapter 49, or to continue to manage hazardous

waste in units newly regulated as hazardous waste management units, if he or she:

i. manages them at a facility that was in existence as a hazardous waste facility with respect to the newly listed or characterized waste or newly regulated waste management unit on the effective date of the final rule listing or identifying the waste, or regulating the unit;

ii. submits a Class 1 modification request on or before the date on which the waste or unit becomes subject to the new requirements;

iii. is in compliance with the standards of LAC 33:V.Chapters 41 and 43;

iv. also submits a complete Class 2 or 3 permit modification request within 180 days after the effective date of the rule listing or identifying the waste, or subjecting the unit to RCRA Subtitle C management standards; and

v. in the case of land disposal units, certifies that such unit is in compliance with all applicable requirements of LAC 33:V.4369 and 4397-4413 on the date 12 months after the effective date of the rule identifying or listing the waste as hazardous, or regulating the unit as a hazardous waste management unit. If the owner or operator fails to certify compliance with these requirements, he or she shall lose authority to operate under this Subsection.

b. New wastes or units added to a facility's permit under this Paragraph do not constitute expansions for the purpose of the 25 percent capacity expansion limit for Class 2 modifications.

8. Military Hazardous Waste Munitions Treatment and Disposal. The permittee is authorized to continue to accept waste military munitions, notwithstanding any permit conditions barring the permittee from accepting off-site wastes, if:

a. the facility was in existence as a hazardous waste facility, and the facility was already permitted to handle the waste military munitions on the date when the waste military munitions became subject to hazardous waste regulatory requirements;

b. on or before the date when the waste military munitions become subject to hazardous waste regulatory requirements, the permittee submits a Class 1 modification request to remove or amend the permit provision restricting the receipt of off-site waste munitions; and

c. the permittee submits a complete Class 2 modification request within 180 days of the date when the waste military munitions became subject to hazardous waste regulatory requirements.

9. Permit Modification List. The administrative authority must maintain a list of all approved permit modifications and must publish a notice once a year in a statewide newspaper that an updated list is available for review.

10. Combustion Facility Changes to Meet 40 CFR Part 63 Maximum Achievable Control Technology (MACT) Standards, as Incorporated by Reference at LAC 33:III.5122. The following procedures apply to hazardous waste combustion facility permit modifications requested under LAC 33:V.322.L.9.

a. Facility owners or operators must have complied with the Notification of Intent to Comply (NIC) requirements of 40 CFR 63.1210 that were in effect prior to October 11, 2000 (see 40 CFR 63.1200-1499, revised as of July 1, 2000) in order to request a permit modification under this Section for the purpose of technology changes needed to meet the standards under 40 CFR 63.1203-1205.

b. Facility owners or operators must comply with the NIC requirements of 40 CFR 63.1210(b) and 63.1212(a) before a permit modification can be requested under this Section for the purpose of technology changes needed to meet the 40 CFR 63.1215-1221 standards promulgated on October 12, 2005.

c. If the administrative authority does not approve or deny the request within 90 days of receiving it, the request shall be deemed approved. The administrative authority may, at his or her discretion, extend this 90-day deadline one time for up to 30 days by notifying the facility owner or operator.

11. Waiver of RCRA Permit Conditions in Support of Transition to the 40 CFR Part 63 MACT Standards, as Incorporated by Reference at LAC 33:III.5122

a. Facility owners or operators may request to have specific RCRA operating and emissions limits waived by submitting a Class 1 permit modification request under the requirements of this Section and LAC 33:V.322.L.10. As part of this request, the facility owner or operator must:

i. identify the specific RCRA permit operating and emissions limits which the facility owner or operator is requesting to waive;

ii. provide an explanation of why the changes are necessary in order to minimize or eliminate conflicts between the RCRA permit and MACT compliance; and

iii. provide an explanation of how the revised provisions will be sufficiently protective.

b. The administrative authority shall approve or deny the request within 30 days of receipt of the request. The administrative authority may extend, at his or her discretion, this 30-day deadline one time for up to 30 days by notifying the facility owner or operator.

c. The facility owner or operator may request this modification in conjunction with MACT performance testing where permit limits may only be waived during actual test events and pretesting, as defined in 40 CFR 63.1207(h)(2)(i) and (ii), for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of the administrative authority). The modification request shall be submitted to the administrative authority at the same time that the test plans are submitted. The administrative authority may elect to approve or deny this request contingent upon approval of the test plans.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 15:378 (May 1989), LR 16:614 (July 1990), LR 18:1375 (December 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 21:944 (September 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1691 (September 1998), LR 25:435 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2466 (November 2000), LR 28:1000 (May 2002), LR 29:319 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2430, 2454 (October 2005), LR 33:2100 (October 2007), LR 34:619 (April 2008), LR 35:1879 (September 2009).

## §322. Classification of Permit Modifications

The following is a listing of classifications of permit modifications made at the request of the permittee.

| Modifications | Class |
|---|---|
| A. General Permit Provisions | |
| 1. Administrative and informational changes | 1 |
| 2. Correction of typographical errors | 1 |
| 3. Equipment replacement or upgrading with functionally equivalent components (e.g., pipes, valves, pumps, conveyors, controls) | 1 |
| 4. Changes in the frequency of or procedures for monitoring, reporting, sampling, or maintenance activities by the permittee: | |
| a. to provide for more frequent monitoring, reporting, sampling, or maintenance | 1 |
| b. other changes | 2 |
| 5. Schedule of compliance: | |
| a. changes in interim compliance dates, with prior approval of the administrative authority | 1[1] |
| b. extension of final compliance date | 3 |
| 6. Changes in expiration date of permit to allow earlier permit termination, with prior approval of the administrative authority | 1[1] |
| 7. Changes in ownership or operational control of a facility, provided the procedures of LAC 33:V.321.B.2 are followed | 1[1] |
| B. General Facility Standards | |
| 1. Changes to waste sampling or analysis methods: | |
| a. to conform with agency guidance or regulations | 1 |
| b. to incorporate changes associated with F039 (multi-source leachate) sampling or analysis methods | 1[1] |
| c. to incorporate changes associated with underlying hazardous constituents in ignitable or corrosive wastes | 1[1] |
| d. other changes | 2 |
| 2. Changes to analytical quality assurance/control plan: | |
| a. to conform with agency guidance or regulations | 1 |
| b. other changes | 2 |
| 3. Changes in procedures for maintaining the operating record | 1 |
| 4. Changes in frequency or content of inspection schedules | 2 |
| 5. Changes in the training plan: | |
| a. that affect the type or decrease the amount of training given to employees | 2 |
| b. other changes | 1 |
| 6. Contingency plan: | |
| a. changes in emergency procedures (i.e., spill or release response procedures) | 2 |
| b. replacement with functionally equivalent equipment, upgrading, or relocation of emergency equipment listed | 1 |
| c. removal of equipment from emergency equipment list | 2 |
| d. changes in names, addresses, or phone numbers of coordinators or other persons or agencies identified in the plan | 1 |

| Modifications | Class |
|---|---|
| 7. Construction quality assurance plan: | |
| a. changes that the CQA officer certifies in the operating record will provide equivalent or better certainty that the unit components meet the design specifications | 1 |
| b. other changes | 2 |
| 8. Changes to remove permit conditions that are no longer applicable (i.e., because the standards upon which they are based are no longer applicable to the facility)<br>[NOTE: When a permit modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change shall be reviewed under the same procedures as the permit modification.] | 1[1] |
| C. Groundwater Protection | |
| 1. Changes to wells: | |
| a. changes in the number, location, depth, or design of upgradient or downgradient wells of a permitted groundwater monitoring system | 2 |
| b. replacement of an existing well that has been damaged or rendered inoperable, without change to location, design, or depth of the well | 1 |
| 2. Changes in groundwater sampling or analysis procedures or monitoring schedule, with prior approval of the administrative authority | 1[1] |
| 3. Changes in the statistical procedure for determining whether a statistically significant change in groundwater quality between the upgradient and downgradient wells has occurred, with prior approval of the administrative authority | 1[1] |
| 4. Changes in point of compliance | 2 |
| 5. Changes in indicator parameters, hazardous constituents, or concentration limits (including ACLs): | |
| a. as specified in the groundwater protection standard | 3 |
| b. as specified in the detection monitoring program | 2 |
| 6. Changes to a detection monitoring program as required by LAC 33:V.3317, unless otherwise specified in this Section | 2 |
| 7. Compliance monitoring program: | |
| a. addition of compliance monitoring program as required by LAC 33:V.3317 and 3319 | 3 |
| b. changes to a compliance monitoring program as required by LAC 33:V.3319, unless otherwise specified in this Section | 2 |
| 8. Corrective action program: | |
| a. addition of a corrective action program as required by LAC 33:V.3319.I.2, 3321 and 3322 | 3 |
| b. changes to a corrective action program as required by LAC 33:V.3321.H, unless otherwise specified in this Section | 2 |
| D. Closure | |
| 1. Changes to the closure plan: | |
| a. changes in the estimate of the maximum extent of operations or maximum inventory of waste on-site at any time during the active life of the facility, with prior approval of the administrative authority | 1[1] |
| b. changes in the closure schedule for any unit, changes in the final closure schedule for the facility, or extension of the closure period, with prior approval of the administrative authority | 1[1] |
| c. changes in the expected year of final closure, where other permit conditions are not changed, with prior approval of the administrative authority | 1[1] |
| d. changes in procedures for decontamination of facility equipment or structures, with prior approval of the administrative authority | 1[1] |
| e. changes in the approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in this Section | 2 |
| f. extensions of the closure period to allow a landfill, surface impoundment, or land treatment unit to receive nonhazardous wastes after final receipt of hazardous wastes under LAC 33:V.3513.D and E | 2 |
| g. changes in the approved closure plan allowing alternative risk assessment based closure protective of human health and the environment in accordance with LAC 33:I.Chapter 13 | 3 |
| 2. Creation of a new landfill unit as part of the closure | 3 |
| 3. Addition of the following new units to be used temporarily for closure activities: | |
| a. surface impoundments | 3 |
| b. incinerators | 3 |
| c. waste piles that do not comply with LAC 33:V.2301.C | 3 |

| Modifications | Class |
|---|---|
| d. waste piles that comply with LAC 33:V.2301.C | 2 |
| e. tanks or containers (other than specified in LAC 33:V.322.D.3.f) | 2 |
| f. tanks used for neutralization, dewatering, phase separation, or component separation, with prior approval of the administrative authority | 1[1] |
| g. staging piles | 2 |
| E. Post-Closure | |
| 1. Changes in the name, address, or phone number of the contact for the post-closure plan | 1 |
| 2. Extension of the post-closure care period | 2 |
| 3. Reduction of the post-closure care period | 3 |
| 4. Changes to the expected year of final closure, where other permit conditions are not changed | 1 |
| 5. Changes in the post-closure plan necessitated by events occurring during the active life of the facility, including partial and final closure | 2 |
| F. Containers | |
| 1. Modification or addition of container units: | |
| a. resulting in greater than 25 percent increase in the facility's container storage capacity, except as provided in LAC 33:V.322.F.1.c and F.4.a below | 3 |
| b. resulting in up to 25 percent increase in the facility's container storage capacity, except as provided in LAC 33:V.322.F.1.c and F.4.a below | 2 |
| c. or treatment processes necessary to treat wastes that are prohibited from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in LAC 33:V.Chapter 22, with prior approval of the administrative authority. This modification may also involve addition of new waste codes or narrative descriptions of wastes. It is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027 and 028) | 1[1] |
| 2. Other container modifications: | |
| a. modification of a container unit without increasing the capacity of the unit | 2 |
| b. addition of a roof to a container unit without alteration of the containment system | 1 |
| 3. Storage of different wastes in containers, except as provided in LAC 33:V.322.F.4: | |
| a. that require additional or different management practices from those authorized in the permit | |
| b. that do not require additional or different management practices from those authorized in the permit | 2 |
| [NOTE: See LAC 33:V.321.C.7 for modification procedures to be used for the management of newly listed or identified wastes.] | |
| 4. Storage or treatment of different wastes in containers: | |
| a. that require addition of units or a change in treatment process or management standards, provided that the wastes are prohibited from land disposal and are to be treated to meet some or all of the applicable treatment standards, or that they are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in LAC 33:V.Chapter 22. This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028) | 1[1] |
| b. that do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028) | 1 |
| G. Tanks | |
| 1. Modification or addition of tank units: | |
| a. modification or addition of tank units resulting in greater than 25 percent increase in the facility's tank capacity, except as provided in LAC 33:V.322.G.1.c, G.1.d, and G.1.e | 3 |
| b. modification or addition of tank units resulting in up to 25 percent increase in the facility's tank capacity, except as provided in LAC 33:V.322.G.1.d and G.1.e | 2 |
| c. addition of a new tank that will operate for more than 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation | 2 |

| Modifications | Class |
|---|---|
| d. after prior approval of the administrative authority, addition of a new tank that will operate for up to 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation or component separation | 1[1] |
| e. modification or addition of tank units or treatment processes necessary to treat wastes that are prohibited from land disposal to meet some or all of the applicable treatment standards, or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in LAC 33:V.Chapter 22, with prior approval of the administrative authority. This modification may also involve addition of new waste codes. It is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028) | 1[1] |
| 2. Modification of a tank unit or secondary containment system without increasing the capacity of the unit | 2 |
| 3. Replacement of a tank with a tank that meets the same design standards and has a capacity within ± 10 percent of that of the replaced tank, provided that: | |
| a. the capacity difference is not more than 1,500 gallons | 1 |
| b. the facility's permitted tank capacity is not increased, and | 1 |
| c. the replacement tank meets the same conditions in the permit | 1 |
| 4. Modification of a tank management practice | 2 |
| 5. Management of different wastes in tanks: | |
| a. that require additional or different management practices, tank design, different fire protection specifications, or a significantly different tank treatment process than that authorized in the permit, except as provided in LAC 33:V.322.G.5.c below | 3 |
| b. that do not require additional or different management practices or tank design, different fire protection specifications, or a significantly different tank treatment process than that authorized in the permit, except as provided in LAC 33:V.322.G.5.d | 2 |
| c. that require the addition of units or a change in treatment processes or management standards, provided that the wastes are prohibited from land disposal and are to be treated to meet some or all of the applicable treatment standards or that they are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in LAC 33:V.Chapter 22. The modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028) | 1[1] |
| d. that do not require the addition of units or a change in the treatment process or management standards and provided that the units have previously received wastes of the same type (e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027 and 028) | 1 |
| [NOTE: See LAC 33:V.321.C.7 for modification procedures to be used for the management of newly listed or identified wastes.] | |
| H. Surface Impoundments | |
| 1. Modification or addition of surface impoundment units that results in increasing the facility's surface impoundment storage or treatment capacity | 3 |
| 2. Replacement of a surface impoundment unit | 3 |
| 3. Modification of a surface impoundment unit without increasing the facility's surface impoundment storage or treatment capacity and without modifying the unit's liner, leak detection system, or leachate collection system | 2 |
| 4. Modification of a surface impoundment management practice | 2 |
| 5. Treatment, storage, or disposal of different wastes in surface impoundments: | |
| a. that require additional or different management practices or different design of the liner or leak detection system than is authorized in the permit | 3 |
| b. that do not require additional or different management practices or different design of the liner or leak detection system than is authorized in the permit | 2 |
| c. that are wastes prohibited from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in LAC 33:V.Chapter 22, and provided that the unit meets the minimum technological requirements stated in LAC 33:V.2239. This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028) | 1 |

| Modifications | Class |
|---|---|
| d. that are residues from wastewater treatment or incineration, provided that disposal occurs in a unit that meets the minimum technological requirements stated in LAC 33:V.2239, and provided further that the surface impoundment has previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028) | 1 |
| 6. Modifications of unconstructed units to comply with LAC 33:V.2903.J, 2904, 2906, and 2907.E | 1[1] |
| 7. Changes in response action plan: | |
| a. increase in action leakage rate | 3 |
| b. change in a specific response reducing its frequency or effectiveness | 3 |
| c. other changes | 2 |
| [NOTE: See LAC 33:V.321.C.7 for modification procedures to be used for the management of newly listed or identified wastes.] | |
| I. Enclosed Waste Piles. For all waste piles except those complying with LAC 33:V.2301.C, modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying with LAC 33:V.2301.C | |
| 1. Modification or addition of waste pile units: | |
| a. resulting in greater than 25 percent increase in the facility's waste pile storage or treatment capacity | 3 |
| b. resulting in up to 25 percent increase in the facility's waste pile storage or treatment capacity | 2 |
| 2. Modification of waste pile unit without increasing the capacity of the unit | 2 |
| 3. Replacement of a waste pile unit with another waste pile unit of the same design and capacity that meets all waste pile conditions in the permit | 1 |
| 4. Modification of a waste pile management practice | 2 |
| 5. Storage or treatment of different wastes in waste piles: | |
| a. that require additional or different management practices, different design of the unit | 3 |
| b. that do not require additional or different management practices, different design of the unit | 2 |
| 6. Conversion of an enclosed waste pile to a containment building unit | 2 |
| [NOTE: See LAC 33:V.321.C.7 for modification procedures to be used for the management of newly listed or identified wastes.] | |
| J. Landfills and Unenclosed Waste Piles | |
| 1. Modification or addition of landfill units that results in increasing the facility's disposal capacity | 3 |
| 2. Replacement of a landfill | 3 |
| 3. Addition or modification of a liner, leachate collection system, leachate detection system, run-off control, or final cover system | 3 |
| 4. Modification of a landfill unit without changing a liner, leachate collection system, leachate detection system, run-off control, or final cover system | 2 |
| 5. Modification of a landfill management practice | 2 |
| 6. Landfill different wastes: | |
| a. that require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system | 3 |
| b. that do not require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system | 2 |
| c. that are wastes prohibited from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in LAC 33:V.Chapter 22, and provided that the landfill unit meets the minimum technological requirements stated in LAC 33:V.2239. This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028) | 1 |
| d. that are residues from the wastewater treatment or incineration, provided that disposal occurs in a landfill unit that meets the minimum technological requirements stated in LAC 33:V.2239, and provided further that the landfill has previously received wastes of the same type (for example, incinerator ash). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027 and 028) | 1 |
| 7. Modifications of unconstructed units to comply with LAC 33:V.2303.C, 2304, 2306, 2309.C, 2503.L, 2504, 2507.D, and 2508. | 1[1] |
| 8. Changes in response action plan: | |
| a. increase in action leakage rate | 3 |
| b. change in a specific response reducing its frequency or effectiveness | 3 |

| Modifications | Class |
|---|---|
| c. other changes | 2 |
| [NOTE: See LAC 33:V.321.C.7 for modification procedures to be used for the management of newly listed or identified wastes.] | |
| K. Land Treatment | |
| 1. Lateral expansion of or other modification of a land treatment unit to increase areal extent | 3 |
| 2. Modification of a run-on control system | 2 |
| 3. Modification of a run-off control system | 3 |
| 4. Other modifications of land treatment unit component specifications or standards required in the permit | 2 |
| 5. Management of different wastes in land treatment units: | |
| a. that require a change in permit operating conditions or unit design specifications | 3 |
| b. that do not require a change in permit operating conditions or unit design specifications | 2 |
| [NOTE: See LAC 33:V.321.C.7 for modification procedures to be used for the management of newly listed or identified wastes.] | |
| 6. Modification of a land treatment unit management practice to: | |
| a. increase the rate or change the method of waste application | 3 |
| b. decrease the rate of waste application | 1 |
| 7. Modification of a land treatment unit management practice to change measures of pH or moisture content, or to enhance microbial or chemical reactions | 2 |
| 8. Modification of a land treatment unit management practice to grow food chain crops, to add to or replace existing permitted crops with different food chain crops, or to modify operating plans or distribution of animal feeds resulting from such crops | 3 |
| 9. Modification of operating practice due to detection of releases from the land treatment unit pursuant to LAC 33:V.2711.G.2 | 3 |
| 10. Changes in the unsaturated zone monitoring system resulting in a change to the location, depth, or number of sampling points, or replacement of unsaturated zone monitoring devices or components of devices with devices or components that have specifications different from permit requirements | 3 |
| 11. Changes in the unsaturated zone monitoring system that do not result in a change to the location, depth, or number of sampling points, or that replace unsaturated zone monitoring devices or components of devices with devices or components having specifications different from permit requirements | 2 |
| 12. Changes in background values for hazardous constituents in soil and soil-pore liquid | 2 |
| 13. Changes in sampling, analysis, or statistical procedure | 2 |
| 14. Changes in the land treatment demonstration program prior to or during the demonstration | 2 |
| 15. Changes in any condition specified in the permit for a land treatment unit to reflect results of the land treatment demonstration, provided performance standards are met, and the administrative authority's prior approval has been received | 1[1] |
| 16. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and have received the prior approval of the administrative authority | 1[1] |
| 17. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, where the conditions for the second demonstration are not substantially the same as the conditions for the first demonstration | 3 |
| 18. Changes in vegetative cover requirements for closure | 2 |
| L. Incinerators, Boilers, and Industrial Furnaces | |
| 1. Changes to increase by more than 25 percent any of the following limits authorized in the permit: a thermal feed rate limit a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The administrative authority will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means | 3 |
| 2. Changes to increase by up to 25 percent any of the following limits authorized in the permit: a thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The administrative authority will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means | 2 |

| Modifications | Class |
|---|---|
| 3. Modification of an incinerator, boiler, or industrial furnace unit by changing the internal size or geometry of the primary or secondary combustion units, by adding a primary or secondary combustion unit, by substantially changing the design of any component used to remove Hcl/$Cl_2$, metals, or particulate from the combustion gases, or by changing other features of the incinerator, boiler, or industrial furnace that could affect its capability to meet the regulatory performance standards. The administrative authority will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means | 3 |
| 4. Modification of an incinerator, boiler, or industrial furnace unit in a manner that would not be likely to affect the capability of the unit to meet the regulatory performance standards but that would change the operating conditions or monitoring requirements specified in the permit. The administrative authority may require a new trial burn to demonstrate compliance with the regulatory performance standards | 2 |
| 5. Operating requirements: | |
| a. modification of the limits specified in the permit for minimum or maximum combustion gas temperature, minimum combustion gas residence time, or oxygen concentration in the secondary combustion chamber, flue gas carbon monoxide and hydrocarbon concentration, maximum temperature at the inlet to the particulate matter emission control system, or operating parameters for the air pollution control system. The administrative authority will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means | 3 |
| b. modification of any stack gas emission limits specified in the permit, or modification of any conditions in the permit concerning emergency shutdown or automatic waste feed cutoff procedures or controls | 3 |
| c. modification of any other operating condition or any inspection or recordkeeping requirement specified in the permit | 2 |
| 6. Burning of different wastes: | |
| a. if the waste contains a POHC that is more difficult to burn than authorized by the permit or if burning of the waste requires compliance with different regulatory performance standards than specified in the permit. The administrative authority will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means | 3 |
| b. if the waste does not contain a POHC that is more difficult to burn than authorized by the permit and if burning of the waste does not require compliance with different regulatory performance standards than specified in the permit | 2 |
| [NOTE: See LAC 33:V.321.C.7 for modification procedures to be used for the management of newly listed or identified wastes.] | |
| 7. Shakedown and trial burn: | |
| a. modification of the trial burn plan or any of the permit conditions applicable during the shakedown period for determining operational readiness after construction, the trial burn period, or the period immediately following the trial burn | 2 |
| b. authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operational readiness after construction, with the prior approval of the administrative authority | 1[1] |
| c. changes in the operating requirements set in the permit for conducting a trial burn, provided the change is minor and has received the prior approval of the administrative authority | 1[1] |
| d. changes in the ranges of the operating requirements set in the permit to reflect the results of the trial burn, provided the change is minor and has received the prior approval of the administrative authority | 1[1] |
| 8. Substitution of an alternate type of nonhazardous waste fuel that is not specified in the permit | 2 |
| 9. Technology changes needed to meet standards under 40 CFR Part 63 (Subpart EEE—National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors), provided the procedures of LAC 33:V.321.C.10 are followed | 1[1] |
| 10. Changes to RCRA permit provisions needed to support transition to 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, provided the procedures of LAC 33:V.321.C.11 are followed | 1[1] |
| M. Containment Buildings | |
| 1. Modification or addition of containment building units: | |
| a. resulting in greater than a 25 percent increase in the facility's containment building storage or treatment capacity | 3 |
| b. resulting in up to a 25 percent increase in the facility's containment building storage or treatment capacity | 2 |

| Modifications | Class |
|---|---|
| 2. Modification of containment building unit or secondary containment system without increasing the capacity of the unit | 2 |
| 3. Replacement of a containment building with another containment building of the same design, having no increased capacity and that meets all containment building conditions in the permit | 1 |
| 4. Modification of a containment building management practice | 2 |
| 5. Storage or treatment of different wastes in a containment building: | |
| a. in which those wastes require additional or different management practices | 3 |
| b. in which those wastes do not require additional or different management practices or different design of the unit | 2 |
| N. Corrective Action | |
| 1. Approval of a corrective action management unit in accordance with LAC 33:V.2601 | 3 |
| 2. Approval of a temporary unit or time extension for a temporary unit in accordance with LAC 33:V.2603 | 2 |
| 3. Approval of a staging pile or staging pile operating term extension in accordance with LAC 33:V.2605 | 2 |
| O. Burden Reduction | |
| 1. Development of one contingency plan based on Integrated Contingency Plan Guidance pursuant to LAC 33:V.1513.B.2 | 1 |
| 2. Changes to recordkeeping and reporting requirements pursuant to LAC 33:V.1513.F.9, 1737.B.1, 1739.A.2, 1913.F, 3111.A.2, 3321.G, and 3513.E.5 | 1 |
| 3. Changes to inspection frequency for tank systems pursuant to LAC 33:V.1911.B | 1 |
| 4. Changes to detection and compliance monitoring program pursuant to LAC 33:V.3317.D, G.2, and G.3, and 3319.F and G | 1 |
| [1]Class 1 modifications requiring prior administrative authority approval. | |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:614 (July 1990), LR 17:658 (July 1991), LR 21:266 (March 1995), LR 21:944 (September 1995), LR 22:815 (September 1996), amended by the Office of the Secretary, LR 24:2245 (December 1998), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:436 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:270 (February 2000), LR 27:292 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 34:620 (April 2008), LR 34:992 (June 2008).

## §323. Suspension, Modification or Revocation and Reissuance, and Termination of Permits

A. When the administrative authority receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit [see LAC 33:V.309], receives a request for revocation and reissuance under this Section, or conducts a review of the permit file), he or she may determine whether one or more of the causes listed in LAC 33:V.323.B.2.c, and B.3.b for suspension, modification or revocation and reissuance, or termination exist. If cause exists, the administrative authority may suspend, modify or revoke and reissue, or terminate the permit accordingly, subject to the limitations of LAC 33:V.323.A, B.1, B.2.c, d and e, or B.3.b, and may request an updated application, if necessary. Permits may be reviewed for potential modification, suspension, or termination either at the request of any interested person (including the permittee) or upon the administrative authority's initiative. However, permits may be modified, or revoked and reissued, suspended or terminated only for the reasons specified in LAC 33:V.323.A, B.1, B.2.c, and B.3.b, or if the administrative authority receives notification of a proposed transfer of the permit (LAC 33:V.309.L.4). All requests shall be in writing, and shall contain facts or reasons supporting the request.

B. If the administrative authority decides the request is not justified, he or she shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. Denials by the administrative authority may be appealed to the Office of the Secretary, in accordance with R.S. 30:2050.21.

1. Suspension

a. The administrative authority may temporarily suspend the operator's right to accept additional hazardous waste to treat, store, or dispose of until violations are corrected. If violations are corrected, the administrative authority may lift the enforcement. Suspension of a permit and/or subsequent corrections of the causes of the suspension by the permittee shall not preclude the administrative authority from terminating the permit, if necessary. The administrative authority shall give notice to the operator, by registered mail, return receipt requested, of violation of the permit or act, listing the specific violations. If the operator fails to comply with this notice by correcting the cited violations within 30 days from date of notice, the administrative authority may issue an order requiring

compliance within a specified time, or may commence a civil action in the district court in the parish in which the violation occurred for appropriate relief, including a temporary or permanent injunction. If the operator fails to take corrective action within the time specified in the order, the administrative authority shall assess a civil penalty, and may suspend or terminate the permit, all pursuant to LAC 33:V.Chapter 1 of these regulations and the Act.

b. For major infractions of the terms of the permit, the administrative authority may suspend the permit and require:

i. the operator to cease accepting hazardous waste or contracting for its treatment, storage, or disposal; or

ii. the operator to agree to a caretaker management of operations involving wastes which are being treated, stored, or have been disposed of on-site. The caretaker management shall be selected by the administrative authority from the following:

(a). operator's personnel acting under supervision of the administrative authority; or

(b). independent management firm operating under administrative authority supervision; or

(c). state operation;

iii. the total cost of the caretaker management shall be borne by the operator, by revenues from operation, or by calling upon the closure fund set up for this purpose;

iv. if the operator does not voluntarily agree to the caretaker management, appropriate legal action shall be taken by the administrative authority to institute the management operations to protect the public interest;

v. after exhausting all other remedies, the administrative authority shall request the attorney general to secure court authority to close the site, using closure funds for this purpose.

c. The operator may request reconsideration of the suspension order. The request shall stipulate the form requested: i.e., a staff conference, a public hearing, or an adjudicatory hearing.

2. Modification or Revocation and Reissuance

a. If the administrative authority tentatively decides to modify or revoke and reissue a permit under LAC 33:V.321.C.3 or 323, he or she shall prepare a draft permit under LAC 33:V.703.C incorporating the proposed changes. The administrative authority may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, the administrative authority shall require the submission of a new application. When a permit is modified, only the conditions subject to modification are reopened. When a permit is revoked and reissued, the entire permit is reopened and subject to revision, and the permit is reissued for a new term.

b. If a permit modification is requested by the permittee, the administrative authority shall approve or deny the request according to the procedures of LAC 33:V.321.C. Otherwise, a draft permit must be prepared and other procedures followed.

c. The following are causes for modification, but not revocation and reissuance, suspension or termination of permits. The following may be causes for revocation and reissuance, as well as modification, when the permittee requests or agrees:

i. material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

ii. the administrative authority has received information that justifies the application of different permit conditions;

iii. the standards or regulations on which the permit was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the permit was issued. The owner or operator may request a permit modification for this cause only as follows:

(a). for promulgation of amended standards or regulations, when the administrative authority has revised, withdrawn, or modified that portion of the regulation or on which the permit condition was based, or has approved a state action with regard to standards on which the permit condition was based, and a permittee requests modification in accordance with LAC 33:V.323 within 90 days after notice of the action on which the request is based;

(b). for judicial decisions, a court of competent jurisdiction has remanded and stayed promulgated regulations, if the remand and stay concern that portion of the regulations or guidelines on which the permit condition was based, and a request is filed by the permittee in accordance with LAC 33:V.323 within 90 days of judicial remand;

iv. the administrative authority determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, materials shortage, or other events over which the permittee has little or no control, and for which there is no reasonably available remedy.

d. Notwithstanding any other provision in this Section, when a permit for a land disposal facility is reviewed by the administrative authority under LAC 33:V.315, the administrative authority shall modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in LAC 33:V.Subpart 1.

e. Suitability of the facility location will not be considered a cause for permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.

3. Termination

a. If the administrative authority tentatively decides to terminate a permit under LAC 33:V.323.C.2, he shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under LAC 33:V.703.C. If a permit is terminated, the entire permit is reopened and subject to revision before the permit can be reissued for a new term.

b. The administrative authority may terminate a permit during its term or deny a permit renewal application for the following causes:

i. noncompliance by the permittee with any condition of the permit;

ii. the permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;

iii. a determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by termination; or

iv. the administrative authority has received notification of a proposed transfer of the permit (see LAC 33:V.309.L.4).

c. The operator may request reconsideration of the termination order. The request shall stipulate the forum requested: i.e., a staff conference, a public hearing, or an adjudicatory hearing.

4. For major infractions of the terms of the permit, the administrative authority shall terminate the permit and require:

a. the operator to cease accepting hazardous waste or contracting for its treatment, storage, or disposal; or

b. the operator to agree to a caretaker management of operations involving wastes which are being treated, stored, or have been disposed of on-site. The caretaker management shall be selected by the administrative authority from the following:

i. operator's personnel acting under supervision of the administrative authority; or

ii. independent management firm operating under administrative authority supervision; or

iii. state operation.

c. The total cost of the caretaker management shall be borne by the operator, by revenues from operation, or by calling upon the closure fund set up for this purpose.

d. If the operator does not voluntarily agree to the caretaker management, appropriate legal action shall be taken by the administrative authority to institute the management operations to protect the public interest.

e. After exhausting all other remedies, the administrative authority shall request the attorney general to secure court authority to close the site, using closure funds for this purpose.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 14:790 (November 1988), LR 16:220 (March 1990), LR 16:614 (July 1990), LR 18:1256 (November 1992), LR 20:1109 (October 1994), LR 21:944 (September 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2467 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2454 (October 2005), LR 33:1625 (August 2007), LR 33:2100 (October 2007).

## §325. Compliance Schedule for Facilities Existing on the Effective Date of These Regulations

A. Applicability

1. The permit may, when appropriate, specify a schedule of compliance leading to compliance with the Act and any other regulations. Any schedules of compliance shall require compliance as soon as possible.

2. If a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule shall set forth interim requirements and the dates, except that:

a. the time between interim dates shall not exceed one year; or

b. if the time necessary for completion of any interim requirement is more than one year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date; and

c. the permit shall be written to require that no later than 14 days following such interim date and the final date of compliance, the permittee shall notify the administrative authority in writing of its compliance or noncompliance with the interim or final requirements. Surface facilities for hazardous waste UIC wells shall be written to require schedules of compliance not later than one year after the effective date of the permit.

B. Alternate Schedules of Compliance. A permit applicant or permittee may cease conducting regulated activities rather than continue to operate and meet permit requirements as follows.

1. If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued:

a. the permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or

b. the permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.

2. If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit shall contain a schedule leading to termination which will insure timely compliance with applicable requirements.

3. If the permittee is undecided whether to cease conducting regulated activities, the administrative authority may issue or modify a permit to contain two schedules as follows:

a. both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner, if the decision is to continue conducting regulated activities;

b. one schedule shall lead to timely compliance with all applicable requirements; and the second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with all applicable requirements; and

c. each permit containing two schedules shall include a requirement that after the permittee has made a final decision under this Section, it shall follow the schedule leading to compliance if the decision is to continue conducting regulated activities, and follow the schedule leading to termination if the decision is to cease conducting regulated activities.

4. The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the administrative authority, such as a resolution of the board of directors of a corporation.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §327. Fees

A. Fees are established by fee system rules and regulations of the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §329. Research, Development, and Demonstration Permits

A. The administrative authority may issue a research, development, and demonstration permit for any hazardous waste treatment facility which proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which permit standards for such experimental activity have not been promulgated under LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 30, 31, 32, 33, 35, 37, or 41. Any such permit shall include such terms and conditions as will assure protection of human health and the environment. Such permits:

1. shall provide for the construction of such facilities as necessary, and for operation of the facility for not longer than one year unless renewed as provided in LAC 33:V.329.D;

2. shall provide for the receipt and treatment by the facility of only those types and quantities of hazardous waste which the administrative authority deems necessary for purposes of determining the efficacy and performance capabilities of the technology or process and the effects of such technology or process on human health and the environment; and

3. shall include such requirements as the administrative authority deems necessary to protect human health and the environment (including, but not limited to, requirements regarding monitoring, operation, financial responsibility, closure and remedial action), and such requirements as the administrative authority deems necessary regarding testing and providing of information to the administrative authority with respect to the operation of the facility.

B. For the purpose of expediting review and issuance of permits under this Section, the administrative authority may, consistent with the protection of human health and the environment, modify or waive permit application and permit issuance requirements in LAC 33:V.Chapters 3, 5, 7, 27, 31, and 43 except that there may be no modification or waiver of regulations regarding financial responsibility (including insurance) or of procedures regarding public participation.

C. The administrative authority may order an immediate termination of all operations at the facility at any time he determines that termination is necessary to protect human health and the environment.

D. Any permit issued under this Section may be renewed not more than three times. Each such renewal shall be for a period of not more than one year.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 20:1000 (September 1994).

## Chapter 4. Requirements for Commercial Treatment, Storage, and Disposal Facility Permits

### §401. Applicability

A. This Chapter applies to proposed, nonexistent, commercial hazardous waste treatment, storage, and disposal (TSD) facilities. Existing facilities seeking major modification, permit renewal, conversion of noncommercial status to commercial, or interim permit to final permit status are not subject to the requirements in this Chapter. All other

requirements in LAC 33:V for hazardous waste facilities also apply.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2178.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 27:285 (March 2001).

## §403. Definitions

A. The definitions used in this Chapter are intended to apply to commercial hazardous waste facilities. Terms not defined herein shall have the meanings given them in LAC 33:V.109.

*Aquifer Recharge Zone*—a land area in which water reaches the zone of saturation from surface infiltration (e.g., an area where rainwater soaks through the earth to reach an aquifer).

*Day Care Center*—any place or facility operated by any institution, society, agency, corporation, person or persons, or any other group for the primary purpose of providing care, supervision, and guidance of seven or more children not related to the caregiver and unaccompanied by parent or guardian on a regular basis for at least 20 hours in a continuous seven-day week.

*Entertainment Facility*—any place where the primary purpose is to amuse, please, or provide hospitality to patrons or guests.

*Food Storage Area*—any facility or structure used to store or contain any foodstuff for human or animal consumption.

*Hospital*—a medical institution whose principal activity or business is the diagnosis, care, and treatment of human illness through the maintenance and operation of organized facilities therefor.

*Nursing Home*—a private home, institution, building, residence, or other place, serving two or more persons who are not related by blood or marriage to the operator, whether operated for profit or not, and including those places operated by a political subdivision of the state of Louisiana, which undertakes, through its ownership or management, to provide maintenance, personal care, or nursing for persons who, by reason of illness or physical infirmity or age, are unable to properly care for themselves.

*Prison*—a state or federal facility of confinement for convicted criminals, especially felons.

*Public Building*—a building or appurtenance to a building that is built in whole or in part or leased with public monies. Examples include, but are not limited to, federal, state, or parish office buildings, courthouses, post offices, custom houses, public record centers, public libraries, public schools, appraisers' stores, and transportation facilities that accommodate traveling passengers.

*Residential Area*—those areas where people live or reside including the property on which housing is located, as well as playgrounds, roadways, sidewalks, parks, and other similar areas within a residential community.

*School*—any profit or nonprofit, public or private, day, night, or residential school that provides elementary, secondary, college, or post-graduate education as determined under state law or any school of any agency of the United States.

*Wetland*—open water areas or areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

*Wildlife Management Area*—any area set aside, maintained, and supervised by the Louisiana Department of Wildlife and Fisheries for the purpose of managing and harvesting wild birds, wild quadrupeds, fish, and other aquatic life under controlled conditions to afford maximum hunting and fishing opportunity.

*Wildlife Preserve*—any area set aside and designated by the Louisiana Department of Wildlife and Fisheries as a refuge on which wild birds and animals are protected.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2178.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 27:285 (March 2001).

## §405. Requirements for Commercial TSD Facilities

A. Secretary's Site Assessment and Report

1. The secretary shall assess the impact of the location of a commercial hazardous waste treatment, storage, or disposal facility on the citizens of the surrounding area, the local infrastructure, and the environment. The secretary shall issue a site assessment report summarizing his findings.

2. The site assessment shall be based upon information in the record including, but not limited to, information required by the regulations to be submitted by the permit applicant. Information regarding the topics listed under "Information Required" in Table 1 identifies and summarizes appropriate information for the site assessment. The "Regulatory Citation" section of the table identifies some of the regulatory requirements to submit information in the Part II hazardous waste permit application.

3. In addition to all other requirements, the permit applicant shall submit a stand-alone document entitled "Commercial Siting Assessment Report," certified in accordance with LAC 33:V.513, that addresses the siting and location issues. In addition to the information otherwise required by the regulations to be submitted as part of the permit application, the applicant's report shall provide sufficient information to address the topics in Table 1. The applicant shall expand these issues or elaborate its response as may be appropriate for some types of TSD facilities. If at any time during the application review process the "Commercial Siting Assessment Report" portion of the application is found, by the department, to contain technical

deficiencies, the permit applicant shall submit an updated version of the report.

**Table 1**
**Statutory Requirements**

| Item | Statutory Citation [All found in R.S. 30:2178] | Information Required | Regulatory Citation [All found in LAC 33:V] |
|---|---|---|---|
| 1[1] | A | Roads and Transportation | §517.K<br>§517.T.6.e<br>§1503.C.1<br>§1513 |
| 2[1] | A | Schools | §517.B.5<br>§517.T.6.a |
| 3[1] | A | Medical Institutions | §517.B.5<br>§1503.C.2<br>§1513 |
| 4[1] | A | Police and Fire Departments | §1503.C.2<br>§1513 |
| 5[2] | B.(2)(a)(i) | Wetlands | §517.T.5.a<br>§1503.B.6 |
| 6[2] | B.(2)(a)(ii) | Wildlife Management Area or Wildlife Preserve | §517.T.5.a<br>§1503.B.6<br>§3307.B.1.h<br>§3307.B.2.i |
| 7[2] | B.(2)(a)(iii) | Aquifer Recharge Zone | §3307.B.2 |
| 8[2] | B.(2)(b)(i) | Schools or Day Care Centers | §517.B.5<br>§517.T.6.a |
| 9[2] | B.(2)(b)(ii) | Hospitals or Nursing Homes | §517.B.5<br>§517.T.6.a |
| 10[2] | B.(2)(b)(iii) | Food Storage Area | §517.B.5<br>§2703.I<br>§2709<br>§3203.A.9 |
| 11[2] | B.(2)(b)(iv) | Public Buildings or Entertainment Facilities | §517.B.5 |
| 12[2] | B.(2)(b)(v) | Residential Area | §517.B.5<br>§517.T.6.a |
| 13[2] | B.(2)(b)(vi) | Prisons | §517.B.5<br>§517.T.6.a |
| 14[2,3] | B.(2)(b)(vii) | Number and Density of Existing Hazardous and Solid Waste Disposal Facilities and Inactive and Abandoned Hazardous Waste Sites | §515.A.15 |
| 15[2,3] | B.(2)(b)(viii) | Number and Density of Industries that Discharge Any Hazardous Substances | §515.A.15 |
| 16[4] | B.(2)(b)(ix) | Existing Community Health Problem | §3203.A.8<br>§3203.B.10<br>§3203.C.6 |
| 17[5] | B.(2)(c) | Impact on Economic Development | §517.T.6.c |

[1] Items 1-4 denote issues that may also be addressed through the local governmental subdivision Infrastructure Assessment Report.

[2] The applicant's responses to Items 5-15 must include an aerial photograph clearly identifying all required information as of the date of the submittal. The aerial photograph must extend 2 miles beyond the property line at a scale of 2.5 centimeters (1 inch) equal to not more than 61.0 meters (200 feet). The photograph date, scale, and orientation (north arrow) must be clearly identified on it.

[3] The applicant's responses to Items 14-15 must include, at a minimum, name, address, facility type (e.g., hazardous waste disposal facility, solid waste disposal facility, inactive and abandoned waste site, industrial code), waste/substance descriptions, type(s) of discharge permit(s), source of information, and documentation of the extent of the applicant's efforts to identify such facilities. Applicant must also discuss density of existing facilities in the 2-mile area and make comparisons as appropriate.

[4] The applicant's response to Item 16 must be answered in sufficient detail to assist the department in making a site assessment determination. The applicant must identify any existing community health problems that may be aggravated by the operation of a commercial hazardous waste disposal facility and include documentation of the extent of the applicant's efforts to identify such problems.

[5] The applicant's response to Item 17 must identify all potential positive and negative impacts on economic development and include documentation of the extent of the applicant's efforts to identify such impacts.

B. Specific Site Requirements for Commercial Facilities

1. Proximity and Location of Waste Management Units

a. No waste management unit shall be located within 200 feet of an environmentally sensitive area including, but not limited to:

i. a wetland;

ii. a wildlife management area or preserve; or

iii. an aquifer recharge zone.

b. No waste management unit shall be located within 200 feet of any area that may result in an undue risk to human health including, but not limited to:

i. a school or day care center;

ii. a hospital or nursing home;

iii. a facility or structure used to store or contain foodstuffs for human or animal consumption;

iv. a public building or entertainment facility;

v. a residential area;

vi. a prison;

vii. other hazardous waste disposal facilities, solid waste disposal facilities, and inactive and abandoned hazardous waste sites;

viii. other industrial facilities that discharge hazardous or toxic substances into the air or water; or

ix. a preexisting community health problem that may be aggravated by the operation of a commercial hazardous waste disposal facility.

c. No waste management unit shall be located in such a manner so as to preclude the further economic development of the area.

2. The administrative authority may approve, on a case-by-case basis, an alternative to the requirements in Subparagraph B.1.a or b of this Section if the applicant can affirmatively demonstrate that as a result of site-specific circumstances, the location of the proposed waste management unit will not adversely impact an environmentally sensitive area, impose an undue risk to

human health, or preclude further economic development of the area.

3. The siting assessment, as determined by this Section, does not preclude any requirements the permit applicant must meet in order to satisfy local zoning ordinances in place at the time the application is submitted to the department.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2178.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 27:285 (March 2001).

### §407. Guidelines for the Infrastructure Assessment Report Prepared by Local Government

A. The purpose of the Infrastructure Assessment Report shall be to adequately assess the capability of the local communities to effectively manage and monitor the ongoing operations of the proposed commercial facility and to respond to emergencies that may potentially threaten the health, safety, or welfare of the communities or any of their inhabitants.

B. The secretary shall submit a written request to the appropriate local governmental representative for a report detailing the impact of the proposed facility on the local infrastructure including, but not limited to, roads and transportation systems, schools, medical institutions, police and fire departments, economic development, and such matters as the local government may determine will be impacted by the facility. A copy of the applicant's Commercial Siting Assessment Report, as required by this Chapter, will be provided to the local governmental subdivision. This request shall be made as soon as the permit application is deemed administratively complete and shall allow local government 180 days to provide the Infrastructure Assessment Report. Any revisions made to the "Commercial Siting Assessment Report" by the permit applicant during the technical review process shall be forwarded to the appropriate local governmental representative. The administrative authority may allow local government additional time to submit the report if a written request, which provides justification for the extension, is received prior to the 180-day deadline; however, in no case shall an extension be granted that extends beyond the date of the evidentiary hearing.

C. The Infrastructure Assessment Report may propose alternate siting for the facility and propose actions to mitigate any infrastructure deficiencies found by the report.

D. Any Infrastructure Assessment Report prepared by the local governmental subdivision shall be submitted prior to the evidentiary hearing held in accordance with LAC 33:V.709. The department may request additional supporting information from the local governmental subdivision or permit applicant before using the report for the secretary's assessment of the suitability of the proposed commercial hazardous waste TSD site.

E. The secretary may reimburse the local governmental subdivision for reasonable and necessary costs of preparation of the Infrastructure Assessment Report, provided the reimbursement request is made in writing and supported with documentation of report preparation costs.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2178 and 2182.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 27:287 (March 2001).

### §409. Departmental Action on Commercial Hazardous Waste TSD Permit Applications

A. The secretary's report shall be issued in conjunction with the draft permit decision for commercial hazardous waste treatment, storage, or disposal facilities. The report will assess the impact of the location of the facility on the citizens in the surrounding area, the local infrastructure, economic development, and on the environment. The sources of information for the report include the permit application contents required in LAC 33:V, the Infrastructure Assessment Report prepared by the local governmental subdivision, and other information sources as appropriate.

B. Based upon information supplied in the permit application and other information sources, as appropriate, the department shall assess site suitability. Consideration shall be given to the following:

1. the number and density of existing hazardous waste disposal facilities in an area extending 2 miles from the facility property line;

2. the number and density of solid waste disposal facilities in an area extending 2 miles from the facility property line;

3. the number and density of inactive and abandoned hazardous waste sites in an area extending 2 miles from the facility property line;

4. the number and density of existing industrial facilities that discharge hazardous or toxic substances into the air or water in an area extending 2 miles from the facility property line;

5. the existence of any community health problem in the area that may be aggravated by the operation of a commercial hazardous waste disposal facility;

6. the negative impact of the proposed facility on economic development of the area by adjacent businesses or industries;

7. whether the area is environmentally sensitive (see LAC 33:V.405.B.1.a); and

8. whether the proximity of the facility may pose undue health risks (see LAC 33:V.405.B.1.b).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2178.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division LR 27:287 (March 2001).

# Chapter 5. Permit Application Contents

## Subchapter A. General Requirements for Permit Applications

### §501. Permit Application

A. Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit a permit application to the Office of Environmental Services, as described in this Section and LAC 33:V.4301, 4303, and 4305. Persons currently authorized with interim status shall apply for permits when required by the administrative authority. Persons covered by RCRA permits by rule (LAC 33:V.305.D) need not apply. Procedures for applications, issuance, and administration of emergency permits are found exclusively in LAC 33:V.701 and 703. Procedures for application, issuance, and administration of research, development, and demonstration permits are found exclusively in LAC 33:V.329.

B. When a facility or activity is not owned and operated by one person, it is the operator's duty to obtain a permit. The owner must also sign the permit application.

C. Existing Hazardous Waste Management Facilities and Interim Status Qualifications

1. Owners and operators of existing hazardous waste management facilities or of hazardous waste management facilities in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to the requirement to have a RCRA permit must submit Part I of their permit application no later than:

a. six months after the date of publication of regulations which first require them to comply with LAC 33:V.Chapters 11, 15, 25, 30, 41 or 43; or

b. thirty days after the date they first become subject to the standards set forth in LAC 33:V.Chapters 11, 15, 25, 30, 41, or 43, whichever first occurs.

2. The owner and operator of an existing hazardous waste management facility may be required to submit Part II of their permit application. The administrative authority may require submission of Part II. Any owner or operator shall be allowed at least 120 days from the date of request to submit Part II of the application. Any owner or operator of an existing hazardous waste management facility may voluntarily submit Part II of the application at any time. Notwithstanding the above, any owner or operator of an existing hazardous waste management facility must submit a Part II permit application in accordance with the dates specified in LAC 33:V.4305. Any owner or operator of a land disposal facility in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to the requirement to have a RCRA permit must submit a Part II application in accordance with the dates specified in LAC 33:V.4305.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990), LR 20:1000 (September 1994), LR 20:1109 (October 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:300 (February 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2467 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2454 (October 2005), LR 33:2100 (October 2007).

### §503. Completeness

A. The administrative authority shall not issue a permit before receiving a complete application for a permit except for permits by rule (LAC 33:V.305.D) or emergency permits (LAC 33:V.701). An application for a permit is complete when the administrative authority receives an application form and any supplemental information which are completed to his or her satisfaction. The administrative authority may deny a permit for the active life of a hazardous waste management facility or TSD unit before receiving a complete application for the permit. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in this Section.

1. Any Part II permit application submitted by an owner or operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or a landfill must be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum, such information must address:

a. reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;

b. the potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described under Subparagraph A.1.a of this Section; and

c. the potential magnitude and nature of the human exposure resulting from such releases.

2. By August 8, 1985, owners and operators of a landfill or a surface impoundment who have already submitted a Part II application must submit the exposure information required in Paragraph A.1 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:220 (March 1990), LR 16:614 (July 1990), LR 17:658 (July 1991), LR 20:1000 (September 1994), LR 20:1109 (October 1994).

### §505. Recordkeeping

A. Applicants shall keep records of all data used to complete permit applications and of any supplemental

information submitted under this Chapter, as required in LAC 33:V.309.J.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

# Subchapter B. Signatories to Permit Applications and Reports, Changes of Authorizations, and Certifications

## §507. Applications

A. All permit applications shall be signed as follows:

1. for a corporation: by a responsible corporate officer; for the purpose of this Section, a *responsible corporate officer* means:

a. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or

b. the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

2. for a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

3. for a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 12:319 (May 1986).

## §509. Reports

A. All reports required by permits, and other information requested by the administrative authority shall be signed by a person described in LAC 33:V.507, or by a duly authorized representative of that person. A person is a duly authorized representative only if: the authorization is made in writing by a person described in LAC 33:V.507; and the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position). The written authorization is submitted to the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

## §511. Changes in Authorization

A. If an authorization under LAC 33:V.509 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of LAC 33:V.509 must be submitted to the administrative authority prior to or together with any reports, information, or applications to be signed by an authorized representative.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §513. Certification

A.1. Any person signing a document under LAC 33:V.507 or 509 shall make the following certification.

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

2. For remedial action plans (RAPs) under LAC 33:V.Chapter 5.Subchapter G, if the operator certifies according to Paragraph A.1 of this Section, then the owner may choose to make the following certification instead of the certification in Paragraph A.1 of this Section.

> "Based on my knowledge of the conditions of the property described in the RAP and my inquiry of the person or persons who manage the system referenced in the operator's certification, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

B.1. Certification of an owner who is not the operator:

> "I certify that I understand that this application is submitted for the purpose of obtaining a permit to operate a hazardous waste management facility on the property as described. As owner of the property/facility, I understand fully that the facility operator and I are jointly and severally responsible for compliance with both LAC 33:V.Subpart 1 and any permit issued pursuant to those regulations."

2. For owners of land disposal facilities, add:

> "I further understand that I am responsible for providing the notice in the deed to the property required by LAC 33:V.3525."

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR

18:1256 (November 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:271 (February 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:620 (April 2008).

# Subchapter C. Permit Applications: Parts I and II

## §515. Part I Information Requirements

A. All applicants for TSD permits shall provide the following information to the administrative authority using the application form provided. Other formatting requirements may be specified by the administrative authority:

1. date of application;

2. EPA identification number;

3. a brief description of the nature of the business;

4. the activities conducted by the applicant which require it to obtain a TSD permit;

5. name, mailing address, and location of the facility for which the application is submitted;

6. the latitude and longitude of the facility and a legal description of the site;

7. up to four SIC codes which best reflect the principal products or services provided by the facility;

8. an indication of whether the facility is new or existing and whether it is a first or revised application;

9. the operator's name, address, telephone number, ownership status, and status as federal, state, private, public, or other entity;

10. owner's name, address, and phone number if different from operator's;

11. contact: name of individual to be contacted concerning hazardous waste management;

12. telephone number of contact;

13. whether the facility is located on Indian lands;

14. a listing of all permits or construction approvals received or applied for under any of the following programs:

a. hazardous waste management program;

b. Underground Injection Control (UIC) program;

c. National Pollution Discharge Elimination System (NPDES) program;

d. Prevention of Significant Deterioration (PSD) program under the Federal Clean Air Act;

e. nonattainment program under the Clean Air Act;

f. National Emission Standards for Hazardous Air Pollutants (NESHAP) preconstruction approval under the Clean Air Act;

g. ocean dumping permits under the Marine Protection Research and Sanctuaries Act;

h. dredge or fill permits under Section 404 of the federal Clean Water Act (CWA); or

i. other relevant environmental permits;

15. a topographic map (or other map if a topographic map is unavailable) extending 2 miles beyond the property boundaries of the facility indicating the following; each hazardous waste treatment, storage, and disposal facility; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant;

16. for existing facilities, a scale drawing of the facility showing the location of all past, present, and future treatment, storage, and disposal areas;

17. for existing facilities, photographs of the facility clearly delineating all existing structures; existing treatment, storage, and disposal areas; and sites of future treatment, storage, and disposal areas;

18. a description of the processes to be used for treating, storing, and disposing of hazardous waste, and the design capacity of these items;

19. a specification of the hazardous wastes listed or designated to be treated, stored, or disposed of at the facility; an estimate of the quantity of such wastes to be treated, stored, or disposed of annually; and a general description of the processes to be used for such wastes;

20. status: ownership status of existing site or land for proposed site (federal, state, private, public, other);

21. operation status;

22. list other company hazardous waste operations in Louisiana (permitted or non-permitted and current or abandoned);

23. list other states in which hazardous waste operations are or have been conducted, as required by LAC 33:I.1701;

24. zoning of site, if applicable;

25. for hazardous debris: a description of the debris category(ies) and contaminant category(ies) to be treated, stored, or disposed of at the facility;

26. other information required in LAC 33:I.1701; and

27. comments.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995), amended by the Office of the Secretary, LR 25:661 (April 1999).

# Subchapter D. Part II General Permit Information Requirements

## §516. Information Requirements for Solid Waste Management Units

A. The following information is required for each solid waste management unit at a facility seeking a permit:

1. the location of the unit on the topographic map required under LAC 33:V.517.B;

2. designation of type of unit;

3. general dimensions and structural description (supply any available drawings);

4. when the unit was operated; and

5. specification of all waste codes for all hazardous wastes that have been managed at the unit;

6. details of all ancillary equipment including tanks storing hazardous waste in less than 90-day service and pipes carrying hazardous waste to the injection well(s) must meet the requirements of LAC 33:V.Chapter 19. A certification by an independent Louisiana registered professional engineer must be provided attesting to the adequacy of pipes, valves, and pumps to handle hazardous waste under pressure and to the adequacy of secondary containment provided to meet the requirements of LAC 33:V.Subpart 1.

B. The owner or operator of any facility containing one or more solid waste management units must submit all available information pertaining to any known release of hazardous wastes or hazardous constituents from such unit or units.

C. The owner/operator must conduct and provide the results of sampling and analysis of groundwater, land surface and/or subsurface strata, surface water, and/or air, which may include the installation of wells, if the administrative authority ascertains it is necessary to complete a RCRA Facility Assessment that will determine whether a more complete investigation is necessary. If the owner/operator has an EPA approved RCRA Facility Investigation, the results of this investigation may be provided to the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §517. Part II Information Requirements (the Formal Permit Application)

The formal permit application information requirements presented in this Section reflect the standards promulgated in LAC 33:V.Subpart 1. These information requirements are necessary in order to determine compliance with all standards. Responses and exhibits shall be numbered sequentially according to the technical standards. The permit application must describe how the facility will comply with each of the sections of LAC 33:V.Chapters 15-37 and 41. Information required in the formal permit application shall be submitted to the administrative authority and signed in accordance with requirements in LAC 33:V.509. The description must include appropriate design information (calculations, drawings, specifications, data, etc.) and administrative details (plans, flow charts, decision trees, manpower projections, operating instructions, etc.) to permit the administrative authority to determine the adequacy of the hazardous waste permit application. Certain technical data, such as design drawings, specifications, and engineering studies, shall be certified by a Louisiana registered professional engineer. If a section does not apply, the permit application must state it does not apply and why it does not apply. This information is to be submitted using the same numbering system and in the same order used in these regulations:

A. a general description of the facility including hours of operation/day and days/week;

B. a topographic map or maps showing a distance of 1,000 feet around the facility at a scale of 2.5 centimeters (1 inch) equal to not more than 61.0 meters (200 feet); contours must be shown on the map. The contour interval must be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. The map or maps shall clearly show the following:

1. map scale and date;

2. orientation of the map (north arrow);

3. 100-year floodplain area;

[Comment: Owners and operators of all facilities shall provide an identification of whether the facility is located within a 100-year floodplain and a flood hazard map (Corps of Engineers or Department of Housing and Urban Development). This identification must indicate the source of data for such determination and include a copy of the relevant Federal Insurance Administration (FIA) flood map, if used. Where maps for the National Flood Insurance Program produced by FIA of the Federal Emergency Management Agency are available, they will normally be determinative of whether a facility is located within or outside of the 100-year floodplain. However, where the FIA map excludes an area (usually areas of the floodplain less than 200 feet in width), these areas must be considered and a determination made as to whether they are in the 100-year floodplain. Where FIA maps are not available for a proposed facility location, the owner or operator must use equivalent mapping techniques to determine if the facility is within the 100-year floodplain, and if so located, what the 100-year flood elevation would be.]

4. surface waters including intermittent streams and surface flow through the site and a map of the potentiometric surface for aquifers within 100 feet of lowest elevation of disposal cells, or other facilities containing hazardous waste, from 1,000 feet upstream to 1,000 feet downstream, where practicable. Included should be a general area map and cross sections indicating the extent of freshwater sands, and the degree of isolation from waste sources by confining layers of clay;

5. surrounding land uses (residential, commercial, agricultural, recreational, public) such as schools, day care centers, hospitals, nursing homes, prisons, libraries, etc.;

[Comment: A map or aerial photograph showing surrounding land use for the area within 2 miles of the site is required.]

6. legal boundaries of the TSD facility site;

7. access control (fences, gates);

8. injection and withdrawal wells both on site and off site;

[Comment: A map of all known wells, operating or abandoned, on the site and within 2 miles of the site perimeter as required in LAC 33:V.515.A.15, including the depth of wells, amount of pumpage, water level depth (annual maximum and minimum), and water analysis from the water well nearest the disposal site is also required.]

9. the proposed location of groundwater monitoring wells as required under LAC 33:V.3315.A and B;

10. the proposed *point of compliance* as defined under LAC 33:V.3311;

11. buildings, treatment, storage, or disposal operations; or other structures (recreation areas, runoff control systems, access and internal roads, storm sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, utilities, security facilities, etc.);

12. barriers for drainage or flood control;

13. location of operational units within the TSD facility site, where hazardous waste is (or will be) treated, stored, or disposed of (including equipment cleanup areas). (For large TSD facilities, the administrative authority may allow the use of other scales on a case-by-case basis); and

14. natural features affecting off-site drainage patterns, transportation, utilities, and location of effluent discharges;

C. site layout and facility design when phased construction is planned; the plans must indicate each phase and an accompanying schedule of construction;

D. chemical and physical analyses of the hazardous wastes and the hazardous debris to be handled at the facility. At a minimum, these analyses shall contain all the information that must be known to treat, store, or dispose of the wastes properly;

E. a copy of the waste analysis plan required by LAC 33:V.1519.B;

F. a description of the security procedures (including entry control, hours manned, lighting, monitoring, and other procedures to prevent unauthorized entry) and equipment required by LAC 33:V.1507 or a justification demonstrating the reasons for requesting a waiver of this requirement;

G. a copy of the general inspection schedule required by LAC 33:V.1509.B. Include, where applicable, as part of the inspection schedule, specific requirements in LAC 33:V.1709, 1719, 1721, 1731, 1755-1759, 1763, 1907.I, 1911, 2109, 2309, 2507, 2703.A-G, 2907, 3119.B and C, and 3205;

H. a justification of any request for a waiver(s) of the preparedness and prevention requirements of LAC 33:V.1511;

I. a copy of the contingency plan required by LAC 33:V.1513;

[NOTE: Include, where applicable, as part of the contingency plan, specific requirements in LAC 33:V.2909];

J. a description of procedures, structures, or equipment used at the facility to:

1. prevent hazards in unloading operations (for example, ramps, special forklifts);

2. prevent runoff from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

3. monitoring leachate control;

4. prevent contamination of water supplies;

5. monitor water and air pollution affecting area outside site;

6. mitigate effects of equipment failure, power outages, inclement weather, or other abnormal conditions;

7. prevent undue exposure of personnel to hazardous waste (for example, protective clothing);

8. prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with LAC 33:V.1517; and

9. prevent nonpermitted releases to the atmosphere;

K. traffic pattern, estimated volume (number, types of vehicles) and control (for example, show turns across traffic lanes, and stacking lanes, if appropriate; describe access road surfacing and load bearing capacity; show traffic control signals);

L. an outline of both the introductory and continuing training programs by owners or operators to prepare persons to operate or maintain the TSD facility in a safe manner as required to demonstrate compliance with LAC 33:V.1515. A list of general qualifications of key operating positions and a brief description of how training will be designed to meet actual job tasks in accordance with these requirements;

M. a copy of the closure plan and, where applicable, the post-closure plan required by LAC 33:V.3511, 3523, and 1915. Include, where applicable, as part of the plans, specific requirements in LAC 33:V.1915, 2117, 2315, 2521, 2719, 2911, 3121, 3203 and 3207;

N. for hazardous waste disposal units that have been closed, documentation that notices required in LAC 33:V.3517 have been filed;

O. the most recent closure cost estimate for the facility prepared in accordance with LAC 33:V.3705 and a copy of the documentation required to demonstrate financial assurance under LAC 33:V.3707. For a new facility, a copy of the required documentation may be submitted 60 days

prior to the initial receipt of hazardous wastes, if that is later than the submission of the Part II;

P. where applicable, the most recent post-closure cost estimate for the facility prepared in accordance with LAC 33:V.3709 plus a copy of the documentation required to demonstrate financial assurance under LAC 33:V.3711. For a new facility, a copy of the required documentation may be submitted 60 days prior to the initial receipt of hazardous wastes, if that is later than the submission of the Part II;

Q. where applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of LAC 33:V.Chapter 37. For a new facility, documentation showing the amount of insurance meeting the specification of LAC 33:V.Chapter 37 that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal;

R. where appropriate, proof of coverage by a state financial mechanism in compliance with LAC 33:V.Chapter 37;

S. a wind rose (i.e., prevailing wind speed and direction) and the source of the information;

T. facility location information:

1. seismic standard. In order to determine the applicability of the seismic standard, LAC 33:V.1503.A.3, the owner or operator of the facility must identify the political jurisdiction (e.g., parish, township, or election district) in which the facility is proposed to be located:

a. the owner or operator shall demonstrate compliance with the seismic standard. This demonstration may be made using either published geologic data (including federal hazardous waste regulations) or data obtained from field investigations carried out by the applicant. The information provided must be of such quality to be acceptable to geologists experienced in identifying and evaluating seismic activity. The information submitted must show that either:

i. no faults which have had displacement in Holocene time are present, or no lineations which suggest the presence of a fault (which have displacement in Holocene time) within 3,000 feet of a facility are present, based on data from:

(a). published geologic studies, including cites from federal regulations which demonstrate that the requirements of this Section do not apply;

(b). aerial reconnaissance of the area within a 5-mile radius from the facility;

(c). an analysis of aerial photographs covering a 3,000-foot radius of the facility; and

(d). if needed to clarify the above data, a reconnaissance based on walking portions of the area within 3,000 feet of the facility; or

ii. no faults may pass within 200 feet of the portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted based on data from a comprehensive geologic analysis of the site. Unless a site analysis is otherwise conclusive concerning the absence of faults within 200 feet of such portions of the facility, data shall be obtained from a subsurface exploration (trenching) of the area within a distance no less than 200 feet from portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted. Such trenching shall be performed in a direction that is perpendicular to known faults (which have had displacement in Holocene time) passing within 3,000 feet of the portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted. Such investigation shall document with supporting maps and other analyses, the location of any faults found, and shall be certified by an independent Louisiana registered professional engineer or geologist;

2. 100-year floodplain:

a. owners and operators of all facilities shall provide an identification of whether the facility is located within a 100-year floodplain;

b. owners and operators of facilities located in the 100-year floodplain must provide the following information:

i. the 100-year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, constructing, operating, or maintaining the facility to withstand washout from a 100-year flood;

ii. engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as a consequence of a 100-year flood;

iii. structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., floodwalls, dikes) at the facility and how these will prevent washout;

iv. if applicable, and in lieu of the above two provisions, a detailed description of procedures to be followed to remove hazardous waste to safety before the facility is flooded, including:

v. timing of such movement relative to flood levels, including estimated time to move the waste, showing that such movement can be completed before floodwaters reach the facility;

vi. a description of the location(s) to which the waste will be moved and demonstration that those facilities will be eligible to receive hazardous waste in accordance with LAC 33:V.Subpart 1;

vii. the planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use; and

viii. the potential for accidental discharges of the waste during movement;

c. existing facilities not in compliance with LAC 33:V.1503.B.3 shall provide a plan showing how the

facility will be brought into compliance and a schedule for compliance;

3. site geology, including:

a. certification by a geologist or independent Louisiana registered professional engineer specializing in geotechnical engineering that the ground and subsurface conditions at the site are acceptable for the planned purposes of the facility;

b. identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including groundwater flow direction and rate, and the basis for such identification (i.e., the information obtained from hydrogeologic investigations of the facility area);

c. soil types, textures, and conditions to depth of 30 feet below lowest elevation of planned disposal cells for impoundments, landfill and land treatment facility based on test holes at 200-foot intervals (or greater or less intervals if acceptable to the administrative authority);

d. logs of test holes and wells, including soil samples for each pertinent strata analyzed for soil type, texture, permeability, and other pertinent characteristics;

e. general area map and cross sections indicating the extent of freshwater sands, and the degree of isolation of these aquifers to a depth of 1,000 feet from waste sources by confining layers of clay;

f. on a topographic map, a delineation of the waste management area, the property boundary, the proposed *point of compliance* as defined under LAC 33:V.3311, the proposed location of groundwater monitoring wells as required under LAC 33:V.3315.A and B; and

g. detailed plans and an engineering report describing the proposed groundwater monitoring program to be implemented to meet the requirements of LAC 33:V.3315.A-H;

4. site hydrology, including:

a. travel times in feet/day for normal drainage of each natural surface drainage system within 1,000 feet of the property;

b. climate factors:

i. the 24-hour/25-year storm rainfall;

ii. maximum, minimum, and average temperature/month for past 10 years;

iii. impact of previous hurricanes on area;

iv. comparison of rainfall and evapotranspiration rates; and

v. prevailing wind direction (provide wind rose);

c. a description of any plume of contamination that has entered the groundwater from a regulated unit at the time that the application is submitted that:

i. delineates the extent of the plume on the topographic map such as required under LAC 33:V.515.A.15; and

ii. identifies the concentration of each LAC 33:V.3325, Table 4 constituent throughout the plume or identifies the maximum concentrations of each such constituent in the plume;

d. if the presence of hazardous constituents have not been detected in the groundwater at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analyses to establish a detection monitoring program which meets the requirements of LAC 33:V.3317. This submission must address the following items specified under LAC 33:V.3317:

i. a proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the groundwater;

ii. a proposed groundwater monitoring system;

iii. background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and

iv. a description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating groundwater monitoring data;

e. if the presence of hazardous constituents has been detected in the groundwater at the point of compliance at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which meets the requirements of LAC 33:V.3319. The owner or operator must also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of LAC 33:V.3321. To demonstrate compliance with LAC 33:V.3319, the owner or operator must address the following items:

i. a description of the wastes previously handled at the facility;

ii. a characterization of the contaminated groundwater, including concentrations of hazardous constituents;

iii. a list of hazardous constituents for which compliance monitoring will be undertaken in accordance with LAC 33:V.3315 and 3317;

iv. proposed concentration limits for each hazardous constituent, based on the criteria set forth in LAC 33:V.3309.A, including a justification for establishing any alternate concentration limits;

v. detailed plans and an engineering report describing the proposed groundwater monitoring system, in accordance with the requirements of LAC 33:V.3315; and

vi. a description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating groundwater monitoring data;

f. if hazardous constituents have been measured in the groundwater which exceed the concentration limits established under LAC 33:V.3309, Table 1, or if groundwater monitoring conducted at the time of permit application under LAC 33:V.3301-3309 at the waste boundary indicates the presence of hazardous constituents from the facility in groundwater over background concentrations, the owner or operator must submit sufficient information, supporting data, and analyses to establish a corrective action program which meets the requirements of LAC 33:V.3321. To demonstrate compliance with LAC 33:V.3321, the owner or operator must address, at a minimum, the following items:

i. a characterization of the contaminated groundwater, including concentrations of hazardous constituents;

ii. the concentration limit for each hazardous constituent found in the groundwater as set forth in LAC 33:V.3309;

iii. detailed plans and an engineering report describing the corrective action to be taken; and

iv. a description of how the groundwater monitoring program will demonstrate the adequacy of the corrective action;

5. environmental factors, including:

a. list all known historical sites, recreational areas, archaeological sites, wildlife areas, swamps and marshes, habitats for endangered species, and other sensitive ecological areas within 1000 feet of the site; and

b. indicate measures planned to protect such areas listed from detrimental impact from the operation of the proposed facility;

6. geographical factors. For an area within 2 miles of the proposed site, provide the following information:

a. map or aerial photograph showing all buildings identified as residential, commercial, industrial, or public (schools, day care centers, hospitals, nursing homes, prisons, libraries, etc.);

b. population;

c. principal livelihood of residents for facilities located in rural areas;

d. land use; and

e. road network, with average daily traffic count and route of trucks which will transport waste to the facility;

7. operations plan, including:

a. classification and estimated quantities of wastes to be handled;

b. methods and processes utilized:

i. facility capacity for each disposal method;

ii. detailed description of each process or method;

iii. storage and disposal procedures:

(a). plans for receipt, checking, processing, segregation of incompatible wastes, and odor control; and

(b). life of each facility based on projected use;

(c). describe recordkeeping procedures, types of records to be kept, and use of the records by management to control the operation; and

(d). monitoring and recording of incoming wastes;

U. Special Requirements. Administrative authority may require additional provisions for special procedures or processes, for specific information for a supplementary environmental analysis, or for such information as may be necessary to enable the administrative authority to carry out his duties under other state laws;

V. for land disposal facilities, if an approval has been granted under LAC 33:V.2239, a petition has been approved under LAC 33:V.2241 or 2271, or a determination made under LAC 33:V.2273, a copy of the notice of approval or a determination is required; and

W. a summary of the preapplication meeting, along with a list of attendees and their addresses, and copies of any written comments or materials submitted at the meeting, as required under LAC 33:V.708.A.3.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 13:433 (August 1987), LR 14:790 (November 1988), LR 15:181 (March 1989), LR 15:378 (May 1989), LR 16:220 (March 1990), LR 16:399 (May 1990), LR 16:614 (July 1990), LR 16:683 (August 1990), LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:657 (April 1998), LR 24:1691 (September 1998), LR 25:436 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1465 (August 1999), LR 25:1799 (October 1999), repromulgated LR 26:1608 (August 2000), repromulgated LR 26:2003 (September 2000), amended LR 27:287 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 33:1625 (August 2007).

## Subchapter E. Specific Information Requirements

### §519. Contents of Part II: General Requirements

A. Part II of the permit application consists of the general information requirements of this Section, and the specific information requirements in LAC 33:V:519, 520, 521, 523, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, and 706 applicable to the facility. The Part II information requirements presented in LAC 33:V:519, 520,

521, 523, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, and 706 reflect the standards promulgated in LAC 33:V.Chapters 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, and 37. These information requirements are necessary in order for the administrative authority to determine compliance with LAC 33:V.Chapters 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, and 37. If owners and operators of Hazardous Waste Management facilities can demonstrate that the information prescribed in Part II cannot be provided to the extent required, the administrative authority may make allowance for submission of such information on a case-by-case basis. Information required in Part II shall be submitted to the administrative authority and signed in accordance with requirements in Subchapter B of this Chapter. Certain technical data, such as design drawings and specifications and engineering studies, shall be certified by a Louisiana registered professional engineer. For post-closure permits, only the information specified in LAC 33:V.528 is required in Part II of the permit application.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:436 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1465 (August 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 34:992 (June 2008), LR 34:1894 (September 2008).

## §520. Specific Part II Information Requirements for Groundwater Protection

The following additional information regarding protection of groundwater is required from owners or operators of hazardous waste facilities containing a regulated unit except as provided in LAC 33:V.3301.B and C:

A. a summary of the groundwater monitoring data obtained during the interim status period under LAC 33:V.4367, 4369, 4371, 4373, and 4375, where applicable;

B. identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including groundwater flow direction and rate, and the basis for such identification (i.e., the information obtained from hydrogeologic investigations of the facility area);

C. on the topographic map required under LAC 33:V.517.B, a delineation of the waste management area, the property boundary, the proposed *point of compliance* as defined under LAC 33:V.3311, the proposed location of groundwater monitoring wells as required under LAC 33:V.3315, and, to the extent possible, the information required in LAC 33:V.520.B;

D. a description of any known plume of contamination that has entered the groundwater from a regulated unit at the time that the application was submitted that:

1. delineates the extent of the plume on the topographic map required under LAC 33:V.517.B; and

2. identifies the concentration of each constituent listed in LAC 33:V.3325 throughout the plume or identifies the maximum concentrations of each LAC 33:V.3325 constituent in the plume;

E. detailed plans and an engineering report describing the proposed groundwater monitoring program to be implemented to meet the requirements of LAC 33:V.3315;

F. if the presence of hazardous constituents has not been detected in the groundwater at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analyses to establish a detection monitoring program that meets the requirements of LAC 33:V.3317. This submission must address the following items specified under LAC 33:V.3317:

1. a proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the groundwater;

2. a proposed groundwater monitoring system;

3. background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and

4. a description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating groundwater monitoring data;

G. if the presence of hazardous constituents has been detected in the groundwater at the point of compliance at the time of the permit application, the owner or operator must submit to the Office of Environmental Services sufficient information, supporting data, and analyses to establish a compliance monitoring program that meets the requirements of LAC 33:V.3319. Except as provided in LAC 33:V.3317.H, the owner or operator must also submit to the Office of Environmental Services an engineering feasibility plan for a corrective action program necessary to meet the requirements of LAC 33:V.3321, unless the owner or operator obtains written authorization in advance from the administrative authority to submit a proposed permit schedule for submittal of such a plan. To demonstrate compliance with LAC 33:V.3319, the owner or operator must address the following items:

1. a description of the hazardous waste code specified in LAC 33:V.Chapter 49 for the wastes previously handled at the facility;

2. a characterization of the contaminated groundwater, including concentrations of hazardous constituents;

3. a list of hazardous constituents for which compliance monitoring will be undertaken in accordance with LAC 33:V.3315 and 3319;

4. proposed concentration limits for each hazardous constituent, based on the criteria set forth in

LAC 33:V.3309.A, including a justification for establishing any alternate concentration limits;

5. detailed plans and an engineering report describing the proposed groundwater monitoring system, in accordance with the requirements of LAC 33:V.3315; and

6. a description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating groundwater monitoring data;

H. if hazardous constituents have been measured in the groundwater that exceed the concentration limits established under LAC 33:V.3309, Table 1, or if groundwater monitoring conducted at the time of permit application under LAC 33:V.4367, 4369, 4371, 4373, and 4375 at the waste boundary indicates the presence of hazardous constituents from the facility in groundwater over background concentrations, the owner or operator must submit sufficient information, supporting data, and analyses to establish a corrective action program that meets the requirements of LAC 33:V.3321. However, an owner or operator is not required to submit information to establish a corrective action program if he or she demonstrates to the administrative authority that alternate concentration limits will protect human health and the environment after considering the criteria listed in LAC 33:V.3309.B. An owner or operator who is not required to establish a corrective action program for this reason must instead submit sufficient information to establish a compliance monitoring program that meets the requirements of LAC 33:V.3319 and LAC 33:V.520.F. To demonstrate compliance with LAC 33:V.3321, the owner or operator must address, at a minimum, the items listed in LAC 33:V.520.H.1-4 below (the permit may contain a schedule for submittal of the information required in LAC 33:V.520.H.3 and 4 provided the owner or operator obtains written authorization from the administrative authority prior to submittal of the complete permit application):

1. a characterization of the contaminated groundwater, including concentrations of hazardous constituents;

2. the concentration limit for each hazardous constituent found in the groundwater as set forth in LAC 33:V.3309;

3. detailed plans and an engineering report describing the corrective action to be taken;

4. a description of how the groundwater monitoring program will demonstrate the adequacy of the corrective action; and

5. the permit may contain a schedule for submittal of the information required in LAC 33:V.520.H.3 and 4 provided the owner or operator obtains written authorization from the administrative authority prior to submittal of the complete permit application.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 18:1256 (November 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2467 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2454 (October 2005), LR 33:2100 (October 2007).

## §521. Specific Part II Information Requirements for Containers

Except as otherwise provided in LAC 33:V.2101 owners or operators of facilities that store containers of hazardous waste must provide the following additional information:

A. a description of the containment system to demonstrate compliance with LAC 33:V.2111, show at least the following:

1. basic design parameters, dimensions, and materials of construction;

2. how the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;

3. capacity of the containment system relative to the number and volume of containers to be stored;

4. provisions for preventing or managing run-on;

5. how accumulated liquids can be analyzed and removed to prevent overflow;

B. for storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with LAC 33:V.2111.C including:

1. test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

2. a description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids;

C. sketches, drawings, or data demonstrating compliance with LAC 33:V.2113 (location of buffer zone and containers holding ignitable or reactive wastes) and LAC 33:V.2115.C (location of incompatible wastes), where applicable;

D. where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with LAC 33:V.2107.A-C, and 1517.B-D; and

E. information on air emission control equipment as required in LAC 33:V.526.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1692 (September 1998).

## §523. Specific Part II Information Requirements for Tanks

Except as otherwise provided in LAC 33:V.1901, owners and operators of facilities that use tanks to store or treat hazardous waste must provide the following additional information:

A. a written assessment that is reviewed and certified by an independent, qualified professional engineer as to the structural integrity and suitability for handling hazardous waste for each tank system, as required under LAC 33:V.1903 and 1905;

B. dimensions and capacity of each tank;

C. descriptions of feed systems, safety cutoff, bypass systems, and pressure controls (e.g., vents);

D. a diagram of piping, instrumentation, and process flow for each tank system;

E. a description of materials and equipment used to provide external corrosion protection, as required under LAC 33:V.1905.A.3.b;

F. for new tank systems, a detailed description of how the tank system(s) will be installed in compliance with LAC 33:V.1905.B, C, D, and E;

G. detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of LAC 33:V.1907.A, B, C, D and F;

H. for tank systems for which a variance from the requirements of LAC 33:V.1907 is sought (as provided by LAC 33:V.1907.G):

1. detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the groundwater or surface water during the life of the facility; or

2. a detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment;

I. descriptions of controls and practices to prevent spills and overflows, as required under LAC 33:V.1909.B;

J. for tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of LAC 33:V.1917 and 1919; and

K. information on air emission control equipment as required in LAC 33:V.526.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 13:433 (August 1987) LR 16:220 (March 1990), LR 16:614 (July 1990), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1692 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:992 (June 2008).

## §525. Specific Part II Information Requirements for Surface Impoundments

Except as otherwise provided in LAC 33:V.1501, owners and operators of facilities that treat, store, or dispose of hazardous waste in surface impoundments must provide the following additional information:

A. a list of the hazardous wastes placed or to be placed in each surface impoundment;

B. detailed plans and an engineering report describing how the surface impoundment is designed and is or will be constructed, operated and maintained to meet the requirements of LAC 33:V.1504, 2903, 2904, and 2906. This submission must address the following items:

1. the liner system (except for an existing portion of a surface impoundment). If an exemption from the requirement for a liner is sought as provided by LAC 33:V.2903.B, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the groundwater or surface water at any future time;

2. the double liner and leak (leachate) detection, collection and removal system, if the surface impoundment must meet the requirements of LAC 33:V.2903.J. If an exemption from the requirements for double liners and leak detection, collection and removal system or alternative design is sought as provided by LAC 33:V.2903.C, K, or L, submit appropriate information;

3. if the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation and the location of the saturated zone in relation to the leak detection system;

4. the construction quality assurance (CQA) plan, if required under LAC 33:V.1504;

5. proposed action leakage rate, with rationale, if required under LAC 33:V.2904 and response action plan, if required under LAC 33:V.2906;

6. prevention of overtopping; and

7. structural integrity of dikes;

C. a description of how each surface impoundment, including the double liner system, leak detection system, cover system, and appurtenances for control of overtopping, will be inspected in order to meet the requirements of LAC 33:V.2907.B, C, and E. This information must be included in the inspection plan submitted under LAC 33:V.517.G;

D. a description of how each surface impoundment, including the liner and cover systems and appurtenances for control of overtopping, will be inspected in order to meet the requirements of LAC 33:V.2907.B and C;

E. a certification by a qualified engineer which attests to the structure integrity of each dike, as required under LAC 33:V.2907.D. For new units, the owner or operator must submit a statement by a qualified engineer that he will provide such a certification upon completion of construction in accordance with the plans and specifications;

F. a description of the procedure to be used for removing a surface impoundment from service, as required under LAC 33:V.2909.B and C;

G. a description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required under LAC 33:V.2911.A. For any wastes not to be removed from the unit upon closure, the owner or operator must submit detailed plans and an engineering report describing how LAC 33:V.2911.B and C will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan;

H. if ignitable or reactive wastes are to be placed in a surface impoundment an explanation of how LAC 33:V.2913 will be complied with;

I. if incompatible wastes, or incompatible wastes and materials will be placed in a surface impoundment, an explanation of how LAC 33:V.2915 will be complied with;

J. a waste management plan for EPA Hazardous Waste Numbers F020, F021, F022, F023, F026 and F027 describing how the surface impoundment is or will be designed, constructed, operated, and maintained to meet the requirements of LAC 33:V.2917. This submission must address the following items:

1. the volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials codisposed with these wastes; and

4. the effectiveness of additional treatment, design, or monitoring techniques; and

K. information on air emission control equipment as required in LAC 33:V.526.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 16:220 (March 1990), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1106 (June 1998), LR 24:1692 (September 1998).

## §526. Specific Part II Information Requirements for Air Emission Controls for Tanks, Surface Impoundments, and Containers

A. Except as otherwise provided in LAC 33:V.1501, owners and operators of tanks, surface impoundments, or containers that use air emission controls in accordance with the requirements of LAC 33:V.Chapter 17.Subchapter C shall provide the following additional information:

1. documentation for each floating roof cover installed on a tank subject to LAC 33:V.1755.D.1 or 2 that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design and certification by the owner or operator that the cover meets the applicable design specifications as listed in LAC 33:V.1755.E.1 or F.1;

2. identification of each container area subject to the requirements of LAC 33:V.Chapter 17.Subchapter C and certification by the owner or operator that the requirements of this Chapter are met;

3. documentation for each enclosure used to control air pollutant emissions from tanks or containers in accordance with the requirements of LAC 33:V.1755.D.5 or 1759.E.1.b that includes records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* under 40 CFR 52.741, Appendix B;

4. documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of LAC 33:V.1757.C that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in LAC 33:V.1757.C.1;

5. documentation for each closed-vent system and control device installed in accordance with the requirements of LAC 33:V.1761 that includes design and performance information as specified in LAC 33:V.530.C and D;

6. an emission monitoring plan for both Method 21 in 40 CFR Part 60, Appendix A and control device monitoring methods. This plan shall include the following information: monitoring point(s), monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliance; and

7. when an owner or operator of a facility subject to LAC 33:V.Chapter 43.Subchapter V cannot comply with LAC 33:V.Chapter 17.Subchapter C by the date of permit issuance, the schedule of implementation required under LAC 33:V.1751.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1692 (September 1998).

## §527. Specific Part II Information Requirements for Waste Piles

Except as otherwise provided in LAC 33:V.1501, owners and operators of facilities that treat or store hazardous waste in waste piles must provide the following additional information:

A. a list of hazardous wastes placed or to be placed in each waste pile;

B. if an exemption is sought to LAC 33:V.2303 and LAC 33:V.Chapter 33 as provided by LAC 33:V.2301.C, an explanation of how the standards of LAC 33:V.2301.C will be complied with;

C. detailed plans and an engineering report describing how the pile is or will be designed, constructed, operated and maintained to meet the requirements of LAC 33:V.2303. This submission must address the following items as specified in LAC 33:V.2303:

1. the liner system (except for an existing portion of a pile), if the waste pile must meet the requirements of LAC 33:V.2303.A. If an exemption from the requirement for a liner is sought, as provided by LAC 33:V.2303.B, the owner or operator must submit detailed plans and engineering and hydrogeologic reports, as applicable, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituent into the groundwater or surface water at any future time:

a. the double liner and leak (leachate) detection, collection, and removal system, if the waste pile must meet the requirements of LAC 33:V.2303.C. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by LAC 33:V.2303.D, E, or F, submit appropriate information;

b. if the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation and the location of the saturated zone in relation to the leak detection system;

c. the construction quality assurance (CQA) plan if required under LAC 33:V.1504;

d. proposed action leakage rate, with rationale, if required under LAC 33:V.2304 and response action plan, if required under LAC 33:V.2306;

2. control of run-on;

3. control of run-off;

4. management of collection and holding units associated with run-on and run-off control systems; and

5. control of wind dispersal of particulate matter, where applicable;

D. if an exemption from LAC 33:V.Chapter 33 is sought as provided by LAC 33:V.2303 or 2307 submit detailed plans and an engineering report describing how the requirements of LAC 33:V.2303.B or 2307 will be complied with;

E. a description of how each waste pile, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenance for control of run-on and run-off, will be inspected in order to meet the requirements of LAC 33:V.2309.A, B, and C. This information must be included in the inspection plan submitted under LAC 33:V.517.G;

F. if treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals;

G. if ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of LAC 33:V.2311 will be complied with;

H. if incompatible wastes, or incompatible wastes and materials will be placed in a waste pile, an explanation of how LAC 33:V.2313 will be complied with;

I. a description of how hazardous waste residues and contaminated materials will be removed from the waste pile at closure, as required under LAC 33:V.2315.A. For any waste not to be removed from the waste pile upon closure, this owner or operator must submit detailed plans and an engineering report describing how LAC 33:V.2521.A and B will be complied with;

J. a waste management plan for EPA Hazardous Waste Numbers F020, F021, F022, F023, F026 and F027 describing how a waste pile that is not enclosed (as defined in LAC 33:V.2301.C) is or will be designed, constructed, operated, and maintained to meet the requirements of LAC 33:V.2317. This submission must address the following items:

1. the volume, physical, and chemical characteristics of the wastes to be disposed in the waste pile, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials codisposed with these wastes; and

4. the effectiveness of additional treatment, design, or monitoring techniques.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 16:220 (March 1990), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1106 (June 1998).

## §528. Part II Information Requirements for Post-Closure Permits

A. For post-closure permits, the owner or operator is required to submit only the information specified in LAC 33:V.516; 517.A, B, F, G, H, M, N, P, R, and T; and 520, unless the administrative authority determines that additional information from LAC 33:V.516, 517, 520, 523, 525, 527, 531, and 533 is necessary. The owner or operator is required to submit the same information when an alternative authority is used in lieu of a post-closure permit as provided in LAC 33:V.305.H.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 25:436 (March 1999).

## §529. Specific Part II Information Requirements for Incinerators

Except as LAC 33:V.Chapter 31 and Subsection F of this Section provide otherwise, owners and operators of facilities that incinerate hazardous waste must fulfill the requirements of Subsection A, B, or C of this Section:

A. when seeking an exemption under LAC 33:V.3105.B or C (ignitable, corrosive, or reactive wastes only):

1. documentation that the waste is listed as a hazardous waste in LAC 33:V.Chapter 49, solely because it is ignitable (Hazard Code I) or corrosive (Hazard Code C) or both; or

2. documentation that the waste is listed as a hazardous waste in LAC 33:V.Chapter 49, solely because it is reactive (Hazard Code R) for characteristics other than those listed in LAC 33:V.4903.D.4 and 5, and will not be burned when other hazardous wastes are present in the combustion zone; or

3. documentation that the waste is a hazardous waste solely because it possesses the characteristics of ignitability, corrosivity, or both, as determined by the tests for characteristics of hazardous waste under LAC 33:V.4903; or

4. documentation that the waste is a hazardous waste solely because it possesses the reactivity characteristics listed in LAC 33:V.4903.D.1, 2, 3, 6, 7, or 8, and that it will not be burned when other hazardous wastes are present in the combustion zone; or

B. submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with LAC 33:V.3115; or

C. in lieu of a trial burn, the applicant may submit the following information:

1. an analysis of each waste or mixture of wastes to be burned including:

a. heat value of the waste in the form and composition in which it will be burned;

b. viscosity (if applicable), or description of physical form of the waste;

c. an identification of any hazardous organic constituents listed in LAC 33:V.3105, Table 1, that are present in the waste to be burned, except that the applicant need not analyze for constituents listed in LAC 33:V.3105, Table 1, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on appropriate analytical techniques;

d. an approximate quantification of the hazardous constituents identified in the waste, within the precision produced by appropriate analytical methods;

e. a quantification of those hazardous constituents in the waste which may be designated as POHC's based on data submitted from other trial or operational burns which demonstrate compliance with the performance standards in LAC 33:V.3111;

2. a detailed engineering description of the incinerators, including:

a. manufacturer's name and model number of incinerator;

b. type of incinerator;

c. linear dimension of incinerator unit including cross sectional area of combustion chamber;

d. description of auxiliary fuel system (type/feed);

e. capacity of prime mover;

f. description of automatic waste feed cutoff system(s);

g. stack gas monitoring and pollution control monitoring system;

h. nozzle and burner design;

i. construction materials;

j. location and description of temperature, pressure, and flow indicating devices and control devices;

3. a description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed; The data should include those items listed in Paragraph C.1 of this Section. This analysis should specify the POHC's which the applicant has identified in the waste for which a permit is sought, and any differences from the POHC's in the waste for which burn data are provided;

4. the design and operating conditions of the incinerator unit to be used, compared with that for which comparative burn data are available;

5. a description of the results submitted from any previously conducted trial burn(s) including:

a. sampling and analysis techniques used to calculate performance standards in LAC 33:V.3111;

b. methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a statement concerning the precision and accuracy of this measurement);

6. the expected incinerator operation information to demonstrate compliance with LAC 33:V.3111 and 3117, including:

a. expected carbon monoxide (CO) level in the stack exhaust gas;

b. waste feed rate;

c. combustion zone temperature;

d. indication of combustion gas velocity;

e. expected stack gas volume, flow rate, and temperature;

f. computed residence time for waste in the combustion zone;

g. expected hydrochloric acid removal efficiency;

h. expected fugitive emissions and their control procedures;

i. proposed waste feed cut-off limits based on the identified significant operating parameters;

7. such supplemental information as the administrative authority finds necessary to achieve the purposes of this Subsection;

8. waste analysis data, including that submitted in Paragraph C.1 of this Section, sufficient to allow the administrative authority to specify as permit Principal Organic Hazardous Constituents (permit POHC's) those constituents for which destruction and removal efficiencies will be required;

D. the administrative authority shall approve a permit application without a trial burn if he finds that:

1. the wastes are sufficiently similar; and

2. the incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (under LAC 33:V.3117) operating conditions that will ensure that the performance standards in LAC 33:V.3111 will be met by the incinerator;

E. commercial hazardous waste incinerators. The administrative authority shall issue no new permit or *substantial permit modification*, as defined in LAC 33:I.1503, that authorizes the construction or operation of any commercial hazardous waste incineration facility, of any type, until the permit applicant complies with:

1. all applicable hazardous waste regulations in LAC 33:V, particularly as they pertain to:

a. design as required in LAC 33:V.Chapters 5 and 31;

b. siting as required in LAC 33:V.Chapters 5, 7, and 15;

c. construction as required in LAC 33:V.Chapters 7 and 31;

d. operation as required in LAC 33:V.Chapters 3, 5, 7, and 31;

e. emission limitations as required in LAC 33:V.Chapters 5 and 31; and

f. disposal methods as required in LAC 33:V.Chapters 22, 31, and 35;

2. all applicable air quality regulations in LAC 33:III; and

3. all applicable water quality regulations in LAC 33:IX;

F. when an owner or operator of a hazardous waste incineration unit becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122 (i.e., by conducting a comprehensive performance test and submitting a notification of compliance in accordance with 40 CFR 63.1207(j) and 63.1210(d), documenting compliance with all applicable requirements of 40 CFR Part 63, Subpart EEE), the requirements of this Section do not apply, except those provisions the administrative authority determines are necessary to ensure compliance with LAC 33:V.3117.A and C if the owner or operator elects to comply with LAC 33:V.2001.A.1.a to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the administrative authority may apply the provisions of this Section, on a case-by-case basis, for purposes of information collection in accordance with LAC 33:V.303.Q-R and 311.E-F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2011(D)(24)(a) and 2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 22:817 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:2199 (November 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:292 (March 2001), LR 29:319 (March 2003), amended by the Office of Environmental Assessment, LR 31:1571 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 34:620 (April 2008), LR 34:1011 (June 2008), LR 34:1894 (September 2008).

## §530. Specific Part II Information Requirements for Process Vents

Except as otherwise provided in LAC 33:V.1501, owners and operators of facilities that have process vents to which LAC 33:V.Chapter 17.Subchapter A applies must provide the following additional information.

A. Facilities that cannot install a closed-vent system and control device to comply with the provisions of LAC 33:V.Chapter 17.Subchapter A, on the effective date

that the facility becomes subject to the provisions of LAC 33:V.Chapter 17.Subchapter A, and Chapter 43.Subchapter Q, must provide an implementation schedule as specified in LAC 33:V.1709.A.2.

B. Documentation of compliance with the process vent standards in LAC 33:V.1707 must be provided, including:

1. information and data identifying all affected process vents, annual throughput, and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan);

2. information and data supporting estimates of vent emissions and emission reduction achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, estimates of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or concentrations) that represent the conditions that exist when the waste management unit is operating at the highest load or capacity level reasonably expected to occur;

3. information and data used to determine whether or not a process vent is subject to the requirements of LAC 33:V.1707.

C. Owners or operators who apply for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with the requirements of LAC 33:V.1707, and choose to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device must provide a performance test plan as specified in LAC 33:V.1713.B.3.

D. Documentation of compliance with LAC 33:V.1709 must be provided, including:

1. a list of all information references and sources used in preparing the documentation;

2. records including the dates of each compliance test required by LAC 33:V.1709.K;

3. a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions," as incorporated by reference at LAC 33:V.110, or other engineering texts acceptable to the administrative authority that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in LAC 33:V.1713.B.4.c;

4. a statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur;

5. a statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater unless the total organic emission limits of LAC 33:V.1707.A for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 18:1256 (November 1992), LR 22:817 (September 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 34:621 (April 2008).

## §531. Specific Part II Information Requirements for Land Treatment Facilities

Except as otherwise provided in LAC 33:V.1501, owners and operators of facilities that use land treatment to dispose of hazardous waste must provide the following additional information:

A. a description of plans to conduct a treatment demonstration as required under LAC 33:V.2707. The description must include the following information:

1. the wastes for which the demonstration will be made and the potential hazardous constituents in the waste;

2. the data sources to be used to make the demonstration (e.g., literature, laboratory data, field data, or operating data);

3. any specific laboratory or field test that will be conducted, including:

a. the type of test (e.g., column leaching, degradation);

b. materials and methods, including analytical procedures;

c. expected time for completion;

d. characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices;

B. a description of a land treatment program, as required under LAC 33:V.2705. This information must be submitted with the plans for the treatment demonstration, and updated following the treatment demonstration. The land treatment program must address the following items:

1. the wastes to be land treated;

2. design measures and operating practices necessary to maximize treatment in accordance with LAC 33:V.2703.A including:

a. waste application method and rate;

b. measures to control soil pH;

c. enhancement of microbial or chemical reactions;

d. control of moisture content;

3. provisions for unsaturated zone monitoring, including:

a. sampling equipment, procedures, and frequency;

b. procedures for selecting sampling locations;

c. analytical procedures;

d. chain of custody control;

e. procedures for establishing background values;

f. statistical methods for interpreting results;

g. the justification for any hazardous constituents recommended for selection as principal hazardous constituents, in accordance with the criteria for such selection in LAC 33:V.2711.A;

4. a list of hazardous constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to LAC 33:V.1519;

5. the proposed dimensions of the treatment zone;

C. a description of how the unit is or will be designed, constructed, operated, and maintained in order to meet the requirements of LAC 33:V.2303. This submission must address the following items:

1. control of run-on;

2. collection and control of run-off;

3. minimization of run-off of hazardous constituents from the treatment zone;

4. management of collection and holding facilities associated with run-on and run-off control systems;

5. periodic inspection of this unit (This information should be included in the inspection plan.);

6. control of wind dispersal of particulate matter, if applicable;

D. no food-chain crops are to be grown in or on the treatment zone of the land treatment unit;

E. a description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining such cover during the post-closure care period, as required under LAC 33:V.2709.A.8 and C.2. This information should be included in the closure plan and, where applicable, the post-closure plan;

F. if ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of LAC 33:V.2715 will be complied with;

G. if incompatible wastes, or incompatible wastes and materials, will be placed in or on the same treatment zone, an explanation of how LAC 33:V.2717 will be complied with;

H. a waste management plan for EPA Hazardous Waste Numbers F020, F021, F022, F023, F026 and F027 describing how a land treatment facility is or will be designed, constructed, operated, and maintained to meet the requirements of LAC 33:V.2723. This submission must address the following items:

1. the volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials codisposed with these wastes; and

4. the effectiveness of additional treatment, design, or monitoring techniques.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 16:220 (March 1990), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1106 (June 1998).

## §532. Special Part II Information Requirements for Drip Pads

A. Except as otherwise provided by LAC 33:V.Chapter 15, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads must provide the following additional information:

1. a list of hazardous wastes placed or to be placed on each drip pad;

2. if an exemption is sought to LAC 33:V.Chapter 33, as provided by LAC 33:V.3301, detailed plans and an engineering report describing how the requirements of LAC 33:V.3301 will be met;

3. detailed plans and an engineering report describing how the drip pad is or will be designed, constructed, operated and maintained to meet the requirements of LAC 33:V.2805, including the as-built drawings and specifications. This submission must address the following items as specified in LAC 33:V.2803:

a. the design characteristics of the drip pad;

b. the liner system;

c. the leakage detection system, including how the system is designed to detect the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time;

d. practices designed to maintain drip pads;

e. the associated collection system;

f. control of run-on to the drip pad;

g. control of run-off from the drip pad;

h. the interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad;

i. procedures for cleaning the drip pad at least once every seven days to ensure the removal of any accumulated residues of waste or other materials, including but not limited to rinsing, washing with detergents or other appropriate solvents, or steam cleaning and provisions for documenting the date, time, and cleaning procedure used each time the pad is cleaned;

j. operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized;

k. procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and nonpressure processes is held on the drip pad until drippage has ceased; including recordkeeping practices;

l. provisions for ensuring that collection and holding units associated with the run-on and run-off control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system;

m. if treatment is carried out on the drip pad, details of the process equipment used and the nature and quality of the residuals;

n. a description of how each drip pad, including appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of LAC 33:V.2805. This information should be included in the inspection plan submitted under LAC 33:V.517.G;

o. a certification signed by an independent, qualified professional engineer stating that the drip pad design meets the requirements of LAC 33:V.2805.A-F;

p. a description of how hazardous waste residues and contaminated materials will be removed from the drip pad at closure, as required under LAC 33:V.2809.A. For any waste not to be removed from the drip pad upon closure, the owner or operator must submit detailed plans and an engineering report describing how LAC 33:V.2521.A and B will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under LAC 33:V.517.M.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 34:993 (June 2008).

## §533. Specific Part II Information Requirements for Landfills

Except as otherwise provided in LAC 33:V.1501, owners and operators of facilities that dispose of hazardous waste in landfills must provide the following additional information:

A. a list of the hazardous wastes placed in each landfill or landfill cell;

B. detailed plans and an engineering report describing how the landfill is designed and is or will be constructed, operated and maintained to comply with the requirements of LAC 33:V.1504, 2503, 2504, and 2507. This submission must address the following items:

1. the liner system (except for an existing portion of a landfill), if the landfill must meet the requirements of LAC 33:V.2503.A. If an exemption from the requirement for a liner is sought as provided by LAC 33:V.2503.L, submit detailed plans and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the groundwater or surface water at any future time;

2. the double liner and leak (leachate) detection, collection, and removal system, if the landfill must meet the requirements of LAC 33:V.2503.K. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by LAC 33:V.2503.L or M, submit appropriate information;

3. if the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation and the location of the saturated zone in relation to the leak detection system;

4. the construction quality assurance (CQA) plan if required under LAC 33:V.1504;

5. proposed action leakage rate, with rationale, if required under LAC 33:V.2504, and response action plan, if required under LAC 33:V.2508;

6. control of run-on;

7. control of run-off;

8. management of collection and holding facilities associated with run-on and run-off control systems; and

9. control of wind dispersal of particulate matter, where applicable;

C. there are no exemptions from the groundwater protection requirements of LAC 33:V.Chapter 33;

D. a description of how each landfill, including the liner and cover systems, will be inspected in order to meet the requirements of LAC 33:V.2507.B, C, and D. This information should be included in the inspection plan submitted under LAC 33:V.517.G;

E. detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with LAC 33:V.2521.A, and a description of how each landfill will be maintained and monitored after closure in accordance with LAC 33:V.2521.B. This information should be included in the closure and post-closure plans;

F. if ignitable or reactive wastes will be landfilled, an explanation of how the standards of LAC 33:V.2511 will be complied with;

G. if incompatible wastes, or incompatible wastes and materials will be landfilled, an explanation of how LAC 33:V.2513 will be complied with;

H. bulk or non-containerized liquid waste or wastes containing free liquids to be landfilled must comply with LAC 33:V.2515;

I. if containers of hazardous waste are to be landfilled, an explanation of how the requirements of LAC 33:V.2517 or LAC 33:V.2519, as applicable, will be complied with;

J. a waste management plan for EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, and F027 describing how a landfill is or will be designed, constructed, operated, and maintained to meet the requirements of LAC 33:V.2523. This submission must address the following items:

1. the volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials codisposed with these wastes; and

4. the effectiveness of additional treatment, design, or monitoring techniques.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 16:220 (March 1990), LR 21:266 (March 1995), LR 21:944 (September 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1106 (June 1998).

## §534. Specific Part II Information Requirements for Miscellaneous Units

Except as otherwise provided in LAC 33:V.3201, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units must provide the following additional information:

A. a detailed description of the unit being used or proposed for use, including the following:

1. physical characteristics, materials of construction, and dimensions of the unit;

2. detailed plans and engineering reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed to comply with the requirements of LAC 33:V.3203 and 3205; and

3. for disposal units, a detailed description of the plans to comply with the post-closure requirements of LAC 33:V.3207;

B. detailed hydrologic, geologic, and meteorologic assessments and land-use maps for the region surrounding the site that address and ensure compliance of the unit with each factor in the environmental performance standards of LAC 33:V.3203. If the applicant can demonstrate that he does not violate the environmental performance standards of LAC 33:V.3203 and the administrative authority agrees with such demonstration, preliminary hydrologic, geologic, and meteorologic assessments will suffice;

C. information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures;

D. for any treatment unit, a report on a demonstration of the effectiveness of the treatment based on laboratory or field data;

E. any additional information determined by the administrative authority to be necessary for evaluation of compliance of the unit with the environmental performance standards of LAC 33:V:3203.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:399 (May 1990).

## §535. Specific Part II Information Requirements for Boilers and Industrial Furnaces Burning Hazardous Waste for Energy or Material Recovery and Not for Destruction

A. Trial Burns

1. General. Except as provided below, owners or operators that are subject to the standards to control organic emissions provided by LAC 33:V.3009, standards to control particulate matter provided by LAC 33:V.3011, standards to control metals emissions provided by LAC 33:V.3013, or standards to control hydrogen chloride or chlorine gas emissions provided by LAC 33:V.3015 must conduct a trial burn to demonstrate conformance with those standards and must submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with LAC 33:V.537.

a. A trial burn to demonstrate conformance with a particular emission standard may be waived under provisions of LAC 33:V.3009-3015 and LAC 33:V.535.A.2-5.

b. The owner or operator may submit data in lieu of a trial burn, as prescribed in LAC 33:V.535.A.6.

2. Waiver of Trial Burn for DRE

a. Boilers Operated under Special Operating Requirements. When seeking to be permitted under LAC 33:V.3009.A.4 and 3021 that automatically waive the DRE trial burn, the owner or operator of a boiler must submit documentation that the boiler operates under the special operating requirements provided by LAC 33:V.3021.

b. Boilers and Industrial Furnaces Burning Low Risk Waste. When seeking to be permitted under the provisions for low risk waste provided by LAC 33:V.3009.A.5 and 3019.A that waive the DRE trial burn, the owner or operator must submit:

i. documentation that the device is operated in conformance with the requirements of LAC 33:V.3019.A.1;

ii. results of analyses of each waste to be burned, documenting the concentrations of nonmetal compounds listed in LAC 33:V.4901.G, Table 6, except for those constituents that would reasonably not be expected to be in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained. The analysis must rely on appropriate analytical techniques;

iii. documentation of hazardous waste firing rates and calculations of reasonable, worst-case emission rates of each constituent identified in LAC 33:V.535.A.2.b.ii using procedures provided by LAC 33:V.3019.A.2.b;

iv. results of emissions dispersion modeling for emissions identified in LAC 33:V.535.A.2.b.iii using modeling procedures prescribed by LAC 33:V.3013.H. The administrative authority will review the emission modeling conducted by the applicant to determine conformance with these procedures. The administrative authority will either approve the modeling or determine that alternate or supplementary modeling is appropriate; and

v. documentation that the maximum annual average ground level concentration of each constituent identified in Clause A.2.b.ii of this Section quantified in conformance with Clause A.2.b.iv of this Section does not exceed the allowable ambient level established in 40 CFR 266, Appendices IV or V, as adopted and amended at LAC 33:V.3099.Appendices D and E. The acceptable ambient concentration for emitted constituents for which a specific Reference Air Concentration has not been established in 40 CFR 266, Appendix IV, as adopted and amended at LAC 33:V.3099.Appendix D or Risk-Specific Dose has not been established in 40 CFR 266, Appendix V, as adopted at LAC 33:V.3099.Appendix E, is 0.1 micrograms per cubic meter, as noted in the footnote to 40 CFR 266, Appendix IV, as adopted and amended at LAC 33:V.3099.Appendix D.

3. Waiver of Trial Burn for Metals. When seeking to be permitted under the Tier I (or adjusted Tier I) metals feed rate screening limits provided by LAC 33:V.3013.B and E that control metals emissions without requiring a trial burn, the owner or operator must submit:

a. documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;

b. documentation of the concentration of each metal controlled by LAC 33:V.3013.B or E in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of each metal;

c. documentation of how the applicant will ensure that the Tier I feed rate screening limits provided by LAC 33:V.3013.B or E will not be exceeded during the averaging period provided by that Subsection;

d. documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by LAC 33:V.3013.B.3-5;

e. documentation of compliance with the provisions of LAC 33:V.3013.B.6, if applicable, for facilities with multiple stacks;

f. documentation that the facility does not fail the criteria provided by LAC 33:V.3013.B.7 for eligibility to comply with the screening limits; and

g. proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feedstocks.

4. Waiver of Trial Burn for Particulate Matter. When seeking to be permitted under the low risk waste provisions of LAC 33:V.3019.B which waives the particulate standard (and trial burn to demonstrate conformance with the particulate standard), applicants must submit documentation supporting conformance with LAC 33:V.535.A.2.b and A.3.

5. Waiver of Trial Burn for HCl and $Cl_2$. When seeking to be permitted under the Tier I (or adjusted Tier I) feed rate screening limits for total chloride and chlorine provided by LAC 33:V.3015.B.1 and E that control emissions of hydrogen chloride (HCl) and chlorine gas ($Cl_2$) without requiring a trial burn, the owner or operator must submit:

a. documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;

b. documentation of the levels of total chloride and chlorine in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of total chloride and chlorine;

c. documentation of how the applicant will ensure that the Tier I (or adjusted Tier I) feed rate screening limits provided by LAC 33:V.3015.B.1 or E will not be exceeded during the averaging period provided by that Subsection;

d. documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by LAC 33:V.3015.B.3;

e. documentation of compliance with the provisions of LAC 33:V.3015.B.4, if applicable, for facilities with multiple stacks;

f. documentation that the facility does not fail the criteria provided by LAC 33:V.3015.B.3 for eligibility to comply with the screening limits; and

g. proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.

6. Data in Lieu of Trial Burn. The owner or operator may seek an exemption from the trial burn requirements to demonstrate conformance with LAC 33:V.537 and 3009-3015 by providing the information required by LAC 33:V.537 from previous compliance testing of the device in conformance with LAC 33:V.3007, or from compliance testing or trial or operational burns of similar boilers or industrial furnaces burning similar hazardous wastes under similar conditions. If data from a similar device is used to support a trial burn waiver, the design and operating information required by LAC 33:V.535 must be provided for both the similar device and the device to which the data is to be applied, and a comparison of the design and operating information must be provided. The administrative authority shall approve a permit application without a trial burn if he finds that the hazardous wastes are sufficiently similar, the devices are sufficiently similar, the operating conditions are sufficiently similar, and the data from other compliance tests, trial burns, or operational burns are adequate to specify (under LAC 33:V.3005) operating conditions that will ensure conformance with LAC 33:V.3005.C. In addition, the following information shall be submitted:

a. for a waiver from any trial burn:

i. a description and analysis of the hazardous waste to be burned compared with the hazardous waste for which data from compliance testing, or operational or trial burns are provided to support the contention that a trial burn is not needed;

ii. the design and operating conditions of the boiler or industrial furnace to be used, compared with that for which comparative burn data are available; and

iii. such supplemental information as the administrative authority finds necessary to achieve the purposes of this Paragraph;

b. for a waiver of the DRE trial burn, the basis for selection of POHCs used in the other trial or operational burns which demonstrate compliance with the DRE performance standard in LAC 33:V.3009.A. This analysis should specify the constituents in LAC 33:V.4901.G, Table 6, that the applicant has identified in the hazardous waste for which a permit is sought, and any differences from the POHCs in the hazardous waste for which burn data are provided.

B. Alternative HC Limit for Industrial Furnaces with Organic Matter in Raw Materials. Owners or operators of industrial furnaces requesting an alternative HC limit under LAC 33:V.3009.F shall submit the following information at a minimum:

1. documentation that the furnace is designed and operated to minimize HC emissions from fuels and raw materials;

2. documentation of the proposed baseline flue gas HC (and CO) concentration, including data on HC (and CO) levels during tests when the facility produced normal products under normal operating conditions from normal raw materials while burning normal fuels and when not burning hazardous waste;

3. test burn protocol to confirm the baseline HC (and CO) level including information on the type and flow rate of all feedstreams, point of introduction of all feedstreams, total organic carbon content (or other appropriate measure of organic content) of all nonfuel feedstreams, and operating conditions that affect combustion of fuel(s) and destruction of hydrocarbon emissions from nonfuel sources;

4. trial burn plan to:

a. demonstrate that flue gas HC (and CO) concentrations when burning hazardous waste do not exceed the baseline HC (and CO) level; and

b. identify the types and concentrations of organic compounds listed in LAC 33:V.4901.G, Table 6, that are emitted when burning hazardous waste in conformance with procedures prescribed by the administrative authority;

5. implementation plan to monitor over time changes in the operation of the facility that could reduce the baseline HC level and procedures to periodically confirm the baseline HC level; and

6. such other information as the administrative authority finds necessary to achieve the purposes of this Subsection.

C. Alternative Metals Implementation Approach. When seeking to be permitted under an alternative metals implementation approach under LAC 33:V.3013.F, the owner or operator must submit documentation specifying how the approach ensures compliance with the metals emissions standards of LAC 33:V.3013.C or D and how the approach can be effectively implemented and monitored. Further, the owner or operator shall provide such other information that the administrative authority finds necessary to achieve the purposes of this Subsection.

D. Automatic Waste Feed Cutoff System. Owners or operators shall submit information describing the automatic waste feed cutoff system, including any pre-alarm systems that may be used.

E. Direct Transfer. Owners or operators that use direct transfer operations to feed hazardous waste from transport vehicles (*containers*, as defined in LAC 33:V.3023) directly to the boiler or industrial furnace shall submit information supporting conformance with the standards for direct transfer provided by LAC 33:V.3023.

F. Residues. Owners or operators that claim that their residues are excluded from regulation under the provisions

of LAC 33:V.3025 must submit information adequate to demonstrate conformance with those provisions.

G. When an owner or operator of a cement or lightweight aggregate kiln, solid fuel or liquid fuel boiler, or hydrochloric acid production furnace becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing cement or lightweight aggregate kiln, solid fuel or liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122 (i.e., by conducting a comprehensive performance test and submitting a notification of compliance in accordance with 40 CFR 63.1207(j) and 63.1210(d), documenting compliance with all applicable requirements of 40 CFR Part 63, Subpart EEE), the requirements of this Section do not apply. However, the requirements of this Section do apply if:

1. the administrative authority determines that certain provisions of this Section are necessary to ensure compliance with LAC 33:V.3005.E.1 and 2.c if the owner or operator elects to comply with LAC 33:V.2001.A.1.a to minimize emissions of toxic compounds from startup, shutdown, and malfunction events;

2. the facility is an *area source* as defined in LAC 33:III.5103 and the owner or operator elects to comply with the standards and associated requirements in LAC 33:V.3011, 3013, and 3015 for particulate matter, non-mercury metals, and hydrogen chloride and chlorine gas; or

3. the administrative authority determines that certain provisions of this Section apply, on a case-by-case basis, for purposes of information collection in accordance with LAC 33:V.303.Q-R and 311.E-F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:737 (September 1989), amended LR 18:1375 (December 1992), LR 21:266 (March 1995), LR 22:817 (September 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:292 (March 2001), LR 29:319 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 34:621 (April 2008), LR 34:1011 (June 2008).

## §536. Specific Part II Information Requirements for Equipment

Except as otherwise provided in LAC 33:V.1501, owners and operators of facilities that have equipment to which LAC 33:V.Chapter 17.Subchapter B applies must provide the following additional information.

A. For each piece of equipment to which LAC 33:V.Chapter 17.Subchapter B, applies, the following information must be provided:

1. equipment identification number and hazardous waste management unit identification;

2. approximate locations within the facility (e.g., identify the hazardous waste management unit on a facility plot plan);

3. type of equipment (e.g., a pump or pipeline valve);

4. percent by weight total organics in the hazardous waste stream at the equipment;

5. hazardous waste state at the equipment (e.g., gas/vapor or liquid); and

6. method of compliance with the standard (e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals").

B. Facilities that cannot install a closed-vent system and control device to comply with the provisions of LAC 33:V.Chapter 17.Subchapter B, on the effective date that the facility becomes subject to the provisions of LAC 33:V.Chapter 17.Subchapter B, or Chapter 43.Subchapter R, must provide an implementation schedule as specified in LAC 33:V.1709.A.2.

C. Owners or operators who apply for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system and choose to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device must provide a performance test plan as specified in LAC 33:V.1713.B.3.

D. Documentation that demonstrates compliance with the equipment standards in LAC 33:V.1719-1733 must be provided. This documentation shall contain the records required under LAC 33:V.1743. The administrative authority may request further documentation before deciding if compliance has been demonstrated.

E. Documentation to demonstrate compliance with LAC 33:V.1735 shall be provided and include the following information:

1. a list of all information references and sources used in preparing the documentation;

2. records, including the dates, of each compliance test required by LAC 33:V.1709.J;

3. a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions," as incorporated by reference at LAC 33:V.110, or other engineering texts acceptable to the administrative authority that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in LAC 33:V.1713.B.4.c;

4. a statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur;

5. a statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 18:1256 (November 1992), LR 22:817 (September 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 34:621 (April 2008).

## Subchapter F. Special Forms of Permits

### §537. Permits for Boiler and Industrial Furnaces Burning Hazardous Waste for Recycling Purposes Only (Boilers and industrial furnaces burning hazardous waste for destruction are subject to permit requirements for incinerators.)

A. General. New boilers and industrial furnaces (those not operating under interim status) that will be permitted based on a trial burn under LAC 33:V.3005.D.3 are subject to Subsection B of this Section. Boilers and industrial furnaces operating under the interim status standards of LAC 33:V.3007 are subject to Subsection C of this Section.

B. New Boilers and Industrial Furnaces Permitted with a Trial Burn. A permit for a new boiler or industrial furnace shall specify appropriate conditions for the following operating periods.

1. Pre-Trial Burn Period. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the boiler or industrial furnace to a point of operational readiness to conduct a trial burn, not to exceed 720 hours operating time when burning hazardous waste, the administrative authority shall establish pre-trial burn permit conditions, including but not limited to allowable hazardous waste feed rates and operating conditions. The administrative authority may extend this operational period once for up to 720 additional hours at the applicant's request when good cause is shown. The permit may be modified to reflect the extension according to LAC 33:V.323 (minor modifications of permits).

a. Applicants must submit a statement with Part II of the permit application that suggests the conditions necessary to operate in compliance with the standards of LAC 33:V.3009-3015 during this period. This statement should include, at a minimum, restrictions on the applicable operating parameters identified in LAC 33:V.3005.E.

b. The administrative authority will review this statement and any other relevant information submitted with Part II of the permit application and specify requirements for this period sufficient to meet the performance standards of LAC 33:V.3009-3015 based on engineering judgment.

2. Trial Burn Period. For the duration of the trial burn, the administrative authority must establish conditions in the trial burn permit for the purposes of determining feasibility of compliance with the performance standards of LAC 33:V.3009-3015 and of determining adequate operating conditions under LAC 33:V.3005.E.

a. Applicants must propose a trial burn plan, prepared under Subparagraph B.2.b of this Section, to be submitted with Part II of the permit application.

b. The trial burn plan must include the following information.

i. An analysis of each feedstream, including hazardous waste, other fuels, and industrial furnace feedstocks as fired, containing the following information is required:

(a). heating value, levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, thallium, total chlorine/chloride, and ash; and composition of the hazardous waste must be specified;

(b). viscosity or a description of the physical form of the feedstream.

ii. An analysis of each hazardous waste stream as fired is required, including:

(a). an identification of any hazardous organic constituents listed in LAC 33:V.3105, Table 1, that are present in the feed stream, except that the applicant need not analyze for constituents listed in LAC 33:V.3105, Table 1, that would reasonably not be expected to be found in the hazardous waste. The constituents excluded from analysis must be identified and the basis for this exclusion explained. The waste analysis must be conducted in accordance with appropriate analytical techniques;

(b). an approximate quantification of the hazardous constituents identified in the hazardous waste, within the precision produced by appropriate analytical methods;

(c). if applicable, the blending procedures used before firing the hazardous waste must be described, and a detailed analysis of the hazardous waste before blending provided, along with an analysis of the material with which the hazardous waste is blended and the blending ratios.

iii. A detailed engineering description of the boiler or industrial furnace is required, including:

(a). manufacturer's name and model number of the boiler or industrial furnace;

(b). type of boiler or industrial furnace;

(c). maximum design capacity in appropriate units;

(d). description of the feed system for the hazardous waste, and, as appropriate, other fuels and industrial furnace feedstocks;

(e). capacity of the hazardous waste feed system;

(f). description of automatic hazardous waste feed cutoff system(s);

(g). description of any emission control system(s); and

(h). description of stack gas monitoring and any pollution-control monitoring systems.

iv. A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis must be provided.

v. A detailed test schedule for each hazardous waste for which the trial burn in planned, including date(s), duration, quantity of hazardous waste to be burned, and other factors relevant to the administrative authority's decision under LAC 33:V.537.B.2.e must be included.

vi. A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feed rate and, as appropriate, the feed rates of other fuels and industrial furnace feedstocks, and any other relevant parameters that will vary and that may affect the ability of the boiler or industrial furnace to meet the performance standards in LAC 33:V.3009-3015 must be provided.

vii. Any emission control equipment that will be used must be described along with the planned operating conditions.

viii. Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction must be described.

ix. The administrative authority may request additional information that he reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this Paragraph and the criteria in LAC 33:V.537.B.2.e.

c. The administrative authority, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information to achieve the purposes of this Paragraph.

d. The administrative authority will use the hazardous waste analysis data in the trial burn plan to specify as trial Principal Organic Hazardous Constituents (POHCs) those constituents for which destruction and removal efficiencies must be calculated during the trial burn. The administrative authority will specify these trial POHCs on the basis of his estimate of the difficulty of destroying:

i. the constituents identified in the hazardous waste feed;

ii. their concentrations or mass in the hazardous waste feed; and

iii. for hazardous wastes listed in LAC 33:V.4901, the hazardous waste organic constituent(s) identified in LAC 33:V.4901.G, Table 6.

e. The administrative authority shall approve a trial burn plan if he finds that:

i. the trial burn is likely to determine whether the boiler or industrial furnace can meet the performance standards in LAC 33:V.3009-3015;

ii. the trial burn itself will not present an imminent hazard to human health and the environment;

iii. the trial burn will help him determine operating requirements to be specified under LAC 33:V.3005.E; and

iv. the information sought in LAC 33:V.537.B.2.e.i-iii cannot reasonably be obtained through other means.

f. The administrative authority may extend and modify the pre-trial burn permit as necessary to accommodate the approved trial burn plan. The permit modification shall proceed as a minor modification according to LAC 33:V.323.

g. The administrative authority must send a notice to all persons on the facility mailing list, as set forth in LAC 33:V.717.A.1.e, and to the appropriate units of state and local government, as set forth in LAC 33:V.717.A.1.b, announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the administrative authority has issued such notice.

i. This notice must be mailed within a reasonable time period before the trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the permitting agency.

ii. This notice must contain:

(a). the name and telephone number of the applicant's contact person;

(b). the name and telephone number of the permitting agency's contact office;

(c). the location where the approved trial burn plan and any supporting documents can be reviewed and copied; and

(d). an expected time period for commencement and completion of the trial burn.

h. During each approved trial burn (or as soon after the burn as is practicable), the applicant must make the following determinations and analyses:

i. a quantitative analysis of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, thallium, silver, and chlorine/chloride in the feedstreams (hazardous waste, other fuels, and industrial furnace feedstocks) to the boiler or industrial furnace is required;

ii. a quantitative analysis of the stack gas for the concentration and mass emissions of the trial POHCs is required;

iii. if dioxin and furan testing is required under LAC 33:V.3009.E, a quantitative analysis of the stack gas for the concentration and mass emission rate of the 2,3,7,8-chlorinated tetra-octa congeners of chlorinated

dibenzo-p-dioxins and furans, and a computation showing conformance with the emission standard are required;

iv. a quantitative analysis of the stack gas for the concentration and mass emission of particulate matter, metal(s) or hydrogen chloride (HCl) and chlorine gas ($Cl_2$) and a computation showing conformance with the metals or HCl emission performance standard in LAC 33:V.3011 and 3015 are required;

v. a quantitative analysis of the scrubber water (if any), ash residues, and other residues is required for the purpose of estimating the fate of the trial POHCs, the fate of any metal, and the fate of chlorine/chloride subject to emissions testing under LAC 33:V.537.B.2.g.iii.(b);

vi. destruction and removal efficiency (DRE) must be computed in accordance with the DRE formula specified in LAC 33:V.3009.A;

vii. sources of fugitive emissions and their means of control must be identified;

viii. carbon monoxide, total hydrocarbons, and oxygen in the stack gas must be continuously measured. The administrative authority may approve an alternative scheme for monitoring total hydrocarbons;

ix. a quantitative analysis of the exhaust gas for the concentration and mass emission of particulate matter, and a computation showing conformance with the particulate matter standard in LAC 33:V.3011 is required; and

x. any other information will be required that the administrative authority specifies as necessary to ensure that the trial burn will reveal whether the facility complies with the performance standards required by LAC 33:V.3009-3015.

i. The applicant must submit to the Office of Environmental Services a certification that the trial burn has been conducted in accordance with the approved trial burn plan and must submit the results of all the analyses and determinations required in Subparagraph B.2.h of this Section. This submission shall be made within 90 days of completion of the trial burn, or later if approved by the administrative authority.

j. All data collected during any trial burn must be submitted to the administrative authority after completion of the trial burn.

k. All submissions required by this Paragraph must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under LAC 33:V.507 and 509.

l. Based on the results of the trial burn, the administrative authority shall specify the operating requirements in the final permit according to LAC 33:V.3005.E. The permit modification shall proceed as a minor modification according to LAC 33:V.323.

3. Post-Trial Burn Period. For a minimum period immediately after the trial burn sufficient for the applicant to analyze samples, compute data, and submit the trial burn results, and for the administrative authority to review the trial burn results and modify the facility permit to reflect those results, the administrative authority will specify the operating requirements most likely to ensure compliance with the performance standards of LAC 33:V.3009-3015 based on engineering judgment. The administrative authority shall extend and modify the trial burn permit to develop the post-trial burn permit. The permit modification shall proceed as a minor modification according to LAC 33:V.323.

a. Applicants must submit a statement with Part II of this permit application that identifies the conditions necessary for operation in compliance with the performance standards of LAC 33:V.3009-3015 during this period. This statement should include, at a minimum, restrictions on the operating parameters identified in LAC 33:V.3005.E.

b. The administrative authority will review this statement and any other relevant information submitted with Part I of the permit application and specify requirements for this period sufficient to meet the performance standards of LAC 33:V.3009-3015 based on engineering judgment.

4. Final Permit. For the final period of operation, the administrative authority will develop operating requirements in conformance with LAC 33:V.3005.E that reflect conditions in the trial burn plan and are likely to ensure compliance with the performance standards of LAC 33:V.3009-3015. Based on the trial burn results, the administrative authority will modify the permit as necessary to ensure compliance with the performance standards of LAC 33:V.3009-3015. The permit modification shall proceed according to LAC 33:V.321.

C. Interim Status Boilers and Industrial Furnaces

1. For the purpose of determining feasibility of compliance with the performance standards of LAC 33:V.3009-3015 of this Chapter and of determining adequate operating conditions under LAC 33:V.3007, applicants owning or operating existing boilers or industrial furnaces operated under the interim status standards of LAC 33:V.3007 must either prepare and submit a trial burn plan and perform a trial burn in accordance with the requirements of this Section or submit other information as specified in LAC 33:V.535.A.6. The administrative authority must announce his or her intention to approve of the trial burn plan in accordance with the timing and distribution requirements of Subparagraph B.2.g of this Section. The contents of the notice must include:

a. the name and telephone number of a contact person at the facility;

b. the name and telephone number of a contact office at the permitting agency;

c. the location where the trial burn plan and any supporting documents can be reviewed and copied; and

d. a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for agency approval of the plan and the time periods during which the trial burn would be conducted.

2. Applicants who submit a trial burn plan and receive approval before submission of Part II of the permit application must complete the trial burn and submit the results specified in LAC 33:V.537.B.2.h with Part II of the permit application. If completion of this process conflicts with the date set for submission of Part II, the applicant must contact the administrative authority to establish a later date for submission of Part II or the trial burn results. If the applicant submits a trial burn plan with Part II of the permit application, the trial burn must be conducted and the results submitted within a time period prior to permit issuance to be specified by the administrative authority.

D. When an owner or operator of a cement or lightweight aggregate kiln, solid fuel or liquid fuel boiler, or hydrochloric acid production furnace becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing cement or lightweight aggregate kiln, solid fuel or liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122 (i.e., by conducting a comprehensive performance test and submitting a notification of compliance in accordance with 40 CFR 63.1207(j) and 63.1210(d), documenting compliance with all applicable requirements of 40 CFR Part 63, Subpart EEE), the requirements of this Section do not apply. However, the requirements of this Section do apply if:

1. the administrative authority determines that certain provisions of this Section are necessary to ensure compliance with LAC 33:V.3005.E.1 and 2.c if the owner or operator elects to comply with LAC 33:V.2001.A.1.a to minimize emissions of toxic compounds from startup, shutdown, and malfunction events;

2. the facility is an *area source* as defined in LAC 33:III.5103 and the owner or operator elects to comply with the standards and associated requirements in LAC 33:V.3011, 3013, and 3015 for particulate matter, non-mercury metals, and hydrogen chloride and chlorine gas; or

3. the administrative authority determines that certain provisions of this Section apply, on a case-by-case basis, for purposes of information collection in accordance with LAC 33:V.303.Q-R and 311.E-F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:737 (September 1989), amended LR 18:1375 (December 1992), LR 21:266 (March 1995), LR 22:818, 832 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:657 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2468 (November 2000), LR 27:292 (March 2001), LR 29:320 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2455 (October 2005), LR 33:2101 (October 2007), LR 34:622 (April 2008), LR 34:1012 (June 2008).

### §540. Remedial Action Plans (RAPs)

A. Remedial action plans (RAPs) are special forms of permits that are regulated under LAC 33:V.Chapter 5.Subchapter G.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:271 (February 2000).

## Subchapter G. Remedial Action Plans (RAPs) - General Information

### §545. Why is this Subchapter written in a special format?

A. This Subchapter is written in a special format to make it easier to understand the regulatory requirements. Like other department regulations, this establishes enforceable legal requirements. For this Subchapter, I and you refer to the owner/operator.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:271 (February 2000).

### §550. What is a RAP?

A. A RAP is a special form of a RCRA permit that you, as an owner or operator, may obtain, instead of a permit issued under LAC 33:V.303-329 and 501-537, to authorize you to *treat*, *store*, or *dispose* of hazardous remediation waste (as defined in LAC 33:V.109) at a remediation waste management site. A RAP may only be issued for the area of contamination where the remediation wastes to be managed under the RAP originated, or areas in close proximity to the contaminated area, except as allowed in limited circumstances under LAC 33:V.699.

B. The requirements in LAC 33:V.303-329 and 501-537 do not apply to RAPs unless those requirements for traditional RCRA permits are specifically required under this Subchapter. The definitions in LAC 33:V.109 apply to RAPs.

C. Notwithstanding any other provision of LAC 33:V.Subpart 1, any document that meets the requirements in this Section constitutes a RCRA permit under RCRA Section 3005(c).

D. A RAP may be:

1. a stand-alone document that includes only the information and conditions required by this Subchapter; or

2. part (or parts) of another document that includes information and/or conditions for other activities at the remediation waste management site, in addition to the information and conditions required by this Subchapter.

E. If you are treating, storing, or disposing of hazardous remediation wastes as part of a cleanup compelled by federal

or state cleanup authorities, your RAP does not affect your obligations under those authorities in any way.

F. If you receive a RAP at a facility operating under interim status, the RAP does not terminate your interim status.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:271 (February 2000).

**§555. When do I need a RAP?**

A. Whenever you treat, store, or dispose of hazardous remediation wastes in a manner that requires a RCRA permit under LAC 33:V.Chapter 3, you must either obtain:

1. a RCRA permit according to LAC 33:V.303-329 and 501-537; or

2. a RAP according to this Subchapter.

B. Treatment units that use combustion of hazardous remediation wastes at a remediation waste management site are not eligible for RAPs under this Subchapter.

C. You may obtain a RAP for managing hazardous remediation waste at an already permitted RCRA facility. You must have these RAPs approved as a modification to your existing permit according to the requirements of LAC 33:V.321-323 instead of the requirements in this Subchapter. When you submit an application for such a modification, however, the information requirements in LAC 33:V.321.C.1.a.i, 2.a.iv, and 3.a.iv do not apply; instead, you must submit the information required under LAC 33:V.580. When your permit is modified the RAP becomes part of the RCRA permit. Therefore, when your permit (including the RAP portion) is modified, revoked and reissued, terminated, or when it expires, it will be modified according to the applicable requirements in LAC 33:V.321-323, revoked and reissued according to the applicable requirements in LAC 33:V.323, terminated according to the applicable requirements in LAC 33:V.323, and expire according to the applicable requirements in LAC 33:V.315.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:271 (February 2000).

**§560. Does my RAP grant me any rights or relieve me of any obligations?**

A. The provisions of LAC 33:V.307 apply to RAPs.

[NOTE: The provisions of LAC 33:V.307.A provide you assurance that, as long as you comply with your RAP, the department will consider you in compliance with Subtitle C of RCRA and will not take enforcement actions against you. However, you should be aware of four exceptions to this provision that are listed in LAC 33:V.307.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:272 (February 2000).

**§565. How do I apply for a RAP?**

A. To apply for a RAP, you must complete an application, sign it, and submit it to the Office of Environmental Services according to the requirements in this Subchapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:272 (February 2000), amended LR 26:2468 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2455 (October 2005), LR 33:2101 (October 2007).

**§570. Who must obtain a RAP?**

A. When a facility or remediation waste management site is owned by one person, but the treatment, storage, or disposal activities are operated by another person, it is the operator's duty to obtain a RAP, except that the owner must also sign the RAP application.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:272 (February 2000).

**§575. Who must sign the application and any required reports for a RAP?**

A. Both the owner and the operator must sign the RAP application and any required reports according to LAC 33:V.507, 509, and 511. In the application, both the owner and the operator must also make the certification required in LAC 33:V.513.A. However, the owner may choose the alternative certification under LAC 33:V.513.B if the operator certifies under LAC 33:V.513.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:272 (February 2000).

**§580. What must I include in my application for a RAP?**

A. You must include the following information in your application for a RAP:

1. the name, address, and EPA identification number of the remediation waste management site;

2. the name, address, and telephone number of the owner and operator;

3. the latitude and longitude of the site;

4. the United States Geological Survey (USGS) or county map showing the location of the remediation waste management site;

5. a scaled drawing of the remediation waste management site showing:

a. the remediation waste management site boundaries;

b. any significant physical structures; and

c. the boundary of all areas on-site where remediation waste is to be treated, stored, or disposed;

6. a specification of the hazardous remediation waste to be treated, stored, or disposed of at the facility or remediation waste management site. This must include information on:

a. constituent concentrations and other properties of the hazardous remediation wastes that may affect how such materials should be treated and/or otherwise managed;

b. an estimate of the quantity of these wastes; and

c. a description of the processes you will use to treat, store, or dispose of this waste including technologies, handling systems, design, and operating parameters you will use to treat hazardous remediation wastes before disposing of them according to the LDR standards of LAC 33:V.Chapter 22, as applicable;

7. enough information to demonstrate that operations that follow the provisions in your RAP application will ensure compliance with applicable requirements of LAC 33:V.Chapters 15-37, 41, and 43;

8. such information as may be necessary to enable the administrative authority to carry out his duties under other state laws as is required for traditional RCRA permits under LAC 33:V.517.U; and

9. any other information the administrative authority decides is necessary for demonstrating compliance with this Subsection or for determining any additional RAP conditions that are necessary to protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:272 (February 2000).

### §585. What if I want to keep this information confidential?

A. Provisions for confidential information may be found in LAC 33:I.Chapter 5.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:272 (February 2000).

### §590. To whom must I submit my RAP application?

A. You must submit your application for a RAP to the Office of Environmental Services for approval.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:273 (February 2000), amended LR 26:2468 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2455 (October 2005), LR 33:2101 (October 2007).

### §595. If I submit my RAP application as part of another document, what must I do?

A. If you submit your application for a RAP as a part of another document, you must clearly identify the components of that document that constitute your RAP application.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:273 (February 2000).

### §600. What is the process for approving or denying my application for a RAP?

A. If the administrative authority tentatively finds that your RAP application includes all of the information required by LAC 33:V.580 and that your proposed remediation waste management activities meet the regulatory standards, the administrative authority may make a tentative decision to approve your RAP application. The administrative authority will then prepare a draft RAP and provide an opportunity for public comment before making a final decision on your RAP application, according to this Subchapter.

B. If the administrative authority tentatively finds that your RAP application does not include all of the information required by LAC 33:V.580 or that your proposed remediation waste management activities do not meet the regulatory standards, the administrative authority may request additional information from you or ask you to correct deficiencies in your application. If you fail or refuse to provide any additional information the administrative authority requests, or to correct any deficiencies in your RAP application, the administrative authority may make a tentative decision to deny your RAP application. After making this tentative decision, the administrative authority will prepare a notice of intent to deny your RAP application (notice of intent to deny) and provide an opportunity for public comment before making a final decision on your RAP application, according to the requirements in this Subchapter. The administrative authority may deny the RAP application either in its entirety or in part.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:273 (February 2000).

### §605. What must the administrative authority include in a draft RAP?

A. If the administrative authority prepares a draft RAP, it must include:

1. the information required under LAC 33:V.580.A.1-9;

2. the following terms and conditions:

a. terms and conditions necessary to ensure that the operating requirements specified in your RAP comply with applicable requirements of LAC 33:V.Chapters 15-37, 41, and 43 (including any recordkeeping and reporting requirements). In satisfying this provision, the administrative authority may incorporate, expressly or by reference, applicable requirements of LAC 33:V.Chapters 15-37, 41, and 43 into the RAP or establish site-specific conditions as required or allowed by LAC 33:V.Chapters 15-37, 41, and 43;

b. terms and conditions in LAC 33:V.309;

c. terms and conditions for modifying, revoking and reissuing, and terminating your RAP, as provided in LAC 33:V.640; and

d. any additional terms or conditions that the administrative authority determines are necessary to protect human health and the environment, including any terms and conditions necessary to respond to spills and leaks during use of any units permitted under the RAP; and

3. if the draft RAP is part of another document, as described in LAC 33:V.550, the administrative authority must clearly identify the components of that document that constitute the draft RAP.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:273 (February 2000).

## §610. What else must the administrative authority prepare in addition to the draft RAP or Notice of Intent to Deny?

A. Once the administrative authority has prepared the draft RAP or notice of intent to deny, he must then:

1. prepare a statement of basis that briefly describes the derivation of the conditions of the draft RAP and the reasons for them, or the rationale for the notice of intent to deny;

2. compile an administrative record, including:

a. the RAP application and any supporting data furnished by the applicant;

b. the draft RAP or notice of intent to deny;

c. the statement of basis and all documents cited therein (material readily available at the department or published material that is generally available need not be physically included with the rest of the record, as long as it is specifically referred to in the statement of basis); and

d. any other documents that support the decision to approve or deny the RAP; and

3. make information contained in the administrative record available for review by the public upon request.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:273 (February 2000).

## §615. What are the procedures for public comment on the draft RAP or Notice of Intent to Deny?

A. The administrative authority must:

1. send notice to you of his intention to approve or deny your RAP application, and send you a copy of the statement of basis;

2. publish a notice of his intention to approve or deny your RAP application in a major local newspaper of general circulation;

3. broadcast his intention to approve or deny your RAP application over a local radio station; and

4. send a notice of his intention to approve or deny your RAP application to each unit of local government having jurisdiction over the area in which your site is located and to each state agency having any authority under state law with respect to any construction or operations at the site.

B. The notice required by Subsection A of this Section must provide an opportunity for the public to submit written comments on the draft RAP or notice of intent to deny within at least 45 days.

C. The notice required by Subsection A of this Section must include:

1. the name and address of the office processing the RAP application;

2. the name and address of the RAP applicant, and if different, the remediation waste management site or activity the RAP will regulate;

3. a brief description of the activity the RAP will regulate;

4. the name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft RAP or notice of intent to deny, statement of basis, and the RAP application;

5. a brief description of the comment procedures in this Section, and any other procedures by which the public may participate in the RAP decision;

6. if a hearing is scheduled, the date, time, location, and purpose of the hearing;

7. if a hearing is not scheduled, a statement of procedures to request a hearing;

8. the location of the administrative record, and times when it will be open for public inspection; and

9. any additional information the administrative authority considers necessary or proper.

D. If, within the comment period, the administrative authority receives written notice of opposition to his

intention to approve or deny your RAP application and a request for a hearing, the administrative authority must hold an informal public hearing to discuss issues relating to the approval or denial of your RAP application. The administrative authority may also determine on his own initiative that an informal hearing is appropriate. The hearing must include an opportunity for any person to present written or oral comments. Whenever possible, the administrative authority must schedule this hearing at a location convenient to the nearest population center to the remediation waste management site and give notice according to the requirements in Subsection A of this Section. This notice must, at a minimum, include the information required by Subsection C of this Section and:

1. reference to the date of any previous public notices relating to the RAP application;

2. the date, time, and location of the hearing; and

3. a brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:273 (February 2000).

### §620. How will the administrative authority make a final decision on my RAP application?

A. The administrative authority must consider and respond to any significant comments raised during the public comment period, or during any hearing on the draft RAP or notice of intent to deny, and revise your draft RAP based on those comments, as appropriate.

B. If the administrative authority determines that your RAP includes the information and terms and conditions required in LAC 33:V.605, then he may issue a final decision approving your RAP and, in writing, notify you and all commenters on your draft RAP that your RAP application has been approved.

C. If the administrative authority determines that your RAP does not include the information required in LAC 33:V.605, then he will issue a final decision denying your RAP and, in writing, notify you and all commenters on your draft RAP that your RAP application has been denied.

D. If the administrative authority's final decision is that the tentative decision to deny the RAP application was incorrect, he will withdraw the notice of intent to deny and proceed to prepare a draft RAP, according to the requirements in this Subchapter.

E. When the administrative authority issues his final RAP decision, he must refer to the procedures for appealing the decision under R.S. 30:2024.

F. Before issuing the final RAP decision, the administrative authority must compile an administrative record. Material readily available at the department or published materials which are generally available and which are included in the administrative record need not be physically included with the rest of the record as long as it is specifically referred to in the statement of basis or the response to comments. The administrative record for the final RAP must include information in the administrative record for the draft RAP (see LAC 33:V.610.B) and:

1. all comments received during the public comment period;

2. tapes or transcripts of any hearings;

3. any written materials submitted at these hearings;

4. the responses to comments;

5. any new material placed in the record since the draft RAP was issued;

6. any other documents supporting the RAP; and

7. a copy of the final RAP.

G. The administrative authority must make information contained in the administrative record available for review by the public upon request.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:274 (February 2000).

### §625. May the decision to approve or deny my RAP application be administratively appealed?

A. You may request an administrative hearing on a decision by the administrative authority to grant or deny your RAP application, under R.S. 30:2024. If the secretary does not grant your hearing request within 30 days of filing, you are entitled to file an application for *de novo* review of the secretary's action in the Nineteenth Judicial District Court.

B. An aggrieved person [as defined in R.S. 30:2004 (17)] may appeal a final decision on your RAP to the Nineteenth Judicial District Court, under R.S. 30:2050.21. Such an appeal would not suspend the effectiveness of the RAP, if one is issued. However, the secretary may grant, or the court may order, a stay of the RAP decision.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:1441 (July 2000).

### §630. When does my RAP become effective?

A. Your RAP becomes effective 30 days after the administrative authority notifies you and all commenters that your RAP is approved unless:

1. the administrative authority specifies a later effective date in the decision;

2. review is requested under R.S. 30:2024; or

3. no commenters requested a change in the draft RAP, in which case the RAP becomes effective immediately when it is issued.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:1441 (July 2000).

**§635. When may I begin physical construction of new units permitted under the RAP?**

A. You must not begin physical construction of new units permitted under the RAP for treating, storing, or disposing of hazardous remediation waste before receiving a RAP which is effective under the terms of LAC 33:V.630.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:1441 (July 2000).

**§640. After my RAP is issued, how may it be modified, revoked and reissued, or terminated?**

A. In your RAP, the administrative authority must specify, either directly or by reference, procedures for future modifications, revocations and reissuance, or terminations of your RAP. These procedures must provide adequate opportunities for public review and comment on any modification, revocation and reissuance, or termination that would significantly change your management of your remediation waste, or that otherwise merits public review and comment. If your RAP has been incorporated into a traditional RCRA permit, as allowed under LAC 33:V.555.C, then the RAP will be modified according to the applicable requirements in LAC 33:V.321-323.B.2, revoked and reissued according to the applicable requirements in LAC 33:V.321 and 323.B.3, or terminated according to the applicable requirements of LAC 33:V.323.B.3.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:274 (February 2000).

**§645. For what reasons may the administrative authority choose to modify my final RAP?**

A. The administrative authority may modify your final RAP on his own initiative only if one or more of the following reasons listed in this Section exist(s). If one or more of these reasons do not exist, then the administrative authority will not modify your final RAP, except at your request. Reasons for modification are:

1. you made material and substantial alterations or additions to the activity that justify applying different conditions;

2. the administrative authority finds new information that was not available at the time of RAP issuance and would have justified applying different RAP conditions at the time of issuance;

3. the standards or regulations on which the RAP was based have changed because of new or amended statutes, standards, or regulations, or by judicial decision after the RAP was issued;

4. if your RAP includes any schedules of compliance, the administrative authority may find reasons to modify your compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which you as the owner/operator have little or no control and for which there is no reasonably available remedy;

5. you are not in compliance with conditions of your RAP;

6. you failed in the application or during the RAP issuance process to disclose fully all relevant facts, or you misrepresented any relevant facts at the time;

7. the administrative authority has determined that the activity authorized by your RAP endangers human health or the environment and can only be remedied by modifying; or

8. you have notified the administrative authority (as required in the RAP under LAC 33:V.321.B) of a proposed transfer of a RAP.

B. Notwithstanding any other provision in this Section, when the administrative authority reviews a RAP for a land disposal facility under LAC 33:V.665, he may modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in LAC 33:V.Subpart 1.

C. The administrative authority will not reevaluate the suitability of the facility location at the time of RAP modification unless new information or standards indicate that a threat to human health or the environment exists that was unknown when the RAP was issued.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:275 (February 2000).

**§650. For what reasons may the administrative authority choose to revoke and reissue my final RAP?**

A. The administrative authority may revoke and reissue your final RAP on his own initiative only if one or more reasons for revocation and reissuance exist(s). If one or more reasons do not exist, then the administrative authority will not modify or revoke and reissue your final RAP, except at your request. Reasons for modification or revocation and reissuance are the same as the reasons listed for RAP modifications in LAC 33:V.645.A.5-8 if the administrative authority determines that revocation and reissuance of your RAP is appropriate.

B. The administrative authority will not reevaluate the suitability of the facility location at the time of RAP revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists that was unknown when the RAP was issued.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:275 (February 2000).

**§655. For what reasons may the administrative authority choose to terminate my final RAP, or deny my renewal application?**

A. The administrative authority may terminate your final RAP on his own initiative, or deny your renewal application, for the same reasons as those listed for RAP modifications in LAC 33:V.645.A.5-7 if the administrative authority determines that termination of your RAP or denial of your RAP renewal application is appropriate.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:275 (February 2000).

**§660. May the decision to approve or deny a modification, revocation and reissuance, or termination of my RAP be administratively appealed?**

A. You may request an administrative hearing on a decision by the administrative authority to grant or deny a modification, revocation and reissuance, or termination of your RAP under R.S. 30:2024. If the secretary does not grant your hearing request within 30 days of filing, you are entitled to file an application for *de novo* review of the secretary's action in the Nineteenth Judicial District Court.

B. An aggrieved person [as defined in R.S. 30:2004 (17)] may appeal a final decision on your RAP to the Nineteenth Judicial District Court, under R.S. 30:2050.21. Such an appeal would not suspend the effectiveness of the RAP, if one is issued. However, the secretary may grant, or the court may order, a stay of the RAP decision.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:1441 (July 2000).

**§665. When will my RAP expire?**

A. RAPs must be issued for a fixed term, not to exceed 10 years, although they may be renewed upon approval by the administrative authority in fixed increments of no more than 10 years. In addition, the administrative authority must review any RAP for hazardous waste land disposal five years after the date of issuance or reissuance, and you or the administrative authority must follow the requirements for modifying your RAP as necessary to assure that you continue to comply with currently applicable requirements in RCRA Sections 3004 and 3005.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:275 (February 2000).

**§670. How may I renew my RAP if it is expiring?**

A. If you wish to renew your expiring RAP, you must follow the process for application for and issuance of RAPs in this Subchapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:276 (February 2000).

**§675. What happens if I have applied correctly for a RAP renewal but have not received approval by the time my old RAP expires?**

A. If you have submitted a timely and complete application for a RAP renewal, but the administrative authority, through no fault of yours, has not issued a new RAP with an effective date on or before the expiration date of your previous RAP, your previous RAP conditions continue in force until the effective date of your new RAP or RAP denial.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:276 (February 2000).

**§680. What records must I maintain concerning my RAP?**

A. You are required to keep records of:

1. all data used to complete RAP applications and any supplemental information that you submit for a period of at least three years from the date the application is signed; and

2. any operating and/or other records the administrative authority requires you to maintain as a condition of your RAP.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:276 (February 2000).

**§685. How are time periods in the requirements in this Subchapter and my RAP computed?**

A. Any time period scheduled to begin on the occurrence of an act or event must begin on the day after the act or event. (For example, if your RAP specifies that you must close a staging pile within 180 days after the operating term for that staging pile expires, and the operating term expires on June 1, then June 2 counts as day one of your 180 days, and you would have to complete closure by November 28.)

B. Any time period scheduled to begin before the occurrence of an act or event must be computed so that the period ends on the day before the act or event. (For example, if you are transferring ownership or operational control of your site, and wish to transfer your RAP, the new owner or operator must submit a revised RAP application no later than 90 days before the scheduled change. Therefore, if you plan to change ownership on January 1, the new owner/operator

must submit the revised RAP application no later than October 3, so that the 90th day would be December 31.)

C. If the final day of any time period falls on a weekend or legal holiday, the time period must be extended to the next working day. (For example, if you wish to request an administrative hearing on the administrative authority's decision to modify your RAP, then you must file your request with the secretary within 30 days after notice of the decision is served upon you. If the thirtieth day falls on Sunday, then you may submit your appeal by the Monday after. If the thirtieth day falls on July 4, then you may submit your appeal by July 5.)

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:276 (February 2000).

### §690. How may I transfer my RAP to a new owner or operator?

A. If you wish to transfer your RAP to a new owner or operator, you must follow the requirements specified in your RAP for RAP modification to identify the new owner or operator, and incorporate any other necessary requirements. These modifications do not constitute significant modifications for purposes of LAC 33:V.640. The new owner/operator must submit a revised RAP application no later than 90 days before the scheduled change along with a written agreement containing a specific date for transfer of RAP responsibility between you and the new permittees.

B. When a transfer of ownership or operational control occurs, you as the old owner or operator must comply with the applicable requirements in LAC 33:V.Chapter 37 (financial requirements), until the new owner or operator has demonstrated that he is complying with the requirements in that chapter. The new owner or operator must demonstrate compliance with LAC 33:V.Chapter 37 within six months of the date of the change in ownership or operational control of the facility or remediation waste management site. When the new owner/operator demonstrates compliance with LAC 33:V.Chapter 37 to the administrative authority, the administrative authority will notify you that you no longer need to comply with LAC 33:V.Chapter 37, as of the date of demonstration.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:276 (February 2000).

### §695. What must the state or EPA region report about noncompliance with RAPs?

A. The department or EPA region must report noncompliance with RAPs according to the provisions of 40 CFR 270.5.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:276 (February 2000).

### §699. May I perform remediation waste management activities under a RAP at a location removed from the area where the remediation wastes originated?

A. You may request a RAP for remediation waste management activities at a location removed from the area where the remediation wastes originated if you believe such a location would be more protective than the contaminated area or areas in close proximity.

B. If the administrative authority determines that an alternative location, removed from the area where the remediation waste originated, is more protective than managing remediation waste at the area of contamination or areas in close proximity, then the administrative authority may approve a RAP for this alternative location.

C. You must request the RAP, and the administrative authority will approve or deny the RAP, according to the procedures and requirements in this Subchapter.

D. A RAP for an alternative location must also meet the following requirements, which the administrative authority must include in the RAP for such locations:

1. the RAP for the alternative location must be issued to the person responsible for the cleanup from which the remediation wastes originated;

2. the RAP is subject to the expanded public participation requirements in LAC 33:V.708;

3. the RAP is subject to the public notice requirements in LAC 33:V.717; and

4. the site permitted in the RAP may not be located within 61 meters or 200 feet of a fault which has had displacement in the Holocene time (you must demonstrate compliance with this standard through the requirements in LAC 33:V.517.T). (See definitions of terms in LAC 33:V.109.)

[Note to Paragraph D.4 of this Section: Sites located in a political jurisdiction other than those listed in Appendix VI of 40 CFR 264 are assumed to be in compliance with this requirement.]

E. These alternative locations are remediation waste management sites and retain the following benefits of remediation waste management sites:

1. exclusion from facility-wide corrective action under LAC 33:V.3322; and

2. application of LAC 33:V.1501.H in lieu of LAC 33:V.Chapter 15.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:276 (February 2000).

# Chapter 7. Administrative Procedures for Treatment, Storage, and Disposal Facility Permits

## Subchapter A. Permits

### §701. Emergency Permits

A. Notwithstanding any other provision, in the event the administrative authority finds an imminent and substantial endangerment to human health or the environment, he may issue a temporary emergency permit (1) to a nonpermitted facility to allow treatment, storage, or disposal of hazardous waste or (2) to a permitted facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective permit. This emergency permit:

1. may be oral or written; if oral, it shall be followed in five days by a written emergency permit;

2. shall not exceed 90 days in duration;

3. shall clearly specify the hazardous wastes to be received, and the manner and location of their treatment, storage, or disposal;

4. may be terminated by the administrative authority at any time without process if he determines that termination is appropriate to protect human health and the environment;

5. shall be accompanied by a public notice published under LAC 33:V.715 including:

a. name and address of the office granting the emergency authorization;

b. name and location of the permitted TSD facility;

c. a brief description of the wastes involved;

d. a brief description of the action authorized and reasons for authorizing it; and

e. duration of the emergency permit;

6. shall incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable and appropriate requirements of LAC 33:V.Subpart 1.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:658 (April 1998).

### §703. Permit Evaluation

A. Application Distribution. Upon acceptance of an application for review, the administrative authority will distribute copies of the application (Part I) for review and comment to: the public (filed with local libraries or other public facility), notification of which is to be published in a bulletin (see LAC 33:V.717), and as an ad in a local newspaper; Department of Health and Hospitals, Office of Health Services and Environmental Quality; Department of Wildlife and Fisheries; Office of Public Works of the Department of Transportation and Development; or the successors to any of the above; and to local governing authorities of any municipality and parish within whose territorial jurisdiction the facility or activity is located.

B. Review Considerations

1. In conducting its review of the application, the administrative authority will consider the purpose and use of facilities, operations and monitoring plan, capacity, closure, site suitability, financial responsibility, legal considerations, special considerations deemed necessary by the administrative authority on a site specific basis, and local zoning ordinances.

2. Comment from the public and involved local, parish, state, and federal agencies will be reviewed. The administrative authority may consider that the agencies that do not comment within 45 days from the date the ad is published in the newspaper have no objection to the proposed operation.

3. The administrative authority will assist the operator in the modification of the permit application or facility design or operation by:

a. conducting staff discussions with operator, designing engineer, and other principals to discuss reasons for denial;

b. referencing to "state-of-the-art" procedures and methods which, if incorporated in the operation design, would allow permit reapplication; and

c. conducting staff evaluations of objectionable features of application.

4. Initial compliance inspections shall be made as follows:

a. for existing facilities as a part of permit application evaluation; or

b. for new facilities ready to begin operation, after a "Request to Perform Initial Inspection" is submitted by the operator to the administrative authority. This inspection determines that new construction was built in conformity with conditions of the permit by a certification from the operator and supervising engineer, and actual department inspection and evaluation.

5. Order to proceed, or to continue with operation shall be given as follows:

a. the administrative authority will issue to existing facilities a notice to continue operations, issue an interim permit for a specified length of time to continue, and cite measures which must be taken to satisfy the terms of the permit. Specific target dates will be listed in the permit and a report of compliance will be submitted as required to the administrative authority but in no case less than quarterly; or

b. to new facilities the administrative authority will issue a notice permitting operation under a standard permit

or issue a list of modifications required, before an order to begin operation will be issued.

6. Mandatory Provisions. Operation of existing facilities during department action on the permit application is permitted, in accordance with provisions of the Act, except that when the continued operation of an existing facility is determined by the department to be causing or about to cause irreparable damage to the environment, or a serious threat to life or safety based on recognized criteria or standards, or both, the administrative authority shall institute immediate enforcement actions pursuant to LAC 33:V.107 of these regulations and the Act. During the time period effective as of November 19 1980, and to extend no longer than the date of issuance of an interim or standard permit, existing treatment, storage and disposal facilities are required to meet interim status standards, in addition to the requirements of prior permits issued before August 1, 1979. Failure to comply with applicable provisions of the interim status standards as set forth in LAC 33:V.Chapter 43 shall be a violation of these regulations.

7. If an applicant fails or refuses to correct deficiencies in the application, the permit may be denied and appropriate enforcement actions may be taken under the applicable statutory provisions.

8. The effective date of an application is the date on which the administrative authority notifies the applicant that the application is complete as provided in LAC 33:V.303.M.

9. For each application from a major TSD facility, the administrative authority shall, no later than the effective date of the application, prepare and mail a project decision schedule to the applicant. The schedule shall specify target dates by which the administrative authority intends to:

a. prepare a draft permit;

b. give public notice;

c. complete the public comment period, including any public hearing; and

d. issue a final permit.

C. Draft Permits

1. Once an application is complete, the administrative authority shall tentatively decide whether to prepare a draft permit or to deny the permit.

2. If the administrative authority tentatively decides to deny the permit, a notice of intent to deny shall be issued. A notice of intent to deny the permit is a type of draft permit which follows the same procedures as any draft permit prepared under LAC 33:V.703.C.4. If the administrative authority's final decision is that the tentative decision to deny the permit was incorrect, the notice of intent to deny shall be withdrawn and a draft permit under LAC 33:V.703.C.3 shall be prepared.

3. If the administrative authority decides to prepare a draft permit, he shall prepare a draft permit that contains the following information:

a. all conditions under LAC 33:V.309 and 311;

b. all compliance schedules under LAC 33:V.325;

c. all monitoring requirements under LAC 33:V.309.J; and

d. all standards for treatment, storage, and/or disposal facilities and surface facilities for injection wells.

4. All draft permits prepared under this Section shall be accompanied by a fact sheet (LAC 33:V.703.D), and shall be based on the administrative record, publicly noticed (LAC 33:V.715) and made available for public comment (LAC 33:V.707). The administrative authority shall give notice of opportunity for a public hearing (LAC 33:V.711), and respond to comments (LAC 33:V.707).

D. Fact Sheet

1. A fact sheet shall be prepared for every draft permit. The fact sheet shall briefly set forth principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The administrative authority shall send this fact sheet to the applicant and, on request, to any other person.

2. The fact sheet shall include, when applicable:

a. a brief description of the type of facility or activity which is the subject of the draft permit;

b. the type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged;

c. a brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record;

d. reasons why any requested variances or alternatives to required standards do or do not appear justified;

e. a description of the procedures for reaching a final decision on the draft permit including:

i. the beginning and ending dates of the comment period and the address where comments will be received;

ii. procedures for requesting a hearing and the nature of that hearing;

iii. any other procedures by which the public may participate in the final decision; and

f. name and telephone number of a person to contact for additional information.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:564 (June 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2468 (November 2000).

### §705. Issuance and Effective Date of Permit

A. After the close of the public comment period under LAC 33:V.707 on a draft permit, the administrative authority shall issue a final permit decision (or a decision to deny a permit for the active life of a hazardous waste management facility or TSD unit under LAC 33:V.706). The administrative authority shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision. For the purpose of this Section, a *final permit decision* means a final decision to issue, deny, modify or revoke and reissue, or terminate a permit.

B. A final permit decision (or a decision to deny a permit for the active life of a hazardous waste management facility or TSD unit under LAC 33:V.706) shall become effective 30 days after the service of notice of the decision under LAC 33:V.705.A, unless:

1. a later effective date is specified in the decision;

2. review is requested under R.S. 30:2024;

3. no comments requested a change in the draft permit, in which case the permit shall become effective immediately upon issuance.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 14:790 (November 1988), LR 15:181 (March 1989), LR 16:614 (July 1990).

### §706. Permit Denial

A. The administrative authority may, pursuant to the procedures in LAC 33:V.Chapter 7, deny the permit application either in its entirety or as to the active life of a hazardous waste management facility or TSD unit only.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:614 (July 1990), amended LR 21:944 (September 1995).

## Subchapter B. Hearings

### §707. Public Comments and Requests for Public Hearings

A. During the public comment period provided under LAC 33:V.715, any interested person may submit written comments on the draft permit or the permit application and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in LAC 33:V.707.B.

B. Response to Comments. At the time that any final permit decision is issued, the administrative authority shall issue a response to comments.

1. This response shall specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change, and briefly describe and respond to all significant comments on the draft permit or the permit application raised during the public comment period, or during any hearing.

2. The response to comments shall be available to the public.

C. Within 30 days after a final permit decision (or a decision under LAC 33:V.706 to deny a permit for the active life of a hazardous waste management facility or TSD unit) has been issued under LAC 33:V.705, any person who filed comments on that draft permit or participated in the public hearing may petition the administrative authority to review any condition of the permit decision.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:614 (July 1990).

### §708. Preapplication Public Meeting and Notice, Public Notice Requirements at the Application Stage, and Information Repository

A. Preapplication Public Meeting and Notice

1. Applicability. The requirements of this Section shall apply to all RCRA Part II applications seeking initial permits for hazardous waste management units over which the department has permit issuance authority. The requirements of this Section shall also apply to RCRA Part II applications seeking renewal of permits for such units where the renewal application is proposing a significant change in facility operations. For the purposes of this Section a *significant change* is any change that would qualify as a Class 3 Permit Modification under LAC 33:V.321.C. The requirements of this Section do not apply to permit modifications under LAC 33:V.321.C or to applications that are submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility.

2. Prior to the submission of a Part II RCRA permit application for a facility, the applicant must hold at least one meeting with the public in order to solicit questions from the community and inform the community of proposed hazardous waste management activities. The applicant shall post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

3. The applicant shall submit a summary of the meeting, along with the list of attendees and their addresses developed under Paragraph A.2 of this Section, and copies of any written comments or materials submitted at the meeting

to the permitting agency as a part of the Part II application, in accordance with LAC 33:V.517.

4. The applicant must provide public notice of the preapplication meeting at least 30 days prior to the meeting. The applicant must maintain, and provide to the permitting agency upon request, documentation of the notice.

a. The applicant shall provide public notice in all of the following forms:

i. a newspaper advertisement. The applicant shall publish a notice, fulfilling the requirements in Subparagraph A.4.b of this Section, in a newspaper of general circulation in the parish or equivalent jurisdiction that hosts the proposed location of the facility. In addition, the administrative authority shall instruct the applicant to publish the notice in newspapers of general circulation in adjacent parishes or equivalent jurisdictions where the administrative authority determines that such publication is necessary to inform the affected public. The notice must be published as a display advertisement;

ii. a visible and accessible sign. The applicant shall post a notice on a clearly marked sign at or near the facility, fulfilling the requirements in Subparagraph A.4.b of this Section. If the applicant places the sign on the facility property, then the sign must be large enough to be readable from the nearest point where the public would pass by the site;

iii. a broadcast media announcement. The applicant shall broadcast a notice, fulfilling the requirements in Subparagraph A.4.b of this Section, at least once, on at least one local radio station or television station. The applicant may employ another medium with prior approval of the administrative authority;

iv. a notice to the department. The applicant shall send a copy of the newspaper notice to the Office of Environmental Services and to the appropriate units of state and local government, in accordance with LAC 33:V.717.A.1.b.

b. The notices required under Subparagraph A.4.a of this Section must include:

i. the date, time, and location of the meeting;

ii. a brief description of the purpose of the meeting;

iii. a brief description of the facility and proposed operations, including the address or a map (e.g., a sketched or copied street map) of the facility location;

iv. a statement encouraging people to contact the facility at least 72 hours before the meeting if they need special access to participate in the meeting; and

v. the name, address, and telephone number of a contact person for the applicant.

B. Public Notice Requirements at the Application Stage

1. Applicability. The requirements of this Section shall apply to all RCRA Part II applications seeking initial permits for hazardous waste management units over which the department has permit issuance authority. The requirements of this Section shall also apply to RCRA Part II applications seeking renewal of permits for such units under LAC 33:V.315.A. The requirements of this Section do not apply to permit modifications under LAC 33:V.321.C or permit applications submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility.

2. Notification at Application Submittal

a. The administrative authority shall provide public notice, as set forth in LAC 33:V.717.A.1.e, and notice to appropriate units of state and local government, as set forth in LAC 33:V.717.A.1.b, that a Part II permit application has been submitted to the department and is available for review.

b. The notice shall be published within a reasonable period of time after the application is received by the administrative authority. The notice must include:

i. the name and telephone number of the applicant's contact person;

ii. the name and telephone number of the permitting agency's contact office and a mailing address to which information, opinions, and inquiries may be directed throughout the permit review process;

iii. an address to which people can write in order to be put on the facility mailing list;

iv. the location where copies of the permit application and any supporting documents can be viewed and copied;

v. a brief description of the facility and proposed operations, including the address or a map (e.g., a sketched or copied street map) of the facility location on the front page of the notice; and

vi. the date that the application was submitted.

3. Concurrent with the notice required under Paragraph B.2 of this Section, the administrative authority must place the permit application and any supporting documents in a location accessible to the public in the vicinity of the facility or at the permitting agency's office.

C. Information Repository

1. Applicability. The requirements of this Section apply to all applications seeking RCRA permits for hazardous waste management units over which the department has permit issuance authority.

2. The administrative authority may assess the need, on a case-by-case basis, for an information repository. When assessing the need for an information repository, the administrative authority shall consider a variety of factors including the level of public interest, the type of facility, the presence of an existing repository, and the proximity to the nearest copy of the administrative record. If the administrative authority determines, at any time after submittal of a permit application, that there is a need for a

repository, then the administrative authority shall notify the facility that it must establish and maintain an information repository. (See LAC 33:V.309.M for similar provisions relating to the information repository during the life of a permit.)

3. The information repository shall contain all documents, reports, data, and information deemed necessary by the administrative authority to fulfill the purposes for which the repository is established. The administrative authority shall have the discretion to limit the contents of the repository.

4. The information repository shall be located and maintained at a site chosen by the facility. If the administrative authority finds the site unsuitable for the purposes and persons for which it was established, due to problems with the location, hours of availability, access, or other relevant considerations, then the administrative authority shall specify a more appropriate site.

5. The administrative authority shall specify requirements for informing the public about the information repository. At a minimum, the administrative authority shall require the facility to provide a written notice about the information repository to all individuals on the facility mailing list.

6. The facility owner/operator shall be responsible for maintaining and updating the repository with appropriate information throughout a time period specified by the administrative authority. The administrative authority may close the repository at his or her discretion, based on the factors in Paragraph C.2 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:659 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2468 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2455 (October 2005), LR 33:2101 (October 2007).

## §709. Evidentiary Hearings on Operating Permit Applications for Commercial Hazardous Waste Treatment, Storage, Disposal, or Recycling Facilities

A. The purpose of an evidentiary hearing is to develop a record of facts, documents, testimony, and pleadings for submission to the administrative authority for consideration in making a permit decision.

B. Applicability

1. An evidentiary hearing shall be held after the technical review of an initial permit application for the operation of a proposed, nonexistent commercial hazardous waste treatment, storage, disposal, or recycling facility.

2. An evidentiary hearing may be held after the technical review of a permit application, other than an initial application for a proposed, nonexistent facility, for the operation of a commercial hazardous waste treatment, storage, disposal, or recycling facility upon a determination by the administrative authority that the hearing would be beneficial in making a permit decision. Considerations by the administrative authority in making this determination include, but are not limited to, fact-finding or clarification of issues.

3. Permit applications for which evidentiary hearings may be held pursuant to Paragraph B.2 of this Section include, but are not limited to:

a. initial permit applications for interim status facilities;

b. renewal permit applications for existing facilities; and

c. major modification (Class 2 or 3) applications for existing facilities (including requests for conversion of noncommercial status to commercial status).

C. The administrative authority shall give public notice of the hearing at least 30 days prior to the date scheduled for commencement of the hearing.

D. Public notice shall be given for all evidentiary hearings.

1. The administrative authority shall mail a copy of a notice to the following persons (any person otherwise entitled to receive notice under this Subsection may waive his or her rights to receive notice for any classes and categories of permits):

a. the applicant;

b. the parish governing authority;

c. those who request notice in writing and those who are on the area mailing list developed by the department.

2. The permit applicant shall publish a notice, provided by the administrative authority, in a daily or weekly major local newspaper of general circulation within the area affected by the facility or activity and in the official journal of the state.

3. The permit applicant shall provide for broadcasting the notice over a local radio station designated by the administrative authority.

4. The administrative authority shall require the applicant to provide and pay for the notifications in LAC 33:V.709.D.2 and 3 and submit proof thereof.

E. All public notices issued under LAC 33:V.709.D.1 and 2 shall contain the following minimum information:

1. name and address of the office processing the permit action for which notice is being given;

2. name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit;

3. a brief description of the business conducted at the facility or activity described in the permit application;

4. name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the permit application;

5. statement that intervention is required to participate at the hearing and a brief description of the procedures to qualify as an intervener;

6. date, time, and place of the hearing;

7. a brief description of the nature and purpose of the hearing; and

8. any additional information considered by the administrative authority to be necessary or proper.

F. Administrative procedures for adjudications contained in LAC 33:I.Chapter 3 shall apply to evidentiary hearings except as provided in LAC 33:V.709.G and H or where they are incompatible with the purpose of the evidentiary hearing as stated in LAC 33:V.709.A.

G. The presiding officer shall not make findings of fact, conclusions of law, or recommendations or render decisions on the merits of the permit application. The presiding officer's authority terminates once the record is complete and has been submitted to the administrative authority.

H. Administrative procedures for adjudications pertaining to intervention contained in LAC 33:I.323 shall apply to evidentiary hearings.

I. Upon completion of the evidentiary hearing, the administrative authority may require the applicant to submit additional relevant information to supplement the record.

J. No draft permit decision shall be issued until after the administrative authority has received and reviewed the record of the evidentiary hearing.

K. Unless otherwise directed by the secretary in writing, hearing officers hired pursuant to R.S. 30:2018 are hereby delegated authority to perform the functions of the presiding officer in evidentiary hearings.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:683 (August 1990), LR 17:362 (April 1991), LR 21:565 (June 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2469 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:69 (January 2008).

### §711. Public Hearings

A. Applicability

1. The administrative authority shall hold a public hearing whenever written notice of opposition to a draft permit and a request for a hearing are received within 45 days of the public hearing notice. Whenever practicable, the administrative authority shall schedule a hearing under this Section at a location convenient to the nearest population center to the proposed facility.

2. The administrative authority may also hold a public hearing at his or her discretion whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision.

3. Public notice of the hearing shall be given as specified in LAC 33:V.713.A.

B. For any public hearing, the administrative authority shall designate a presiding officer who shall be responsible for its scheduling and orderly conduct.

C. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and written submissions may be required. The public comment period under LAC 33:V.715 shall automatically be extended to the close of any public hearing under this Section. The hearing officer may also extend the comment period by so stating at the hearing.

D. A tape recording or written transcript of the hearing shall be made available to the public.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 17:478 (May 1991).

## Subchapter C. Public Notice of Permit Actions and Public Comment Period

### §713. Scope

A. The administrative authority shall give public notice that the following actions have occurred:

1. a permit application has been tentatively denied under LAC 33:V.703.C.2;

2. a draft permit has been prepared under LAC 33:V.703.C.3;

3. a hearing has been scheduled under LAC 33:V.711.A; or

4. an appeal has been granted under LAC 33:V.323.A.3.

B. No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under LAC 33:V.323. Written notice of that denial shall be given to the requester and to the permittee.

C. Public notices may describe more than one permit or permit action.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §715. Timing

A. Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under LAC 33:V.703.C.2 and 703.C.4 shall allow at least 45 days for public comment.

B. Public notice of a public hearing shall be given at least 45 days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §717. Methods

A. Public notice of activities described in LAC 33:V.713.A shall be given by the following methods:

1. by mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this Subsection may waive his or her rights to receive notice for any classes and categories of permits):

a. the applicant;

b. any unit of local government having jurisdiction over the area where the facility is proposed to be located, and each state agency having any authority under state law with respect to the construction or operation of such facility;

c. any other agency which the administrative authority knows has issued or is required to issue a permit for the same facility or activity;

d. federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, state historic preservation officers, and any affected states (Indian tribes) (For purposes of this Section, and in the context of the underground injection control program only, the term "state" includes Indian tribes treated as states.);

e. persons on a mailing list, including:

i. those who request in writing to be on the list;

ii. those solicited for "area lists" on the basis of their participation in past permit proceedings in that area; and

iii. those on the list as a result of notification to the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as regional and state funded newsletters, environmental bulletins, or state law journals. The administrative authority may update the mailing list from time to time by requesting written indication of continued interest from those listed and the administrative authority may delete from the list the name of any person who fails to respond to such a request;

2. for standard permits or major modifications, publication of a notice in a daily or weekly major local newspaper of general circulation within the area affected by the facility or activity and broadcast over local radio stations. The administrative authority may require the applicant to provide for and pay for the notifications and submit proof thereof;

3. any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 17:478 (May 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1442 (July 2000).

## §719. Contents

A. All public notices issued under this Part shall contain the following minimum information:

1. name and address of the office processing the permit action for which notice is being given;

2. name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit;

3. a brief description of the business conducted at the facility or activity described in the permit application or the draft permit;

4. name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit or draft general permit, as the case may be, statement of basis or fact sheet, and the application;

5. a brief description of the comment procedures required by LAC 33:V.707 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision; and

6. any additional information considered necessary or proper.

B. Public Notices for Hearings. In addition to the general public notice described in LAC 33:V.719, the public notice of a hearing under LAC 33:V.709 shall contain the following information:

1. reference to the date of previous public notices relating to the permit;

2. date, time, and place of the hearing; and

3. a brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 14:790 (November 1988).

### §721. Additional Information

A. In addition to any other notice requirements of this Chapter, a copy of the fact sheet, Part I of the permit application, and the draft decision shall be mailed to the applicant, the United States Environmental Protection Agency, the governing authority for the parish in which the facility or activity is located or proposed, and the library repository specifically designated to receive information concerning the facility.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:565 (June 1995).

(Editor's note: Chapter 9 is hereby repealed as of May 20, 2006. §901 moved to §1516.A; §905 moved to §1516.B; §907 moved to §1516.C; §909 moved to §1516.D; §911 requirements exist in Chapter 11; §921 requirements exist in Chapter 11; and §923 moved to §1107.E.)

# Chapter 11. Generators

## Subchapter A. General

### §1101. Applicability

A. A generator who treats, stores, or disposes of hazardous waste on-site is not required to comply with the requirements of this Chapter except for the following with respect to that waste: LAC 33:V.1101.C, 1103, 1105, 1109.E, 1111.A.3 and 4, 1111.D, and 1121.

B. Any person who exports or imports hazardous waste subject to the manifesting requirements of this Chapter, or subject to the universal waste management standards of LAC 33:V.Chapter 38, to or from the countries listed in LAC 33:V.1113.I.1.a for recovery must comply with Subchapter B of this Chapter.

C. Any person who imports hazardous waste from a foreign country into the state of Louisiana must comply with the standards applicable to generators established in this Chapter.

D. A farmer disposing of waste pesticides from his own use which are hazardous wastes is not required to comply with the standards in this Chapter or other standards in the LAC 33:V.Chapters 3, 5, 7, 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37, and 43 for those wastes, provided he triple rinses each emptied pesticide container in accordance with the provisions of LAC 33:V.109.*Empty Container*.3 and disposes of the pesticide residues in a manner consistent with the disposal instructions on the pesticide label.

E. A person who generates a *hazardous waste* as defined in LAC 33:V.109 and further specified in LAC 33:V.Chapter 49 is subject to the requirements of this Chapter and penalties prescribed in the Act for noncompliance.

F. An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility must comply with the generator standards established in this Chapter. The provisions of LAC 33:V.1109.E are applicable to the on-site accumulation of hazardous waste by generators. Therefore, the provisions of LAC 33:V.1109.E only apply to owners or operators who are shipping hazardous waste which they generated at that facility. A generator who treats, stores, or disposes of hazardous waste on-site must comply with the applicable standards and permit requirements set forth in LAC 33:V.Subpart 1.

G. A person who generates a *hazardous waste* as defined in LAC 33:V.109 and further specified in LAC 33:V.Chapter 49 is subject to the requirements of these chapters and shall register with the department in accordance with the applicable provisions of LAC 33:V.303.

H. Persons responding to an explosives or munitions emergency in accordance with LAC 33:V.1501.C.7.a.iv or d or 4307 and 305.C.12 or 13 are not required to comply with the standards of this Chapter.

I. LAC 33:V.108.C and D must be used to determine the applicability of provisions of this Chapter that are dependent on calculations of the quantity of hazardous waste generated per month.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:398 (May 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 22:20 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:660 (April 1998), LR 24:1106 (June 1998), LR 24:1693 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:709 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 32:822 (May 2006).

### §1103. Hazardous Waste Determination

A person who generates a *solid waste*, as defined in LAC 33:V.109, must determine if that waste is a hazard.

A. First, the generator must determine if the waste is exempted from regulation under LAC 33:V.105.D.

B. For the purposes of compliance with LAC 33:V.Chapter 22, or if the waste is not listed as a hazardous waste in LAC 33:V.4901, the generator must determine whether the waste is identified in LAC 33:V.4903 by either:

1. testing the waste according to the methods set forth in the *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference at LAC 33:V.110, or according to

an equivalent method approved by the administrative authority; or

2. applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

C. If the waste is determined to be hazardous, the generator must refer to other parts of LAC 33:V.Subpart 1 for possible exclusions or prohibitions pertaining to management of his or her specific wastes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 15:378 (May 1989), LR 17:658 (July 1991), LR 22:818 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1693 (September 1998).

## §1105. EPA Identification Numbers

A generator must not treat, store, dispose of, transport or offer for transportation hazardous waste without having received an active EPA identification number.

A. A generator who has not received an active EPA identification number must obtain one by applying to the administrative authority using the form provided within 14 days after first generating any hazardous waste.

B. A generator must notify the Office of Environmental Services within seven days if any of the information submitted in the application for the identification number changes. Because EPA identification numbers are site-specific, if a facility moves to another location, the owner/operator must obtain a new EPA identification number for the facility.

C. A generator must not offer his or her hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an active EPA identification number and the required permits (or interim status) necessary to receive and manage the generator's waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 17:362 (April 1991), LR 18:1256 (November 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2470 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2455 (October 2005), LR 33:2101 (October 2007).

## §1107. The Manifest System

A. General Requirements. The revised manifest form and procedures in 40 CFR Part 262 and the Appendix to Part 262 shall be effective as of September 5, 2006. As of September 5, 2006, Uniform Hazardous Waste Manifest forms must be obtained only from EPA-registered and approved sources as identified by the Manifest Registry. Contact the Office of Environmental Services, or access the U.S. Environmental Protection Agency's website to obtain information on EPA-registered and approved sources.

1. A generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal, or a treatment, storage, and disposal facility that offers for transport a rejected hazardous waste load, shall prepare a Manifest (OMB Control number 2050-0039) on EPA Form 8700-22 and, if necessary, EPA Form 8700-22A, according to the instructions included in the Appendix to 40 CFR Part 262.

2. A generator shall designate on the manifest one facility that is permitted to handle the waste described on the manifest. A generator may also designate on the manifest one alternate facility that is permitted to handle the waste in the event an emergency prevents delivery of the waste to the primary designated facility.

3. If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator shall either designate another facility or instruct the transporter to return the waste.

4. The requirements of this Section do not apply to hazardous waste produced by generators of greater than 100 kg, but less than 1000 kg, in a calendar month where:

a. the waste is reclaimed under a contractual agreement pursuant to which:

i. the type of waste and frequency of shipments are specified in the agreement;

ii. the vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste; and

b. the generator maintains a copy of the reclamation agreement in his files for a period of at least three years after termination or expiration of the agreement.

5. In naming a hazardous waste, a generator shall use the proper shipping name prescribed by the Louisiana Department of Public Safety and Corrections or its successor agency and provide specific identification pursuant to LAC 33:V.Chapter 49.

6. If the hazardous waste is to be transported out-of-state, the generator will be responsible for receiving the completed, signed manifest from the out-of-state hazardous waste facility.

7. Generators must get written confirmation of acceptability of the hazardous waste from the operator of the hazardous waste facility before shipping the hazardous waste. The confirmation must be maintained as part of the facility manifest records (see LAC 33:V.1111).

8. The requirements of this Chapter and LAC 33:V.1109.C do not apply to the transport of hazardous wastes on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way. Notwithstanding LAC 33:V.1301.A, the generator or transporter must comply with the requirements for transporters set forth in

LAC 33:V.1315 and 1317 in the event of a discharge of hazardous waste on a public or private right-of-way.

B. Required Information

1. The manifest must contain all of the following information before being issued:

a. the name, physical address, telephone number, and active EPA identification number of the generator;

b. the name, physical address, telephone number, and active EPA identification number of each transporter;

c. the name, physical address, telephone number, and active EPA identification number of the designated facility;

d. the description of the waste(s) (e.g., proper shipping name, EPA hazardous waste number, etc.) required by Hazardous Materials regulations of the Louisiana Department of Public Safety in LAC 33:V.Subpart 2.Chapter 101; and

e. the total quantity of each hazardous waste in tons, cubic yards, pounds, or gallons (liquids only), and the type, including but not limited to, metal drums, barrels, kegs, fiberboard or plastic drums, cargo tanks, tank trucks, dump trucks, metal boxes, cartons, cases, burlap bags, paper bags, plastic bags, wooden drums, portable tanks, tank cars, cylinders, wooden boxes, and fiber or plastic boxes, and number of containers as loaded into or onto the transport vehicle. If the weight is unknown, the volume and estimated weight shall be provided.

2. The certification that appears on the manifest must be read, signed, and dated by the generator as follows.

> "I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If this is an export shipment and I am the primary exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent."

C. Number of Copies. The manifest consists of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned to the generator.

D. Use of the Manifest

1. The generator must:

a. sign and date the manifest certification by hand when the initial transporter accepts the shipment;

b. obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and

c. retain one copy, in accordance with LAC 33:V.1111.A.

2. The generator must give the transporter the remaining copies of the manifest.

3. For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must send three copies of the manifest dated and signed in accordance with this Section to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

4. For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must complete the transporter section of the manifest less signature, retain one copy of the completed manifest, and send at least three copies of the manifest dated and signed in accordance with this Section to:

a. the next non-rail transporter, if any; or

b. the designated facility if transported solely by rail; or

c. the last rail transporter to handle the waste in the United States if exported by rail.

> [NOTE: See LAC 33:V.1307.E and 1307.F for special provisions for rail or water (bulk shipment) transporters.]

5. Reserved.

6. For shipments of hazardous waste to a designated facility in an authorized state that has not yet obtained authorization to regulate that particular waste as hazardous, the generator must assure that the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility.

E. Special Manifest Provisions

1. Scope. These provisions will apply to material in containers meeting the provisions of lab packs except that the outer container, excluding overpacking, shall not exceed 5 gallons (20 liters) in total liquid capacity prior to addition of the absorbent. The container and overpacking shall comply with applicable requirements of the Louisiana Department of Public Safety or its successor agency. Except as otherwise provided herein, the requirements of LAC 33:V.2519 shall be met.

2. Reporting and Recordkeeping. Both the generator and disposer shall maintain copies of the manifests and other records as required elsewhere in LAC 33:V.Subpart 1. The generator and disposer shall include all such wastes in the annual report as provided in LAC 33:V.1111.B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 12:319 (May 1986), LR 16:220 (March 1990), LR 17:362 (April 1991), LR 17:478 (May 1991), LR 18:1256 (November 1992), LR 20:1109 (October 1994), LR 21:266, 267 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1693 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2470 (November 2000),

LR 27:42 (January 2001), LR 27:709 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 32:823 (May 2006), LR 33:89 (January 2007), repromulgated LR 33:281 (February 2007), amended LR 33:2101 (October 2007), LR 34:622 (April 2008).

## §1108. Manifest Tracking Numbers, Manifest Printing, and Obtaining Manifests

A. 40 CFR 262.21 and the associated appendix, July 1, 2005, are hereby incorporated by reference. 40 CFR 262.21 establishes standards and procedures for registrants who apply early to, and obtain approval from, the Director, Office of Solid Waste, US EPA, to print and distribute hazardous waste manifest forms.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1256 (November 1992), amended by the Office of the Secretary, Legal Affairs Division, LR 32:823 (May 2006).

## §1109. Pre-Transport Requirements

A. Packaging. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must package the waste in accordance with the applicable Department of Public Safety regulations and packaging under LAC 33:V.Subpart 2.Chapter 103.

1. Hazardous waste, liquid, or solid not otherwise specified must meet the requirement of Subchapter C of 49 CFR, and/or the Louisiana Hazardous Material Regulations Subchapter C. Special attention must be directed towards LAC 33:V.Subpart 2.Chapter 105.

2. Dump type transport vehicles in addition to LAC 33:V.1109.A.1 must have a continuous plastic lining with a minimum thickness of 6 mil, be bindered or bolted in order to prevent accidental leakage or escape of the material (Trip binders are not acceptable), must be completely covered by a tarpaulin that is secured to insure no leakage during normal transportation, and the material transported must be solidified with a medium to such consistency that insures the material will not shift, creep, crawl or splash during emergency braking from 20 mph, or accomplish these requirements by other means acceptable to the administrative authority.

3. Portable tank or "sludge" containers in addition to LAC 33:V.1109.A.1 must have fill, discharge, and similar openings of the container bindered or bolted to prevent discharge during transport, be secured to the transport vehicle to insure that the container will not shift laterally or longitudinally during transportation, or accomplish these requirements by other means acceptable to the administrative authority.

B. Labeling. Before transporting or offering hazardous waste for transportation off-site, a generator must label each package in accordance with the applicable transportation regulations on hazardous materials of the Louisiana Department of Public Safety or its successor agency under LAC 33:V.Subpart 2.Chapter 105.

C. Marking. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must mark each container of 119 gallons or less used in such transportation with the following words and information displayed in accordance with the Department of Public Safety regulations (see Department of Public Safety regulation LAC 33:V.Subpart 2.Chapter 105).

Hazardous Waste: Federal and state law prohibits improper disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address _____

Generator's EPA ID Number _____

Manifest Tracking Number _____

D. Placarding. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must placard, or offer the initial transporter the appropriate placards for, the shipment according to Department of Public Safety regulations for hazardous materials under LAC 33:V.Subpart 2.Chapter 105.

E. Accumulation Time

1. Except as provided in LAC 33:V.1109.E.7, a generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status provided that:

a. the waste is placed:

i. in containers and the generator complies with the applicable requirements of LAC 33:V.2103, 2105, 2107, 2109.A, 2113, 2115, and Chapter 43.Subchapters Q, R, and V; and/or

ii. in tanks and the generator complies with the applicable requirements of LAC 33:V.Chapter 43.Subchapters I, Q, R, and V, except LAC 33:V.4442 and 4445; and/or

iii. on drip pads and the generator complies with LAC 33:V.2801, 2803, 2805, 2807, 2809, and 2811 and maintains the following records at the facility:

(a). a description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every 90 days; and

(b). documentation of each waste removal, including the quantity of waste removed from the drip pad and the sump or collection system and the date and time of removal; and/or

iv. in containment buildings and the generator complies with LAC 33:V.Chapter 43.Subchapter T by having placed his Louisiana professional engineer certification that the building complies with the design standards specified in LAC 33:V.4703 in the facility's operating record no later than 60 days after the date of initial operation of the unit. After February 18, 1993, Louisiana PE certification will be

required prior to operation of the unit. The owner or operator shall maintain the following records at the facility:

(a). a written description of procedures to ensure that each waste volume remains in the unit for no more than 90 days, a written description of the waste generation and management practices for the facility showing that they are consistent with respecting the 90-day limit, and documentation that the procedures are complied with; or

(b). documentation that the unit is emptied at least once every 90 days;

b. such a generator is exempt from all requirements in LAC 33:V.Chapter 43.Subchapters F and G, except for LAC 33:V.4379 and 4385;

c. the date upon which each period of accumulation begins is clearly marked on each container and visible for inspection on each container;

d. while being accumulated on-site, each container and tank is labeled or marked clearly with the words "Hazardous Waste"; and

e. the generator complies with the requirements for owners or operators in LAC 33:V.2245, 4319, and Chapter 43.Subchapters B and C.

2. A generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the permitting requirements as specified in LAC 33:V.Subpart 1 unless he has been granted an extension to the 90-day period. Such an extension may be granted by the administrative authority if hazardous wastes must remain on-site for longer than 90 days due to unforeseen, temporary, or uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the administrative authority on a case-by-case basis.

3. Reserved.

4. A generator may accumulate as much as 55 gallons of hazardous waste listed in LAC 33:V.4901.B, C, D, F, or LAC 33:V.4903, or one quart of acutely hazardous waste listed in LAC 33:V.4901.E in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with LAC 33:V.1109.E.1 of this Section provided he complies with LAC 33:V.2103, 2105, 2107.A and marks his containers either with the words "Hazardous Waste" or with other words that identify the contents of the containers.

5. A generator who accumulates either hazardous waste or acutely hazardous waste listed in LAC 33:V.4901.E in excess of the amounts listed in Subparagraph E.4.a of this Section at or near any point of generation must, with respect to that amount of excess waste, comply within three days with Paragraph E.1 of this Section or other applicable provisions of this Chapter.

6. During the three-day period, the generator must continue to comply with LAC 33:V.1109.E.4 of this Section. The generator must mark the container holding the excess accumulation of hazardous waste with the date the excess amounts began accumulating.

7. A generator who generates greater than 100 kg, but less than 1000 kg, of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status provided that:

a. the generator complies with the requirements of LAC 33:V.2103, 2105, 2107, 2109.A, and 2115;

b. the generator complies with the requirements of LAC 33:V.4438;

c. the generator complies with the requirements of LAC 33:V.1109.E.1.c and d; the requirements of LAC 33:V.Chapter 43.Subchapter B; and the requirements of LAC 33:V.2245.E;

d. the generator complies with the following requirements:

i. at all times there must be at least one employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures specified in LAC 33:V.1109.E.7.d.iv. This employee is the emergency coordinator;

ii. the generator must post the following information next to the telephone:

(a). the name and telephone number of the emergency coordinator;

(b). location of fire extinguishers and spill control material, and, if present, fire alarm; and

(c). the telephone number of the fire department, unless the facility has a direct alarm;

iii. the generator must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

iv. the emergency coordinator or his designee must respond to any emergencies that arise. The applicable responses are as follows:

(a). in the event of a fire, call the fire department or attempt to extinguish the fire with a fire extinguisher;

(b). in the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;

(c). in the event of a fire, explosion, or other release that could threaten human health outside the facility or when the generator has knowledge that a spill has reached surface water, the generator must immediately notify the Office of Environmental Compliance in accordance with LAC 33:I.3923;

e. the quantity of waste accumulated on-site never exceeds 6000 kg;

f. any and all fees required to be paid by generators must be paid.

8. A generator who generates greater than 100 kg, but less than 1000 kg, of hazardous waste in a calendar month and who must transport its waste, or offer its waste for transportation, over a distance of 200 miles or more for off-site treatment, storage, or disposal may accumulate hazardous waste on-site for 270 days or less without a permit or without having interim status provided that the generator complies with the requirements of Paragraph E.7 of this Section.

9. A generator who generates greater than 100 kg, but less than 1000 kg, of hazardous waste in a calendar month and who accumulates hazardous waste in quantities exceeding 6000 kg or accumulates hazardous waste for more than 180 days (or for more than 270 days if the generator must transport his waste, or offer his waste for transportation, over a distance of 200 miles or more) is an operator of a storage facility and is subject to the requirements of LAC 33:V.Chapters 11, 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 35, 37, 43, and 51 and the permit requirements of LAC 33:V.Chapters 3-7 unless the generator has been granted an extension to the 180-day (or 270-day if applicable) period. Such extension may be granted by the administrative authority if hazardous wastes must remain on-site for longer than 180 days (or 270 days if applicable) due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the administrative authority on a case-by-case basis.

10. A generator who generates 1000 kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for the RCRA hazardous waste code F006, may accumulate F006 waste on-site for more than 90 days, but not more than 180 days without a permit or without having interim status provided that:

a. the generator has implemented pollution prevention practices that reduce the amount of any hazardous substances, pollutants or contaminants entering F006 wastestream or otherwise released to the environment prior to its recycling;

b. the F006 waste is legitimately recycled through metals recovery;

c. no more than 20,000 kilograms of F006 waste are accumulated on-site at any one time; and

d. the F006 waste is managed in accordance with the following:

i. the F006 waste is placed:

(a). in containers and the generator complies with the applicable requirements of LAC 33:V.2103, 2105, 2107, 2109.A, 2113, 2115, and Chapter 43.Subchapters Q, R, and V; and/or

(b). in tanks and the generator complies with the applicable requirements of LAC 33:V.Chapter 43. Subchapters I, Q, R, and V, except LAC 33:V.4442 and 4445; and/or

(c). in containment buildings and the generator complies with LAC 33:V.Chapter 43.Subchapter T, and has placed its professional engineer certification that the building complies with the design standards specified in LAC 33:V.4703 in the facility's operating record prior to operation of the unit. The owner or operator must maintain the following records at the facility:

(i). a written description of procedures to ensure that the F006 waste remains in the unit for no more than 180 days, a written description of the waste generation and management practices for the facility showing that they are consistent with the 180-day limit, and documentation that the generator is complying with the procedures; or

(ii). documentation that the unit is emptied at least once every 180 days;

ii. in addition, such a generator is exempt from all the requirements in LAC 33:V.Chapter 43.Subchapters F and G, except for LAC 33:V.4379 and 4385;

iii. the date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;

iv. while being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste"; and

v. the generator complies with the requirements for owners or operators in LAC 33:V.Chapter 43.Subchapters B and C, with LAC 33:V.4319, and 2245.E.

11. A generator who generates 1,000 kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for the RCRA hazardous waste code F006, and who must transport this waste, or offer this waste for transportation, over a distance of 200 miles or more for off-site metals recovery, may accumulate F006 waste on-site for more than 90 days, but not more than 270 days without a permit or without having interim status if the generator complies with the requirements of Subparagraphs E.10.a-d of this Section.

12. A generator accumulating F006 waste in accordance with Paragraphs E.10 and 11 of this Section who accumulates F006 waste on-site for more than 180 days (or for more than 270 days if the generator must transport this waste, or offer this waste for transportation, over a distance of 200 miles or more), or who accumulates more than 20,000 kilograms of F006 waste on-site is an operator of a storage facility and is subject to the requirements of LAC 33:V.Chapters 11, 15-21, 23-29, 31-37, and 43 (except LAC 33:V.4301.D and E) and the permit requirements of LAC 33:V.Chapters 3-7 unless the generator has been

granted an extension to the 180-day (or 270-day if applicable) period or an exception to the 20,000 kilogram accumulation limit. Such extensions and exceptions may be granted by the administrative authority if F006 waste must remain on-site for longer than 180 days (or 270 days if applicable) or if more than 20,000 kilograms of F006 waste must remain on-site due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days or an exception to the accumulation limit may be granted at the discretion of the administrative authority on a case-by-case basis.

13. A generator who sends a shipment of hazardous waste to a designated facility with the understanding that the designated facility can accept and manage the waste, and who later receives that shipment back as a rejected load or residue, may accumulate the returned waste on-site depending on the amount of hazardous waste on-site in that calendar month. Upon receipt of the returned shipment, the generator shall:

a. sign Item 18c of the manifest, if the transporter returned the shipment using the original manifest; or

b. sign Item 20 of the manifest, if the transporter returned the shipment using a new manifest.

F. Waste Minimization Certification. A generator who initiates a shipment of hazardous waste must certify to one of the following statements in Item 15 of the Uniform Hazardous Waste Manifest.

1. "I am a large quantity generator. I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me that minimizes the present and future threat to human health and the environment."

2. "I am a small quantity generator. I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford."

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 16:47 (January 1990), LR 16:220 (March 1990), LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 18:1375 (December 1992), LR 20:1000 (September 1994), LR 20:1109 (October 1994), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1693 (September 1998), LR 25:437 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1466 (August 1999), LR 26:277 (February 2000), LR 26:2470 (November 2000), LR 27:293 (March 2001), LR 27:709, 716 (May 2001), LR 27:1014 (July 2001), LR 30:1673 (August 2004), amended by the Office of Environmental Assessment, LR 31:1571 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 32:823 (May 2006), LR 33:2102 (October 2007), LR 34:622 (April 2008).

## §1111. Recordkeeping and Reporting

A. Recordkeeping

1. A generator must keep a copy of each manifest signed in accordance with LAC 33:V.1107.D.1 for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

2. A generator, must keep a copy of each Annual Report and Exception Report for a period of at least three years from the due date of the report.

3. A generator must keep records of any test results, waste analyses, or other determinations made in accordance with LAC 33:V.1103 for at least three years from the date that the waste was last sent to an on-site or off-site treatment, storage, or disposal facility.

4. The periods of retention referred to in this Section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the administrative authority.

B. Annual Report

1. A generator who ships any hazardous waste off-site to a treatment, storage, or disposal facility within the United States must prepare and submit a single copy of an annual report to the Office of Environmental Services by March 1 of each year. The annual report must be submitted on the form provided by the administrative authority and it must cover generator activities during the previous calendar year. The reports must also include the following information:

a. the EPA identification number, name, and address of the generator;

b. the calendar year covered by the report;

c. the EPA identification number, name, and address of each off-site treatment, storage, or disposal facility in the United States to which waste was shipped during the year;

d. the name and EPA identification number of each transporter used during the reporting year for shipments to a treatment, storage, or disposal facility within the United States;

e. a description of the waste, the EPA hazardous waste number (see LAC 33:V.4901 or 4903), U.S. Department of Transportation hazard class, and quantity of each hazardous waste shipped off-site for shipments to a treatment, storage, or disposal facility within the United States. This information must be listed by EPA identification number of each such off-site facility to which waste was shipped;

f. the certification signed by the generator or his authorized representative;

g. a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated;

h. a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available.

2. Generators who also dispose, treat, or store hazardous waste on-site shall also submit annual reports to the Office of Environmental Services, reporting total quantity, by type, of waste handled, and how that waste was disposed, treated, or stored. Generators must maintain on site a copy of each report submitted to the department for a period of at least three years from the date of the report. Reporting for exports of hazardous waste is not required on the annual report form. A separate annual report requirement is set forth in LAC 33:V.1113.G.

C. Exception Reporting

1. A generator of greater than 1000 kg of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter must contact the transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste.

2. A generator of greater than 1000 kg of hazardous waste in a calendar month must submit an Exception Report to the Office of Environmental Services if he has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter. The Exception Report must include:

a. a legible copy of the manifest for which the generator does not have confirmation of delivery; and

b. a cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

3. A generator of greater than 100 kg, but less than 1000 kg, of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter must submit a legible copy of the manifest, with some indication that the generator has not received confirmation of delivery, to the Office of Environmental Services.

[NOTE: The submission to the administrative authority need only be a handwritten or typed note on the manifest itself, or on an attached sheet of paper, stating that the return copy was not received.]

D. Additional Reporting. The administrative authority, as it deems necessary under the Act, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in LAC 33:V.Chapter 49.

E. Special Requirements for Generators of Between 100 and 1000 kg/month. A generator of greater than 100 kg, but less than 1000 kg, of hazardous waste in a calendar month is subject only to the following requirements in this Section:

1. Paragraphs A.1, 3, and 4 of this Section, recordkeeping;

2. Paragraph C.3 of this Section, exception reporting; and

3. Subsection D of this Section, additional reporting.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:220 (March 1990), LR 17:365 (April 1991), LR 20:1000 (September 1994), LR 20:1109 (October 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2470 (November 2000), LR 27:42 (January 2001), LR 27:710 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2102 (October 2007).

## §1113. Exports of Hazardous Waste

A. Applicability. Any person who exports hazardous waste to a foreign country, from a point of departure in the state of Louisiana, must comply with the requirements of this Chapter and with the special requirements of LAC 33:V.1113. LAC 33:V.1113 establishes requirements applicable to exports of hazardous waste. A primary exporter of hazardous waste must comply with the special requirements of LAC 33:V.1113, and a transporter who transports hazardous waste for export must comply with applicable requirements of LAC 33:V.Chapter 13.

B. Reserved.

C. General Requirements. Exports of hazardous wastes are prohibited except in compliance with the applicable requirements of LAC 33:V.1113 and LAC 33:V.Chapter 13. Exports of hazardous waste are prohibited unless:

1. notification in accordance with LAC 33:V.1113.D has been provided;

2. the appropriate authority in the receiving country has consented to accept the hazardous waste;

3. a copy of the EPA Acknowledgment of Consent for the shipment accompanies the hazardous waste shipment and, unless exported by rail, is attached to the manifest (or shipping paper for exports by water [bulk shipment]);

4. the hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgement of Consent.

D. Notification of Intent to Export

1. A primary exporter of hazardous waste must notify the United States Environmental Protection Agency of an intended export before such waste is scheduled to leave the United States. A complete notification should be submitted 60 days before the initial shipment is intended to be shipped off-site. This notification may cover export activities extending over a 12-month or lesser period. The notification

must be in writing, signed by the primary exporter, and include the following information:

a. name, mailing address, telephone number, and EPA ID number of the primary exporter;

b. by consignee, for each hazardous waste type:

i. a description of the hazardous waste and the EPA hazardous waste number (LAC 33:V.4901 and 4903), U.S. Department of Transportation proper shipping name, hazard class, and ID number for each hazardous waste as identified in 49 CFR Part 171-177;

ii. the estimated frequency or rate at which such waste is to be exported and the period of time over which such waste is to be exported;

iii. the estimated total quantity of the hazardous waste in units as specified in the instructions to the Uniform Hazardous Waste Manifest Form (8700-22);

iv. all points of entry to and departure from each foreign country through which the hazardous waste will pass;

v. a description of the means by which each shipment of the hazardous waste will be transported (e.g., mode of transportation vehicle [air, highway, rail, water, etc.], type[s] of container [drums, boxes, tanks, etc.]);

vi. a description of the manner in which the hazardous waste will be treated, stored, or disposed of in the receiving country (e.g., land or ocean incineration, other land disposal, ocean dumping, recycling);

vii. the name and site address of the consignee and any alternate consignee; and

viii. the name of any transit countries through which the hazardous waste will be sent and a description of the approximate length of time the hazardous waste will remain in such country and the nature of its handling while there.

2. Notification shall be sent to the Office of Environmental Services, with "Attention: Notification to Export" prominently displayed on the front of the envelope.

[NOTE: This does not relieve the regulated community from the requirement of submitting notification to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460, as required by 40 CFR 262.53(b) and LAC 33:V.1113.D.1.]

3. Except for changes to the telephone number required by Subparagraph D.1.a of this Section, changes to the information required by Clause D.1.b.v of this Section, and decreases in the quantity indicated pursuant to Clause D.1.b.iii of this Section, when the conditions specified on the original notification change (including any exceedance of the estimate of the quantity of hazardous waste specified in the original notification), the primary exporter must provide the United States Environmental Protection Agency with a written renotification of the change. The shipment cannot take place until consent of the receiving country to the changes (except for changes to Clause D.1.b.viii of this Section and in the ports of entry to and departure from transit countries pursuant to Clause D.1.b.iv of this Section) has been obtained and the primary exporter received an EPA Acknowledgment of Consent reflecting the receiving country's consent to the changes.

4. Upon request by the United States Environmental Protection Agency, a primary exporter shall furnish to the United States Environmental Protection Agency any additional information which a receiving country requests in order to respond to a notification.

5. The administrative authority will provide a complete notification to the receiving country and any transit countries. A notification is complete when the administrative authority receives a notification which the administrative authority determines satisfies the requirements of LAC 33:V.1113.D.1. Where a claim of confidentiality is asserted with respect to any notification information required by LAC 33:V.1113.D.1, the administrative authority may find the notification not complete until any such claim is resolved in accordance with LAC 33:I.Chapter 5.

6. Where the receiving country consents to the receipt of the hazardous waste, the administrative authority will forward an EPA Acknowledgement of Consent to the primary exporter for purposes of LAC 33:V.1113.E.8. Where the receiving country objects to receipt of the hazardous waste or withdraws a prior consent, the administrative authority will notify the primary exporter in writing. The EPA will also notify the primary exporter of any responses from transit countries.

E. Special Manifest Requirements. A primary exporter must comply with manifest requirements of LAC 33:V.1107, except for the following.

1. In lieu of the name, site address, and EPA ID number of the designated permitted facility, the primary exporter must enter the name and site address of the consignee.

2. In lieu of the name, site address, and EPA ID number of a permitted alternate facility, the primary exporter may enter the name and site address of any alternate consignee.

3. In the International Shipments block, the primary exporter shall check the export box and enter the point of exit (city and state) from the United States.

4. The following statement must be added to the end of the first sentence of the certification set forth in Item 16 of the Uniform Hazardous Waste Manifest Form: "and conforms to the terms of the attached EPA Acknowledgment of Consent."

5. The primary exporter shall obtain the manifest form from any source that is registered with the US EPA as a supplier of manifests.

6. The primary exporter must require the consignee to confirm in writing the delivery of the hazardous waste to that facility and to describe any significant discrepancies

between the manifest and the shipment (as defined in LAC 33:V.1516.C.1). A copy of the manifest signed by such facility may be used to confirm delivery of the hazardous waste.

7. In lieu of the requirements of LAC 33:V.1107.A.3, where a shipment cannot be delivered for any reason to the designated or alternate consignee, the primary exporter must:

a. renotify the United States Environmental Protection Agency of a change in the conditions of the original notification to allow shipment to a new consignee in accordance with LAC 33:V.1113.D.3 and obtain an EPA Acknowledgment of Consent prior to delivery; or

b. instruct the transporter to return the waste to the primary exporter in the United States or designate another facility within the United States; and

c. instruct the transporter to revise the manifest in accordance with the primary exporter's instructions.

8. The primary exporter must attach a copy of the EPA Acknowledgement of Consent to the shipment to the manifest which must accompany the hazardous waste shipment. For exports by rail or water (bulk shipment), the primary exporter must provide the transporter with an EPA Acknowledgment of Consent which must accompany the hazardous waste but which need not be attached to the manifest except that for exports by water (bulk shipment) the primary exporter must attach the copy of the EPA Acknowledgment of Consent to the shipping paper.

9. The primary exporter shall provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste leaves the United States in accordance with LAC 33:V.1307.G.4.

F. Exception Reports. In lieu of the requirements of LAC 33:V.1111.C, a primary exporter must file an Exception Report with the United States Environmental Protection Agency, if:

1. he has not received a copy of the manifest signed by the transporter stating the date and place of departure from the United States within 45 days from the date it was accepted by the initial transporter;

2. within 90 days from the date the waste was accepted by the initial transporter, the primary exporter has not received written confirmation from the consignee that the hazardous waste was received; or

3. the waste is returned to the United States.

G. Annual Reports

1. Primary exporters of hazardous waste shall file with the United States Environmental Protection Agency no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous waste exported during the previous calendar year. Such reports shall include the following:

a. the EPA identification number, name, and mailing and site address of the exporter;

b. the calendar year covered by the report;

c. the name and site address of each consignee;

d. by consignee, for each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number (from LAC 33:V.4901 or 4903), U.S. Department of Transportation hazard class, the name and US EPA ID number (where applicable) for each transporter used, the total amount of waste shipped and number of shipments pursuant to each notification;

e. except for hazardous waste produced by exporters of greater than 100 kg, but less than 1000 kg, in a calendar month, unless provided in accordance with LAC 33:V.1111.B in even numbered years:

i. a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

ii. a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984;

f. a certification signed by the primary exporter which states:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

2. Reports shall be sent to the administrative authority of the Louisiana Department of Environmental Quality.

> [NOTE: This does not relieve the regulated community from the requirement of submitting annual reports in accordance with 40 CFR 262.56 to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460. Hand-delivered reports should be sent to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, Environmental Protection Agency, Ariel Rios Bldg., Room 6144, 12th St. and Pennsylvania Ave., NW, Washington, DC 20004.]

H. Recordkeeping

1. For all exports a primary exporter must:

a. keep a copy of each notification of intent to export for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

b. keep a copy of each EPA Acknowledgment of Consent for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

c. keep a copy of each confirmation of delivery of the hazardous waste from the consignee for at least three

years from the date the hazardous waste was accepted by the initial transporter; and

d. keep a copy of each annual report for a period of at least three years from the due date of the report.

2. The periods of retention referred to in this Section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the United States Environmental Protection Agency.

I. International Agreements

1. Any person who exports or imports hazardous waste subject to manifest requirements of this Chapter, or subject to the universal waste management standards of LAC 33:V.Chapter 38, to or from designated member countries of the Organization for Economic Cooperation and Development (OECD), as defined in LAC 33:V.1113.I.1.a, for purposes of recovery is subject to Subchapter B of this Section. The requirements of this Section and LAC 33:V.1123 do not apply.

a. For the purposes of these regulations the designated OECD countries consist of Australia, Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

b. For the purposes of these regulations, Canada and Mexico are considered OECD member countries only for the purpose of transit.

2. Any person who exports hazardous waste to or imports hazardous waste from a designated OECD member country for purposes other than recovery (e.g., incineration, disposal), Mexico (for any purpose), or Canada (for any purpose) remains subject to the requirements of this Section and LAC 33:V.1123.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 20:1109 (October 1994), LR 21:944 (September 1995), LR 22:20 (January 1996), amended by the Office of the Secretary, LR 22:344 (May 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:661 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2471 (November 2000), LR 27:710 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 32:824 (May 2006), LR 33:2102 (October 2007), LR 34:72 (January 2008), LR 34:622 (April 2008).

## §1121. Spills

A. Any spilled material or material trapped in sumps that is a hazardous waste or that will be disposed of as a hazardous waste must be cleaned up in a timely manner.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §1123. Imports of Foreign Hazardous Waste

A. Any person who imports hazardous waste from a foreign country into the state of Louisiana must comply with this Chapter and the special requirements of LAC 33:V.1123.

B. When importing hazardous waste from a foreign country into the state of Louisiana, a person must meet all the requirements of LAC 33:V.1107 for the manifest except that:

1. the name and address of the foreign generator and the importer's name, address, and EPA identification number must replace the generator's name, address, and EPA identification number;

2. the U.S. importer or his agent must sign and date the certification and obtain the signature of the initial transporter to replace the generator's signature on the certification statement;

3. in the comment section (Section J) of the manifest form, the importer must indicate the name of any transit countries with the corresponding ports and dates of entry and departure through which each waste type passed and the nature of its handling while there, the point of entry and the date on which the waste entered the United States and the date on which the Importation of Hazardous Waste Notification Form (HW-2) was mailed to the administrative authority; and

4. a copy of the Importation of Hazardous Waste Notification Form must accompany the manifest form.

C. A person who imports hazardous waste shall obtain a manifest form from any source that is registered with the US EPA as a supplier of manifests.

1. In the International Shipments block, the importer shall check the import box and enter the point of entry (city and state) into the United States.

2. The importer shall provide the transporter with an additional copy of the manifest to be submitted by the receiving facility to the US EPA.

D. Any person who imports hazardous waste from a foreign country into the state of Louisiana must prepare an Importation of Hazardous Waste Notification Form (HW-2) notifying the administrative authority of an intended import at least 30 days but not prior to one year before such waste is scheduled to enter the state of Louisiana. This notification form must be obtained from the administrative authority. The notification form must be signed by the importer and include the following information:

1. name, mailing address, telephone number, and EPA identification number of the importer;

2. for each hazardous waste type:

a. a description of the hazardous waste and the EPA hazardous waste number (LAC 33:V.4901 and 4903), the United States Department of Transportation shipping name, the hazard class, and the ID number for each hazardous waste imported;

b. the estimated total quantity of the hazardous waste in units as specified in the instructions to the Uniform Hazardous Waste Manifest form (8700-22); and

c. a description of the manner in which each hazardous waste type will be treated, stored, or disposed of in the state of Louisiana, e.g., incineration, land disposal, recycling;

3. a description of the means by which the shipment of the hazardous waste will be transported, e.g., mode of transportation (air, highway, rail, water, etc.) and types of containers (drums, boxes, tanks, etc.); and

4. the name of the U.S. port of entry with the corresponding date of entry and the nature of the handling of the waste from its point of entry into the U.S. until its final destination.

E. Notification shall be sent to the Office of Environmental Services, with "Attention: Notification to Import Foreign Hazardous Waste" prominently displayed on the front of the envelope. Such notices shall be sent by certified mail.

F. Except for changes to the telephone number required by LAC 33:V.1123.D.1, decreases in the quantity indicated pursuant to LAC 33:V.1123.D.2.c, and changes to the information required by LAC 33:V.1123.D.2.e, when conditions specified on the original notification change (including changes in the estimate of the quantity of hazardous waste specified in the original notification), the importer must provide the administrative authority with written notice of the change. Notice of such change must be submitted to the administrative authority prior to import into the state of Louisiana of the waste that is the subject of the change.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:20 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2471 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 32:824 (May 2006), LR 33:2103 (October 2007).

### §1125. Unmanifested Foreign Hazardous Waste

A. Any person who imports foreign generated material that has not been classified as hazardous waste prior to entry into the state of Louisiana, but subsequently is determined to be hazardous waste, must immediately notify the Office of Environmental Services by telephone.

B. Any person who imports foreign generated material that has not been classified as hazardous waste prior to entry into the state of Louisiana, but subsequently is determined to be hazardous must, within seven business days:

1. file, in writing, an unmanifested waste report with the Office of Environmental Services, which shall include:

a. the facility name and location;

b. the port of entry of the hazardous waste;

c. the date of entry of the hazardous waste;

d. clarification of existence or nonexistence of an Importation of Hazardous Waste Notification Form (HW-2);

e. the name of the transporter from port of entry to the destination facility;

f. the vehicle numbers of the transporters; and

g. the date of transportation; and

2. prepare a manifest and file a copy of the completed manifest for the unmanifested waste with the administrative authority. (The transporter's signature may be omitted from the manifest; however, the comment section [Section J] of the manifest must explain why the signature was omitted and must detail the unmanifested waste circumstance.)

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:21 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2471 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2103 (October 2007).

## Subchapter B. Transfrontier Shipments of Hazardous Waste

### §1127. Transfrontier Shipments of Hazardous Waste for Recovery within the OECD

A. Applicability

1. The requirements of this Subchapter apply to imports and exports of wastes that are considered hazardous under United States national procedures and are destined for recovery operations in the countries listed in LAC 33:V.1113.I.1.a. A waste is considered hazardous under United States national procedures if it meets the definition of *hazardous waste* in LAC 33:V.109 and is subject to either the manifesting requirements in LAC 33:V.1107 or to the universal waste management standards of LAC 33:V.Chapter 38.

2. Any person (notifier, consignee, or recovery facility operator) who mixes two or more wastes (including hazardous and nonhazardous wastes) or otherwise subjects two or more wastes (including hazardous and nonhazardous wastes) to physical or chemical transformation operations, and thereby creates a new hazardous waste, becomes a generator and assumes all subsequent generator duties under RCRA and any notifier duties, if applicable, under this Subchapter.

B. General Conditions

1. Scope. The level of control for exports and imports of waste is indicated by assignment of the waste to a green,

amber, or red list and by United States national procedures as defined in Paragraph A.1 of this Section. The green, amber, and red lists are incorporated by reference in LAC 33:V.110.

a. Wastes on the green list are subject to existing controls normally applied to commercial transactions, except as provided in the following.

i. Green-list wastes that are considered hazardous under United States national procedures are subject to amber-list controls.

ii. Green-list wastes that are sufficiently contaminated or mixed with amber-list wastes such that the waste or waste mixture is considered hazardous under United States national procedures are subject to amber-list controls.

iii. Green-list wastes that are sufficiently contaminated or mixed with other wastes subject to red-list controls such that the waste or waste mixture is considered hazardous under United States national procedures must be handled in accordance with the red-list controls.

b. Wastes on the amber list that are considered hazardous under United States national procedures as defined in Paragraph A.1 of this Section are subject to the amber-list controls of this Subchapter.

i. If amber-list wastes are sufficiently contaminated or mixed with other wastes subject to red-list controls such that the waste or waste mixture is considered hazardous under United States national procedures, the wastes must be handled in accordance with the red-list controls.

ii. Reserved.

c. Wastes on the red list that are considered hazardous under United States national procedures as defined in Paragraph A.1 of this Section are subject to the red-list controls of this Subchapter.

[NOTE: Some wastes on the amber or red lists are not listed or otherwise identified as hazardous under RCRA (e.g., polychlorinated biphenyls) and, therefore, are not subject to the amber-list or red-list controls of this Subchapter. Regardless of the status of the waste under RCRA, however, other federal environmental statutes (e.g., the Toxic Substances Control Act) may restrict certain waste imports or exports. Such restrictions continue to apply without regard to this Subchapter.]

d. Wastes not yet assigned to a list are eligible for transfrontier movements, as follows:

i. if such wastes are considered hazardous under United States national procedures as defined in Paragraph A.1 of this Section, these wastes are subject to the red-list controls; or

ii. if such wastes are not considered hazardous under United States national procedures as defined in Paragraph A.1 of this Section, such wastes may move as though they appeared on the green list.

2. General Conditions Applicable to Transfrontier Movements of Hazardous Waste

a. The waste must be destined for recovery operations at a facility that, under applicable domestic law, is operating or is authorized to operate in the importing country.

b. The transfrontier movement must be in compliance with applicable international transport agreements.

[NOTE: These international agreements include, but are not limited to, the Chicago Convention (1944), ADR (1957), ADNR (1970), MARPOL Convention (1973/1978), SOLAS Convention (1974), IMDG Code (1985), COTIF (1985), and RID (1985).]

c. Any transit of waste through a non-OECD member country must be conducted in compliance with all applicable international and national laws and regulations.

3. Provisions Relating to Re-Export for Recovery to a Third Country

a. Re-export of wastes subject to the amber-list control system from the United States, as the importing country, to a third country listed in LAC 33:V.1113.I.1.a may occur only after a notifier in the United States provides notification to and obtains consent of the competent authorities in the third country, the original exporting country, and new transit countries. The notification must comply with the notice and consent procedures in Subsection C of this Section for all concerned countries, and the original exporting country. The competent authorities of the original exporting country as well as the competent authorities of all other concerned countries have 30 days to object to the proposed movement.

i. The 30-day period begins once the competent authorities of both the initial exporting country and new importing country issue Acknowledgements of Receipt of the notification.

ii. The transfrontier movement may commence if no objection has been lodged after the 30-day period has passed or immediately after written consent is received from all relevant OECD importing and transit countries.

b. Re-export of wastes subject to the red-list control system from the original importing country to a third country listed in LAC 33:V.1113.I.1.a may occur only following notification of the competent authorities of the third country, the original exporting country, and new transit countries by a notifier in the original importing country in accordance with Subsection C of this Section. The transfrontier movement may not proceed until receipt by the original importing country of written consent from the competent authorities of the third country, the original exporting country, and new transit countries.

c. In the case of re-export of amber-list or red-list wastes to a country other than those in LAC 33:V.1113.I.1.a, notification to and consent of the competent authorities of the original OECD member country of export and any OECD member countries of transit is required as specified in

Subparagraphs B.3.a-b of this Section in addition to compliance with all international agreements and arrangements to which the first importing OECD member country is a party and all applicable regulatory requirements for exports from the first importing country.

C. Notification and Consent

1. Applicability. Consent must be obtained from the competent authorities of the relevant OECD importing and transit countries prior to exporting hazardous waste destined for recovery operations subject to this Subchapter. Hazardous wastes subject to amber-list controls are subject to the requirements of Paragraph C.2 of this Section; hazardous wastes subject to red-list controls are subject to the requirements of Paragraph C.3 of this Section; and wastes not identified on any list are subject to the requirements of Paragraph C.4 of this Section.

2. Amber-List Wastes. The export from the United States of hazardous wastes as described in Paragraph A.1 of this Section that appear on the amber list is prohibited unless the notification and consent requirements of this Subsection are met.

a. Transactions Requiring Specific Consent

i. Notification. At least 45 days prior to commencement of the transfrontier movement, the notifier must provide written notification in English of the proposed transfrontier movement to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460, with the words "Attention: OECD Export Notification" prominently displayed on the envelope. This notification must include all of the information identified in Paragraph C.5 of this Section. In cases where wastes having similar physical and chemical characteristics, the same United Nations classification, and the same RCRA waste codes are to be sent periodically to the same recovery facility by the same notifier, the notifier may submit one notification of intent to export these wastes in multiple shipments during a period of up to one year.

ii. Tacit Consent. If no objection has been lodged by any concerned country (i.e., exporting, importing, or transit countries) to a notification provided pursuant to Clause C.2.a.i of this Section within 30 days after the date of issuance of the Acknowledgment of Receipt of notification by the competent authority of the importing country, the transfrontier movement may commence. Tacit consent expires one calendar year after the close of the 30-day period; renotification and renewal of all consents are required for exports after that date.

iii. Written Consent. If the competent authorities of all the relevant OECD importing and transit countries provide written consent in a period less than 30 days, the transfrontier movement may commence immediately after all necessary consents are received. Written consent expires for each relevant OECD importing and transit country one calendar year after the date of that country's consent unless otherwise specified; renotification and renewal of each expired consent is required for exports after that date.

b. Shipments to Facilities Preapproved by the Competent Authorities of the Importing Countries to Accept Specific Wastes for Recovery

i. The notifier must provide EPA the information identified in Paragraph C.5 of this Section, in English, at least 10 days in advance of commencing shipment to a preapproved facility. The notification should indicate that the recovery facility is preapproved, and the notification may apply to a single specific shipment or to multiple shipments as described in Clause C.2.a.i of this Section. This information must be sent to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460, with the words "OECD Export Notification-Preapproved Facility" prominently displayed on the envelope.

ii. Shipments may commence after the notification required in Clause C.2.a.i of this Section has been received by the competent authorities of all concerned countries, unless the notifier has received information indicating that the competent authorities of one or more concerned countries objects to the shipment.

3. Red-List Wastes. The export from the United States of hazardous wastes as described in Paragraph A.1 of this Section that appear on the red list is prohibited unless notice is given in accordance with Clause C.2.a.i of this Section and the notifier receives written consent from the importing country and any transit countries prior to commencement of the transfrontier movement.

4. Unlisted Wastes. Wastes not assigned to the green, amber, or red list that are considered hazardous under United States national procedures as defined in Paragraph A.1 of this Section are subject to the notification and consent requirements established for red-list wastes in accordance with Paragraph C.3 of this Section. Unlisted wastes that are not considered hazardous under United States national procedures as defined in Paragraph A.1 of this Section are not subject to amber or red controls when exported or imported.

5. Notification Information. Notifications submitted under this Section must include:

a. serial number or other accepted identifier of the notification form;

b. notifier name and EPA identification number (if applicable), address, and telephone and telefax numbers;

c. importing recovery facility name, address, telephone and telefax numbers, and technologies employed;

d. consignee name (if not the owner or operator of the recovery facility), address, and telephone and telefax numbers; whether the consignee will engage in waste exchange or storage prior to delivering the waste to the final

recovery facility and identification of recovery operations to be employed at the final recovery facility;

e. intended transporters and/or their agents;

f. country of export and relevant competent authority and point of departure;

g. countries of transit and relevant competent authorities and points of entry and departure;

h. country of import and relevant competent authority and point of entry;

i. statement of whether the notification is a single notification or a general notification. If general, include the period of validity requested;

j. date foreseen for commencement of transfrontier movement;

k. designation of waste type(s) from the appropriate list (amber or red and waste list code), descriptions of each waste type, estimated total quantity of each, RCRA waste code, and United Nations number for each waste type; and

l. certification/declaration signed by the notifier that states:

> "I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally enforceable written contractual obligations have been entered into and that any applicable insurance or other financial guarantees are or shall be in force covering the transfrontier movement."
>
> Name: _____
>
> Signature: _____
>
> Date: _____
>
> [NOTE: The United States does not currently require financial assurance; however, United States exporters may be asked by other governments to provide and certify to such assurance as a condition of obtaining consent to a proposed movement.]

D. Tracking Document

1. All United States parties subject to the contract provisions of Subsection E of this Section must ensure that a tracking document meeting the conditions of Paragraph D.2 of this Section accompanies each transfrontier shipment of wastes subject to amber-list or red-list controls from the initiation of the shipment until it reaches the final recovery facility, including cases in which the waste is stored and/or exchanged by the consignee prior to shipment to the final recovery facility, except as provided in Subparagraphs D.1.a-b of this Section.

a. For shipments of hazardous waste within the United States solely by water (bulk shipments only) the generator must forward the tracking document with the manifest to the last water (bulk shipment) transporter to handle the waste in the United States if exported by water (in accordance with the manifest routing procedures in LAC 33:V.1107.D.3).

b. For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must forward the tracking document with the manifest (in accordance with the routing procedures for the manifest in LAC 33:V.1107.D.4) to the next nonrail transporter, if any, or the last rail transporter to handle the waste in the United States if exported by rail.

2. The tracking document must include all information required under Subsection C of this Section for notification and the following:

a. date shipment commenced;

b. name (if not notifier), address, and telephone and telefax numbers of primary exporter;

c. company name and EPA ID number of all transporters;

d. identification (license, registered name, or registration number) of means of transport, including types of packaging;

e. any special precautions to be taken by transporters;

f. certification/declaration signed by notifier that no objection to the shipment has been lodged as follows:

> "I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally enforceable written contractual obligations have been entered into, that any applicable insurance or other financial guarantees are or shall be in force covering the transfrontier movement, and that:
>
> [List the following sentence that is applicable]
>
> 1. all necessary consents have been received; or
>
> 2. the shipment is directed at a recovery facility within the OECD area and no objection has been received from any of the concerned countries within the 30 day tacit consent period; or
>
> 3. the shipment is directed at a recovery facility preauthorized for that type of waste within the OECD area; such an authorization has not been revoked, and no objection has been received from any of the concerned countries."
>
> Name: _____
>
> Signature: _____
>
> Date: _____

and

g. appropriate signatures for each custody transfer (e.g., transporter, consignee, and owner or operator of the recovery facility).

3. Notifiers also must comply with the special manifest requirements of LAC 33:V.1113.E.1, 2, 3, 5, and 9; and consignees must comply with the import requirements of LAC 33:V. 1123.

4. Each United States person that has physical custody of the waste from the time the movement commences until it arrives at the recovery facility must sign the tracking document (e.g., transporter, consignee, and owner or operator of the recovery facility).

5. Within three working days of the receipt of imports subject to this Subchapter, the owner or operator of the

United States recovery facility must send signed copies of the tracking document to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460, and to the competent authorities of the exporting and transit countries.

E. Contracts

1. Transfrontier movements of hazardous wastes subject to amber or red control procedures are prohibited unless they occur under the terms of a valid written contract, chain of contracts, or equivalent arrangements (when the movement occurs between parties controlled by the same corporate or legal entity). Such contracts or equivalent arrangements must be executed by the notifier and the owner or operator of the recovery facility and must specify responsibilities for each. Contracts or equivalent arrangements are valid for the purposes of this Section only if persons assuming obligations under the contracts or equivalent arrangements have appropriate legal status to conduct the operations specified in the contract or equivalent arrangement.

2. Contracts or equivalent arrangements must specify the name and EPA ID number, where available, of:

a. the generator of each type of waste;

b. each person who will have physical custody of the wastes;

c. each person who will have legal control of the wastes; and

d. the recovery facility.

3. Contracts or equivalent arrangements must specify which party to the contract will assume responsibility for alternate management of the wastes if its disposition cannot be carried out as described in the notification of intent to export. In such cases, contracts must specify that:

a. the person having actual possession or physical control over the wastes will immediately inform the notifier and the competent authorities of the exporting and importing countries and, if the wastes are located in a country of transit, the competent authorities of that country; and

b. the person specified in the contract will assume responsibility for the adequate management of the wastes in compliance with applicable laws and regulations including, if necessary, arranging their return to the original country of export.

4. Contracts must specify that the consignee will provide the notification required in Paragraph B.3 of this Section prior to re-export of controlled wastes to a third country.

5. Contracts or equivalent arrangements must include provisions for financial guarantees, if required by the competent authorities of any concerned country, in accordance with applicable national or international law requirements.

[NOTE: Financial guarantees so required are intended to provide for alternate recycling, disposal, or other means of sound management of the wastes in cases where arrangements for the shipment and the recovery operations cannot be carried out as foreseen. The United States does not require such financial guarantees at this time; however, some OECD countries do. It is the responsibility of the notifier to ascertain and comply with such requirements; in some cases, transporters or consignees may refuse to enter into the necessary contracts absent specific references or certifications to financial guarantees.]

6. Contracts or equivalent arrangements must contain provisions requiring each contracting party to comply with all applicable requirements of this Subchapter.

7. Upon request by EPA, United States notifiers, consignees, or recovery facilities must submit to EPA copies of contracts, chain of contracts, or equivalent arrangements (when the movement occurs between parties controlled by the same corporate or legal entity). Information contained in the contracts or equivalent arrangements for which a claim of confidentiality is asserted in accordance with 40 CFR 2.203(b) will be treated as confidential and will be disclosed by EPA only as provided in 40 CFR 260.2.

[NOTE: Although the United States does not require routine submission of contracts at this time, OECD Council Decision C(92)39/FINAL allows members to impose such requirements. When other OECD countries require submission of partial or complete copies of the contract as a condition to granting consent to proposed movements, EPA will request the required information; absent submission of such information, some OECD countries may deny consent for the proposed movement.]

F. Provisions Relating to Recognized Traders

1. A recognized trader who takes physical custody of a waste and conducts recovery operations (including storage prior to recovery) is acting as the owner or operator of a recovery facility and must be so authorized in accordance with all applicable federal laws.

2. A recognized trader acting as a notifier or consignee for transfrontier shipments of waste must comply with all the requirements of this Subchapter associated with being a notifier or consignee.

G. Reporting and Recordkeeping

1. Annual Reports. For all waste movements subject to this Subchapter, persons (e.g., notifiers, recognized traders) who meet the definition of *primary exporter* in LAC 33:V.109 shall file an annual report with the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460, no later than March 1 of each year, summarizing the types, quantities, frequency, and ultimate destination of all such hazardous waste exported during the previous calendar year. (If the primary exporter is required to file an annual report for waste exports that are not covered under this Subchapter, he may include all export information in one report provided the information required by this Subsection on exports of waste destined for recovery within the designated OECD

member countries is contained in a separate section.) Such reports shall include the following:

a. the EPA identification number, name, and mailing and site address of the notifier filing the report;

b. the calendar year covered by the report;

c. the name and site address of each final recovery facility;

d. by final recovery facility, for each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number (from LAC 33:V.Chapter 49), designation of waste type(s) from OECD waste lists and applicable waste code from the OECD lists, the DOT hazard class, the name and U.S. EPA identification number (where applicable) for each transporter used, the total amount of hazardous waste shipped pursuant to this Subchapter, and the number of shipments pursuant to each notification;

e. in even numbered years, for each hazardous waste exported, except for hazardous waste produced by exporters of greater than 100 kg but less than 1,000 kg in a calendar month and except for hazardous waste for which information was already provided pursuant to LAC 33:V.1111.B:

i. a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

ii. a description of the changes in volume and toxicity of the waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984; and

f. a certification signed by the person acting as primary exporter that states:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

2. Exception Reports. Any person who meets the definition of *primary exporter* in LAC 33:V.109 must file an exception report, in lieu of the requirements of LAC 33:V.1111.C, with the Office of Environmental Services if any of the following occurs:

a. he has not received a copy of the tracking documentation signed by the transporter stating point of departure of the waste from the United States within 45 days from the date it was accepted by the initial transporter;

b. within 90 days from the date the waste was accepted by the initial transporter, the notifier has not received written confirmation from the recovery facility that the hazardous waste was received; or

c. the waste is returned to the United States.

3. Recordkeeping

a. Persons who meet the definition of *primary exporter* in LAC 33:V.109 shall keep the following records:

i. a copy of each notification of intent to export and all written consents obtained from the competent authorities of concerned countries for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

ii. a copy of each annual report for a period of at least three years from the due date of the report; and

iii. a copy of any exception reports and a copy of each confirmation of delivery (i.e., tracking documentation) sent by the recovery facility to the notifier for at least three years from the date the hazardous waste was accepted by the initial transporter or received by the recovery facility, whichever is applicable.

b. The periods of retention referred to in this Section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the administrative authority.

H. Preapproval for United States Recovery Facilities—Reserved.

I. OECD Waste Lists

1. General. For the purposes of this Subchapter, a waste is considered hazardous under United States national procedures, and hence subject to this Subchapter, if the waste:

a. meets the definition of *hazardous waste* in LAC 33:V.109; and

b. is subject to either the manifesting requirements of this Chapter or to the universal waste management standards of LAC 33:V.Chapter 38.

2. If a waste is hazardous under Subparagraph I.1.a of this Section and it appears on the amber or red list, it is subject to amber-list or red-list requirements respectively.

3. If a waste is hazardous under Subparagraph I.1.a of this Section and it does not appear on either the amber or red list, it is subject to red-list requirements.

4. The appropriate control procedures for hazardous wastes and hazardous waste mixtures are addressed in Subsection B of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:661 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2471 (November 2000), LR 27:293 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2103 (October 2007), LR 34:72 (January 2008), LR 34:1012 (June 2008).

## §1199. Appendix A—Uniform Hazardous Waste Manifest and Instructions (DEQ Form HW-3 and Its Instructions)

Read all instructions before completing DEQ Form HW-3. This form is available from the Office of Environmental Services and has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may also be used, press down hard. State regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, and disposal facilities to use this form (HW-3) and, if necessary, the continuation sheet for both interstate and intrastate transportation. Federal and state regulations also require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, and disposal facilities to complete the following information.

I. DEQ Form HW-3

A. Generators

Item 1. Generator's U.S. EPA ID Number—Manifest Document Number

Enter the generator's U.S. EPA 12-digit identification number and the unique five digit number assigned to this manifest (e.g., 00001) by the generator.

Item 2. Page 1 of ____

Enter the total number of pages used to complete this manifest, i.e., the first page (HW-3) plus the number of continuation sheets, if any.

Item 3. Generator's Name and Mailing Address

Enter the name and mailing address of the generator. The address should be the location that will manage the returned manifest forms.

Item 4. Generator's Phone Number

Enter a telephone number where an authorized agent of the generator may be reached in the event of an emergency.

Item 5. Transporter 1 Company Name

Enter the company name of the first transporter who will transport the waste.

Item 6. U.S. EPA ID Number

Enter the U.S. EPA 12-digit identification number of the first transporter identified in Item 5.

Item 7. Transporter 2 Company Name

If applicable, enter the company name of the second transporter who will transport the waste. If more than two transporters are used to transport the waste, use a continuation sheet(s) and list the transporters in the order they will be transporting the waste.

Item 8. U.S. EPA ID Number

If applicable, enter the U.S. EPA 12-digit identification number of the second transporter identified in Item 7.

[NOTE: If more than two transporters are used, enter each additional transporter's company name and U.S. EPA 12-digit identification number in Items 24-27 on the continuation sheet. Each continuation sheet has space to record two additional transporters. Every transporter used between the generator and the designated facility must be listed.]

Item 9. Designated Facility Name and Site Address

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. The address must be the site address, which may differ from the company mailing address.

Item 10. U.S. EPA ID Number

Enter the U.S. EPA 12-digit identification number of the designated facility identified in Item 9.

Item 11. U.S. DOT Description [Including Proper Shipping Name, Hazard Class, and ID Number (UN/NA)]

Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste as identified in 49 CFR 171-177.

[NOTE: If additional space is needed for waste descriptions, enter these additional descriptions in Item 28 on the continuation sheet.]

Item 12. Containers (No. and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

**Table I–Types of Containers**

| Abbreviation | Type of Container |
|---|---|
| DM | Metal drums, barrels, kegs |
| DW | Wooden drums, barrels, kegs |
| DF | Fiberboard or plastic drums, barrels, kegs |
| TP | Tanks portable |
| TT | Cargo tanks (tank trucks) |
| TC | Tank cars |
| DT | Dump truck |
| CY | Cylinders |
| CM | Metal boxes, cartons, cases (including roll-offs) |
| CW | Wooden boxes, cartons, cases |
| CF | Fiber or plastic boxes, cartons, cases |
| BA | Burlap, cloth, paper, or plastic bags |

Item 13. Total Quantity

Enter the total quantity of waste described on each line.

Item 14. Unit (Wt./Vol.)

Enter the appropriate abbreviation from Table II (below) for the unit of measure.

**Table II–Units of Measure**

| Abbreviation | Unit of Measure |
|---|---|
| G | Gallons (liquids only) |

| | |
|---|---|
| P | Pounds |
| T | Tons (2000 lbs) |
| Y | Cubic yards |
| L | Liters (liquids only) |
| K | Kilograms |
| M | Metric tons (1000 kg) |
| N | Cubic meters |

Item 15. Special Handling Instructions and Additional Information

Generators may use this space to indicate special transportation, treatment, storage, or disposal information or bill of lading information. States may not require additional, new, or different information in this space. For international shipments, generators must enter in this space the point of departure (city and state) for those shipments destined for treatment, storage, or disposal outside the jurisdiction of the United States.

Item 16. Generator's Certification

The generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water, or air) inserted in the space below. If another mode in addition to the highway mode is used, enter the appropriate additional mode (e.g., and rail) in the space below.

Primary exporters shipping hazardous wastes to a facility located outside of the United States must add to the end of the first sentence of the certification the following words "and conforms to the terms of the EPA Acknowledgment of Consent to the shipment." In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements.

Generators may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator certifications.

[NOTE: All of the above information except the handwritten signature required in Item 16 may be preprinted.]

B. Transporters

Item 17. Transporter 1 Acknowledgement of Receipt of Materials

Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Item 18. Transporter 2 Acknowledgement of Receipt of Materials

Enter, if applicable, the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

[NOTE: International Shipments–Transporter Responsibilities.
**Exports**: Transporters must sign and enter the date the waste left the United States in Item 15.
**Imports**: Shipments of hazardous waste regulated by RCRA and transported into the United States from another country must, upon entry, be accompanied by the U.S. EPA Uniform Hazardous Waste Manifest. Transporters who transport hazardous waste into the United States from another country are responsible for completing the Manifest (LAC 33:V.1301.E).]

C. Owners and Operators of Treatment, Storage, or Disposal Facilities

Item 19. Discrepancy Indication Space

The authorized representative of the designated (or alternate) facility's owner or operator must note in this space any significant discrepancy between the waste described on the manifest and the waste actually received at the facility. Owners and operators of facilities located in unauthorized states (i.e., the U.S. EPA administers the hazardous waste management program) who cannot resolve significant discrepancies within 15 days of receiving the waste must submit to their regional administrator (see list below) a letter with a copy of the manifest at issue describing the discrepancy and attempts to reconcile it (LAC 33:V.1516.C and 4355). Owners and operators of facilities located in authorized states (i.e., those states that have received authorization from the U.S. EPA to administer the hazardous waste program) should contact their state agency for information on state discrepancy report requirements.

| EPA Regional Administrators |
|---|
| Regional Administrator, U.S. EPA Region I,<br>J.F. Kennedy Federal Building, Boston, MA 02203 |
| Regional Administrator, U.S. EPA Region II,<br>26 Federal Plaza, New York, NY 10278 |
| Regional Administrator, U.S. EPA Region III,<br>6th and Walnut Streets, Philadelphia, PA 19106 |
| Regional Administrator, U.S. EPA Region IV,<br>345 Courtland Street, NE, Atlanta, GA 30365 |
| Regional Administrator, U.S. EPA Region V,<br>77 West Jackson Boulevard, Chicago, IL 60604 |
| Regional Administrator, U.S. EPA Region VI,<br>1201 Elm Street, Dallas, TX 75270 |
| Regional Administrator, U.S. EPA Region VII,<br>324 East 11th Street, Kansas City, MO 64106 |
| Regional Administrator, U.S. EPA Region VIII,<br>1860 Lincoln Street, Denver, CO 80295 |
| Regional Administrator, U.S. EPA Region IX,<br>215 Freemont Street, San Francisco, CA 94105 |
| Regional Administrator, U.S. EPA Region X,<br>1200 Sixth Avenue, Seattle, WA 98101 |

Item 20. Facility Owner or Operator: Certification of Receipt of Hazardous Materials Covered by This Manifest Except as Noted in Item 19

Print or type the name of the person accepting the waste on behalf of the owner or operator of the facility. That person must acknowledge acceptance of the waste

described on the Manifest by signing and entering the date of receipt. Generators must also complete items A-K (the shaded portions of the manifest).

II. Instructions—Continuation Sheet

Read all instructions before completing this form. This form has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may also be used, press down hard. This form must be used as a continuation sheet to DEQ Form HW-3 if:

more than two transporters are to be used to transport the waste; or

more space is required for the U.S. DOT description and related information in Item 11 of DEQ Form HW-3.

Federal and state regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, or disposal facilities to use DEQ Form HW-3 and, if necessary, this continuation sheet for both inter- and intrastate transportation.

A. Generators

Item 21. Generator's U.S. EPA ID Number—Manifest Document Number

Enter the generator's U.S. EPA 12-digit identification number and the unique five digit number assigned to this Manifest (e.g., 00001) as it appears in Item 1 on the first page of the manifest.

Item 22. Page ___

Enter the page number of this continuation sheet.

Item 23. Generator's Name

Enter the generator's name as it appears in Item 3 on the first page of the manifest.

Item 24. Transporter—Company Name

If additional transporters are used to transport the waste described on this manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "transporter" the order of the transporter. For example, Transporter 3 Company Name. Each Continuation Sheet will record the names of two additional transporters.

Item 25. U.S. EPA ID Number

Enter the U.S. EPA 12-digit identification number of the transporter described in Item 24.

Item 26. Transporter—Company Name

If additional transporters are used to transport the waste described on this manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "transporter" the order of the transporter. For example, Transporter 4 Company Name. Each continuation sheet will record the names of two additional transporters.

Item 27. U.S. EPA ID Number

Enter the U.S. EPA 12-digit identification number of the transporter described in Item 26.

Item 28. U.S. DOT Description Including Proper Shipping Name, Hazardous Class, and ID Number (UN/NA). Refer to Item 11.

Item 29. Containers (No. and Type). Refer to Item 12.

Item 30. Total Quantity. Refer to Item 13.

Item 31. Unit (Wt./Vol.). Refer to Item 14.

Item 32. Special Handling Instructions

Generators may use this space to indicate special transportation, treatment, storage, or disposal information or bill of lading information.

B. Transporters

Item 33. Transporter—Acknowledgement of Receipt of Materials

Enter the same number of the transporter as identified in Item 24. Enter also the name of the person accepting the waste on behalf of the transporter (Company Name) identified in Item 24. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

Item 34. Transporter—Acknowledgement of Receipt of Materials

Enter the same number of the transporter as identified in Item 26. Enter also the name of the person accepting the waste on behalf of the transporter (Company Name) identified in Item 26. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

C. Owners And Operators of Treatment, Storage, or Disposal Facilities

Item 35. Discrepancy Indication Space. Refer to Item 19.

D. Generators must also complete items L-R (the shaded portions of the continuation sheet).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 27:42 (January 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2103 (October 2007).

# Chapter 13. Transporters

## §1301. Applicability

A. The revised manifest form and procedures in 40 CFR Part 262 and the Appendix to Part 262 shall be effective as of September 5, 2006. This Chapter establishes standards that apply to persons transporting hazardous waste within the state of Louisiana if the transportation requires a manifest under LAC 33:V.1516.

B. The regulations set forth in LAC 33:V.Chapters 11 and 13 establish the responsibilities of generators and transporters in the handling, transportation and management of hazardous waste. In these regulations, Louisiana has expressly adopted certain regulations of the Department of Public Safety (DPS). These regulations concern, among other things, labeling, marking, placarding, using proper containers and reporting discharges. The department has adopted these regulations in order to satisfy its statutory obligation to promulgate regulations which are necessary to protect human health and the environment in the transportation of hazardous waste. The department adoption of these DPS regulations ensures consistency with the requirements of DPS and thus avoids the establishment of duplicative or conflicting requirements with respect to these matters.

C. Transporters of hazardous waste are cautioned that DPS's regulations are fully applicable to their activities and enforceable by DPS. The department and DPS worked together to develop standards for transporters of hazardous waste in order to avoid conflicting requirements. Regardless of DPS's action, the department retains its authority to enforce these regulations.

D. This Chapter does not apply to:

1. on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities; and

2. any person who offers for transportation or who transports household refuse or household septic tank pumping from the site where it was generated, if those materials are not transported with any other hazardous waste.

E. A transporter of hazardous waste must also comply with LAC 33:V.Chapter 11 if he transports hazardous waste into Louisiana from abroad or mixes hazardous wastes of different United States Department of Transportation shipping descriptions by placing them into a single container.

F. A transporter of hazardous waste subject to the manifesting requirements of LAC 33:V.Chapter 11 or subject to the waste management standards of LAC 33:V.Chapter 38 that is being imported from or exported to any of the countries listed in LAC 33:V.1113.I.1.a for purposes of recovery is subject to this Chapter and to all other relevant requirements of LAC 33:V.Chapter 11.Subchapter B including, but not limited to, LAC 33:V.1127.D for tracking documents.

G. The regulations in this Chapter do not apply to transportation during an explosives or munitions emergency response conducted in accordance with LAC 33:V.1501.C.7.a.iv or d or 4307 and 305.C.12 or 13.

H. LAC 33:V.5305 identifies how the requirements of this Chapter apply to military munitions classified as solid waste under LAC 33:V.5303.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:666 (April 1998), LR 24:1694 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 32:824 (May 2006).

## §1303. EPA Identification Number

A. A transporter must not transport hazardous wastes without having received an EPA identification number.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984).

## §1305. Transfer Facility Requirements

A. A transporter who stores manifested shipments of hazardous waste at a transfer facility for more than 10 days is considered a storage facility and is required to obtain a permit in compliance with the conditions of these regulations.

B. If hazardous wastes from different generators or separate wastes from the same generator become mixed after being accepted by the transporter, the transporter shall also comply with applicable federal or state generator standards unless the transporter shows that the information on the manifests still identifies the hazardous waste.

C. A transporter storing manifested shipments of hazardous waste in containers meeting the requirements applicable to the LDPS regulations on packaging under LAC 33:V.Subpart 2.Chapter 101 at a transfer facility for a period of 10 days or less is not subject to regulation under LAC 33:V.Chapters 1-7, 15-29, 31-38, and 43 with respect to the storage of those wastes, except as required to obtain approval by the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), repromulgated LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1511 (November 1997), LR 24:1694 (September 1998).

## §1307. The Manifest System

A. A transporter may not accept hazardous waste from a generator or another transporter unless it is accompanied by a manifest, signed by the generator in accordance with the provisions of LAC 33:V.1107. The transportation of any hazardous wastes without a manifest shall be deemed a violation of these regulations and the Act. In the case of exports other than those subject to LAC 33:V.1125, a transporter may not accept such waste from a primary exporter or other person:

1. if he knows the shipment does not conform to the EPA Acknowledgment of Consent; and

2. unless, in addition to a manifest signed by the generator, such waste is also accompanied by an EPA Acknowledgment of Consent that is attached to the manifest. For exports of hazardous waste subject to the requirements of LAC 33:V.1125, a transporter may not accept hazardous waste without a tracking document that includes all information required by LAC 33:V.1127.D.

B. Before transporting the hazardous waste, the transporter must sign and date the manifest acknowledging acceptance of the hazardous waste from the generator or other transporter. The transporter must return a signed copy to the generator or other transporter before leaving the generator's property or other transporter's facility.

C. The transporter must ensure that the manifest accompanies the hazardous waste, except as provided for bulk water or rail transport in LAC 33:V.1307.E and F. In the case of exports, the transporter must ensure that a copy of the EPA Acknowledgment of Consent also accompanies the hazardous waste.

D. A transporter who delivers a hazardous waste to another transporter or to the designated facility must:

1. obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the designated facility on the manifest;

2. retain one copy of the manifest in accordance with LAC 33:V.1311; and

3. give the remaining copies of the manifest to the accepting transporter or designated facility.

E. The requirements of LAC 33:V.1307.C, D and F do not apply to water (bulk shipment) transporters if:

1. the hazardous waste is delivered by water (bulk shipment) to the designated facility;

2. a shipping paper containing all the information required on the manifest (excluding the EPA identification number, generator certification and signature) and, for exports, an EPA Acknowledgment of Consent accompanies the hazardous waste;

3. the delivering transporter obtains the date of delivery and handwritten signature of the owner and operator of the designated facility on either the manifest or the shipping paper;

4. the person delivering the hazardous waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility; and

5. a copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with LAC 33:V.1311.B.

F. For shipments involving rail transportation, the requirements of LAC 33:V.1307.C, D and E do not apply and the following requirements do apply.

1. When accepting hazardous waste from a non-rail transporter, the initial rail transporter must:

a. sign and date the manifest acknowledging acceptance of the hazardous waste;

b. return a signed copy of the manifest to the non-rail transporter;

c. forward at least three copies of the manifest to:

i. the next non-rail transporter, if any;

ii. the designated facility, if the shipment is delivered to that facility by rail; or

iii. the last rail transporter designated to handle the waste in the United States;

d. retain one copy of the manifest and rail shipping paper in accordance with LAC 33:V.1311;

2. rail transporters must ensure that a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator certification, and signatures) and, for exports, an EPA Acknowledgment of Consent accompanies the hazardous waste at all times;

[NOTE: Intermediate rail transporters are not required to sign either the manifest or shipping paper.]

3. when delivering hazardous waste to the designated facility, a rail transporter must:

a. obtain the date of delivery and handwritten signature of the owner or operator of the designated facility on the manifest or the shipping paper (if the manifest has not been received by the facility); and

b. retain a copy of the manifest or signed shipping paper in accordance with LAC 33:V.1311;

4. when delivering hazardous waste to a non-rail transporter, a rail transporter must:

a. obtain the date of delivery and the handwritten signature of the next non-rail transporter on the manifest; and

b. retain a copy of the manifest in accordance with LAC 33:V.1311; and

5. before accepting hazardous waste from a rail transporter, a non-rail transporter must sign and date the manifest or the shipping paper and provide a copy to the rail transporter.

G. Transporters who transport hazardous waste out of the United States must:

1. sign and date the manifest in the International Shipments block to indicate the date that the shipment left the United States;

2. retain one copy in accordance with LAC 33:V.1311.D;

3. return a signed copy of the manifest to the generator; and

4. give a copy of the manifest to a United States Customs official at the point of departure from the United States.

H. A transporter transporting hazardous waste from a generator who generates greater than 100 kg, but less than 1000 kg, of hazardous waste in a calendar month need not comply with the requirements of this Section or those of LAC 33:V.1311 provided that:

1. the waste is being transported in accordance with a reclamation agreement as provided for in LAC 33:V.1107.A.4;

2. the transporter records, on a log or shipping paper, the following information for each shipment:

a. the name, address, and EPA identification number of the generator of the waste;

b. the quantity of waste accepted;

c. all DOT-required shipping information; and

d. the date the waste is accepted;

3. the transporter carries this record when transporting waste to the reclamation facility; and

4. the transporter retains these records for a period of at least three years after termination or expiration of the agreement.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990), LR 18:1256 (November 1992), LR 20:1109 (October 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:666 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:710 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 32:824 (May 2006).

## §1309. Compliance with the Manifest

A. The transporter must deliver the entire quantity of hazardous waste which he has accepted from a generator or a transporter to:

1. the designated facility listed on the manifest;

2. the alternate designated facility, if the hazardous waste cannot be delivered to the designated facility because an emergency prevents delivery, and such action is approved by the administrative authority;

3. the next designated transporter; or

4. the place outside the United States designated by the generator.

[NOTE: No person may deliver a hazardous waste to a place other than the permitted facility shown on the manifest.]

B. If the hazardous waste cannot be delivered in accordance with Subsection A of this Section, the transporter shall contact the generator for further directions and shall revise the manifest according to the generator's instructions. If the hazardous waste is rejected by the designated facility while the transporter is on the facility's premises, then the transporter must obtain the following:

1. for a partial load rejection or for regulated quantities of container residues, a copy of the original manifest that includes the date and the facility's signature, the manifest tracking number of the new manifest that will accompany the shipment, and a description of the partial rejection or container residue in the Discrepancy block of the original manifest. The transporter shall retain a copy of this manifest and give remaining copies of the original to the rejecting facility. If the transporter is forwarding the rejected part of the shipment or a regulated container residue to an alternate facility or returning it to the generator, the transporter shall obtain a new manifest to accompany the shipment, and the new manifest must include all of the required information;

2. for a full load rejection that will be taken back by the transporter, a copy of the original manifest which includes the date and the rejecting facility's signature and that attests to the rejection, the description of the rejection in the Discrepancy block, and the name, address, phone number, and ID number for the alternate facility to which the shipment must be delivered. The transporter shall retain a copy of the manifest and give a copy to the rejecting facility. If the original manifest is not used, the transporter must obtain a new manifest for shipment.

C. A transporter shall not transport a shipment of hazardous waste in containers unless each hazardous waste container is marked and labeled as required in LAC 33:V.1109.B and C. If the label is lost or detached, the transporter shall replace it based on the information taken from the manifest for the shipment.

D. A transporter shall not transport a container that is leaking or appears to be damaged, except to the nearest place where the transport vehicle can be safely positioned without unnecessarily endangering other transport vehicles or the environment. The transporter will then make the repairs necessary to remedy the unsafe condition.

E. A transporter shall not accept hazardous wastes consisting of a material or mixtures of materials prohibited under DPS regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2472 (November 2000), LR 27:44 (January 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 32:825 (May 2006).

## §1311. Recordkeeping

A. A transporter of hazardous waste must keep a copy of the manifest signed by the generator, himself, and the next designated transporter or the owner or operator of the designated facility for a period of three years from the date the hazardous waste was accepted by the initial transporter.

B. For shipments delivered to the designated facility by water (bulk shipment), each water (bulk shipment) transporter must retain a copy of the shipping paper containing all the information required in LAC 33:V.1307.E.2 for a period of three years from the date the hazardous waste was accepted by the initial transporter.

C. For shipments of hazardous waste by rail:

1. the initial rail transporter must keep a copy of the manifest and shipping paper with all the information required in LAC 33:V.1307.F.2 for a period of three years from the date the hazardous waste was accepted by the initial transporter; and

2. the final rail transporter must keep a copy of the signed manifest (or the shipping paper if signed by the designated facility in lieu of the manifest) for a period of three years from the date the hazardous waste was accepted by the initial transporter.

[NOTE: Intermediate rail transporters are not required to keep records pursuant to these regulations.]

D. A transporter who transports hazardous waste out of the United States must keep a copy of the manifest, indicating that the hazardous waste left the United States, for a period of three years from the date the hazardous waste was accepted by the initial transporter.

E. The periods of retention referred to in this Section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984).

## §1313. Financial Responsibility

A. Each transporter of hazardous wastes shall acquire continuous coverage for all of its transport vehicles regulated by these rules and regulations at a minimum coverage of $300,000 per vehicle public liability and $200,000 per vehicle damage.

B. The financial responsibility required by this Section may be established by any one or a combination of the following:

1. evidence of liability insurance;

2. self-insurance with a level not more than 20 percent of equity; or

3. other evidence of financial responsibility acceptable to the secretary of public safety.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §1315. Spills

A. Contingency Plan. Each transporter shall prepare a spill contingency plan. The spill contingency plan must include the information specified in LAC 33:V.1513.B (except LAC 33:V.1513.B.1), C, E, and F. The contingency plan shall include a section describing emergency response procedures as specified in LAC 33:V.1513.F.

B. Personnel Training. All transporters shall institute a personnel training program as specified in LAC 33:V.1515. This program shall apply to all personnel who would reasonably be expected to handle hazardous waste containers or tanks or deal with spills (e.g., drivers and dispatchers).

C. In the event of a discharge of hazardous waste during transportation, the transporter must take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and dike the discharge area).

D. If a discharge of hazardous waste occurs during transportation and an official acting within the scope of his official responsibilities determines that immediate removal of the waste is necessary to protect human health or the environment, that official may authorize the removal of the waste by transporters who do not have EPA identification numbers.

E. An air, rail, highway, or water transporter who has discharged hazardous waste must:

1. give notice, if required by 49 CFR 171.15, to the National Response Center by telephone at (800) 424-8802 or (202) 267-2675; and

2. report in writing, as required by 49 CFR 171.16, to the Information Systems Manager, PHH-63, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, DC 20590-0001, or send an electronic Hazardous Materials Incident Report to the Information System Manager, DHM-63, Research and Special Programs Administration, Department of Transportation, Washington, DC 20590-0001. An electronic Hazardous Materials Incident Report form can be obtained at http://hazmat.dot.gov.

F. As required by 33 CFR 153.203 for oil and hazardous substance, a water (bulk shipment) transporter who has discharged hazardous waste must immediately notify the National Response Center (NRC), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593 by telephone at (800) 424-8802 or (202) 267-2675.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), amended by the Office of the Secretary, Legal Affairs Division, LR 34:72 (January 2008).

### §1317. Discharge Cleanup

A. A transporter must clean up any hazardous waste discharge that occurs during transportation and take such action as may be required by the administrative authority so that the hazardous waste discharge no longer presents a hazard to human health or the environment. The transporter becomes the generator of the waste for the purpose of cleanup, unless such responsibility is transferred to the owner of the material, or other responsible parties.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §1319. Use and Reuse of Containers

A. A container may be used for the shipment of hazardous waste only to the extent permitted under the regulations of the Department of Public Safety. A permitted container may be reused only as provided in LAC 33:V.1319.B.

B. A package marked "NRC" or "STC" according to the specification requirements in the regulations of the Department of Public Safety may be reused only one time for the shipment of hazardous wastes, under the following conditions:

1. the material is packaged, marked, and labeled in accordance with the regulations of the Department of Public Safety;

2. transportation is by highway only;

3. the package is transported only after being sealed for at least 24 hours, is inspected for leakage immediately before being transported; or

4. the package is loaded by the shipper and unloaded by the consignee, unless the motor carrier is a private or contract carrier.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of the Secretary, Legal Affairs Division, LR 34:73 (January 2008).

### §1321. Hazardous Waste That Is Also a Hazardous Material

A. If a *hazardous waste*, as defined in these rules and regulations, also meets the definition of hazardous material, the regulations of the Department of Public Safety also apply.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §1323. Vehicle Markings and Placards

A. Markings. No person may transport a hazardous waste unless the transport vehicle is marked to display:

1. the name or trademark of the carrier operating the vehicle;

2. the city or place in which the carrier has its principal office or in which the vehicle is customarily based; and

3. the name of the person operating the vehicle. The name of a person other than the operating carrier may appear on the vehicle as long as the words "operated by" immediately precedes the information required by LAC 33:V.1323.A.1 and A.2. (Other identifying information may be displayed on the vehicle if it is not inconsistent with the information required by this Paragraph.)

B. The marking required by LAC 33:V.1323.A must:

1. appear on both sides of the vehicle;

2. be in letters that contrast sharply in color with the background;

3. be readily legible during daylight hours from a distance of at least 50 feet while the vehicle is stationary; and

4. be maintained in a manner that retains the legibility required by LAC 33:V.1323.B. (The marking may be a removable device.)

C. Placarding. A transporter may not move a transport vehicle containing a hazardous waste which is also a hazardous material unless the vehicle is placarded with placards in accordance with the regulations of the Department of Public Safety or such other regulations as may be prescribed by the secretary of public safety for placarding vehicles carrying a hazardous material.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## Chapter 15. Treatment, Storage, and Disposal Facilities

### §1501. Applicability

A. The regulations in this Chapter apply to owners and operators of all hazardous waste facilities, except as provided in LAC 33:V.1501.C. LAC 33:V.1503.B.3 applies only to facilities subject to regulations under LAC 33:V. Chapters 19, 21, 23, 25, 27, 29, 31, or 32.

B. Except as specifically authorized by the terms and conditions of a permit issued under these rules and regulations, the construction and operation of a facility to treat, store, or dispose of hazardous wastes in violation of

the standards established by this Section shall be a violation of the Act enforceable pursuant to LAC 33:V.107 of these regulations and R.S. 30:1073.

C. The requirements of this Chapter do not apply to:

1. the owner or operator of a facility permitted, licensed, or registered to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation by LAC 33:V.108;

2. the owner or operator of a facility managing recycled material described in LAC 33:V.4105.A (except to the extent they are referred to in LAC 33:V.Chapter 30 or 40 or LAC 33:V.4139, 4141, 4143, or 4145);

3. Reserved;

4. a farmer disposing of waste pesticides from his own use as provided in LAC 33:V.1101.D;

5. the owner or operator of a *totally enclosed treatment facility* (see LAC 33:V.109);

6. the owner or operator of an *elementary neutralization unit* or *wastewater treatment unit* (see LAC 33:V.109) provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 High TOC Subcategory defined in LAC 33:V.2299.Appendix, Table 2, Treatment Standards for Hazardous Wastes) or reactive (D003) waste to remove the characteristic before land disposal, the owner/operator must comply with the requirements set out in LAC 33:V.1517.B;

7.a. except as provided in Subparagraph C.7.b of this Section, a person engaged in treatment or containment activities during immediate response to any of the following situations:

i. a discharge of a hazardous waste;

ii. an imminent and substantial threat of a discharge of hazardous waste;

iii. a discharge of a material that, when discharged, becomes a hazardous waste; or

iv. an immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an *explosive* or *munitions emergency response specialist* as defined in LAC 33:V.109;

b. an owner or operator of a facility otherwise regulated by this Chapter must comply with all applicable requirements of LAC 33:V.1511 and 1513;

c. any person who is covered by Subparagraph C.7.a of this Section and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this Chapter and 40 CFR 122-124 for those activities; and

d. in the case of an explosives or munitions emergency response, if a federal, state, tribal, or local official acting within the scope of his or her official responsibilities or an explosives or munitions emergency response specialist determines that immediate removal of the material or waste is necessary to protect human health or the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have EPA identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition;

8. a transporter storing manifested shipments of hazardous waste in containers meeting the requirements applicable to the regulations of the Department of Public Safety on packaging, at a transfer facility for a period of 10 days or less, if so approved by the administrative authority;

9. the addition of absorbent material to waste in a *container* (see LAC 33:V.109), or the addition of waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container and LAC 33:V.1517.B, 2103, and 2105 are complied with;

10. a generator accumulating waste on-site in compliance with LAC 33:V.1109.E;

11. *universal waste handlers* and *universal waste transporters* (as defined in LAC 33:V.3813) handling the wastes listed below. These handlers are subject to regulation under LAC 33:V.Chapter 38, when handling the below listed universal wastes:

a. batteries as described in LAC 33:V.3803;

b. pesticides as described in LAC 33:V.3805;

c. mercury-containing equipment as described in LAC 33:V.3807;

d. lamps as described in LAC 33:V.3809;

e. electronics as described in LAC 33:V.3810; and

f. antifreeze as described in LAC 33:V.3811; or

12. LAC 33:V.5309 identifies when the requirements of this Chapter apply to the storage of military munitions classified as solid waste under LAC 33:V.5303. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in LAC 33:V.Subpart 1.

D. The requirements of this Chapter apply to owners or operators of all facilities which treat, store, or dispose of hazardous wastes referred to in LAC 33:V.Chapter 22.

E. The requirements of this Chapter apply to a person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sanctuaries Act only to the extent they are

included in a RCRA permit by rule granted to such a person under LAC 33:V.305.D.

F. The requirements of this Chapter apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an Underground Injection Control (UIC) program approved or promulgated under the Safe Drinking Water Act only to the extent they are required by 40 CFR 144.14.

G. The requirements of this Chapter apply to the owner or operator of a POTW which treats, stores, or disposes of hazardous waste only to the extent they are included in a RCRA permit by rule granted to such a person under LAC 33:V.305.D.

H. The requirements of LAC 33:V.1105, 1503, 1504, 1507, 1509, 1511, 1513, 1515, 1517, 1519, and 3322 do not apply to remediation waste management sites. (However, some remediation waste management sites may be a part of a facility that is subject to a traditional RCRA permit because the facility is also treating, storing, or disposing of hazardous wastes that are not remediation wastes. In these cases, LAC 33:V.1509, 1511, 1513, and 3322 do apply to the facility subject to the traditional RCRA permit.) Instead of the requirements of LAC 33:V.1509, 1511, and 1513, owners or operators of remediation waste management sites must:

1. obtain an EPA identification number by applying to the administrative authority using the department's Form HW-1;

2. obtain a detailed chemical and physical analysis of a representative sample of the hazardous remediation wastes to be managed at the site. At a minimum, the analysis must contain all of the information which must be known to treat, store, or dispose of the waste according to LAC 33:V.Chapters 9-11, 15-29, and 31-37, and must be kept accurate and up to date;

3. prevent people who are unaware of the danger from entering, and minimize the possibility for unauthorized people or livestock to enter onto the active portion of the remediation waste management site, unless the owner or operator can demonstrate to the administrative authority that:

a. physical contact with the waste, structures, or equipment within the active portion of the remediation waste management site will not injure people or livestock who may enter the active portion of the remediation waste management site; and

b. disturbance of the waste or equipment by people or livestock who enter onto the active portion of the remediation waste management site will not cause a violation of the requirements of this Section;

4. inspect the remediation waste management site for malfunctions, deterioration, operator errors, and discharges that may be causing, or may lead to, a release of hazardous waste constituents to the environment, or a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment, and must remedy the problem before it leads to a human health or environmental hazard. Where a hazard is imminent or has already occurred, the owner/operator must take remedial action immediately;

5. provide personnel with classroom or on-the-job training on how to perform their duties in a way that ensures the remediation waste management site complies with the requirements of LAC 33:V.Chapters 9-11, 15-29, and 31-37, and on how to respond effectively to emergencies;

6. take precautions to prevent accidental ignition or reaction of ignitable or reactive waste, and prevent threats to human health and the environment from ignitable, reactive, and incompatible waste;

7. for remediation waste management sites subject to regulation under LAC 33:V.Chapters 19, 21, 23, 25, 27, 29, 31, and 32, the owner/operator must design, construct, operate, and maintain a unit within a 100-year floodplain to prevent washout of any hazardous waste by a 100-year flood, unless the owner/operator can meet the demonstration of LAC 33:V.1503.B;

8. not place any non-containerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine, or cave;

9. develop and maintain a construction quality assurance program for all surface impoundments, waste piles, and landfill units that are required to comply with LAC 33:V.2303.C and D, 2503.L and M, and 2903.J and K at the remediation waste management site, according to the requirements of LAC 33:V.1504;

10. develop and maintain procedures to prevent accidents and a contingency and emergency plan to control accidents that occur. These procedures must address proper design, construction, maintenance, and operation of remediation waste management units at the site. The goal of the plan must be to minimize the possibility of, and the hazards from, a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment. The plan must explain specifically how to treat, store, and dispose of the hazardous remediation waste in question, and must be implemented immediately whenever a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment occurs;

11. designate at least one employee, either on the facility premises or on call (that is, available to respond to an emergency by reaching the facility quickly), to coordinate all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan;

12. develop, maintain, and implement a plan to meet the requirements in Paragraphs H.2-6 and 9-10 of this Section; and

13. maintain records documenting compliance with Paragraphs H.1-12 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992), LR 21:266 (March 1995), LR 21:944 (September 1995), LR 23:565, 568 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1106 (June 1998), LR 24:1694, 1759 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:277 (February 2000), LR 27:711 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3117 (December 2005), LR 32:606 (April 2006), LR 34:623 (April 2008).

## §1503. Site Requirements

A. Geology

1. Topographic Relief. The site should not have any abrupt topographic changes or means should be provided to guard against slides, slumping, or erosion.

2. Soils. The area should be covered with natural stable soils of low permeability or a means should be provided, acceptable to administrative authority, which provide a barrier to penetration of surface spills or accumulations of hazardous wastes into a subsurface strata which would have a potential effect on a fresh-water aquifer.

3. Seismic Conditions. Portions of new facilities where treatment, storage, or disposal of hazardous waste will be conducted must not be located within 61 meters (200 feet) of a fault which has had displacement in Holocene time.

B. Hydrology

1. General Requirement. Sites utilized shall be isolated by means of natural or created boundaries from adjoining land and from subsurface and surface waters.

2. Drainage. The site must have the capability to control and/or contain run-off from the maximum rainfall in 24 hours from a 25-year storm (when maximum rainfall records are not available, the design standard shall be 12 inches below 31 degrees North latitude and 9 inches above 31 degrees North latitude) and must have the capability to divert run-on from adjoining land (outside limits of hazardous waste site or if part of an industrial complex, outside limits of company property) from such a storm from the site (surface and subsurface).

3. Floodplains

a. A facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood unless the owner or operator can demonstrate to the administrative authority that:

i. procedures are in effect which will cause the waste to be removed safely, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to floodwaters; or

ii. for existing surface impoundments, waste piles, land treatment units, landfills, and miscellaneous units, no adverse effects on human health or the environment will result if washout occurs, considering:

(a). the volume and physical and chemical characteristics of the waste in the facility;

(b). the concentrations of hazardous constituents that would potentially affect surface waters as a result of washout;

(c). the impact of such concentrations on the current or potential uses of and water quality standards established for the affected surface waters; and

(d). the impact of hazardous constituents on the sediments of affected surface waters or the soils of the 100-year floodplain that could result from washout.

4. Hurricane-Prone-Areas. Sites located in an area which is historically subject to hurricanes shall be protected from the entry of water by natural or created barriers certified by a professional engineer.

5. Conformity with Existing Restrictions and Permits. Sites located in floodways or wetlands under control of the U.S. Army Corps of Engineers and/or the Coastal Zone Management Office must apply for applicable permits. However, to avoid unnecessarily long licensing periods, the department may accept and process the application with its final approval dependent upon a similar approval. Final department action on such a state permit will be taken after final action on wetlands and coastal zone permits.

6. Areas of Critical Environmental Concern. Sites located in, or adjacent to, swamps, marshes, floodplains, estuaries, designated wildlife hatchery areas, habitats of endangered species, and similar critical environmental areas shall be isolated from such areas by effective barriers which eliminate possible adverse impacts on such areas due to operation of the facility.

7. Salt Dome Formations, Salt Bed Formations, Underground Mines, and Caves. The placement of any noncontainerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine or cave is prohibited.

C. Facilities

1. Transportation. Access to sites by surface and water transportation modes shall be by roads and waterways with the capacity to accept the demands created by the facility and designed to avoid, to the extent practical, congestion, sharp turns, obstructions, or other hazards which are conducive to accidents.

2. Services. Sites shall have convenient access to required services, including: utilities, medical care, police, fire protection, and similar services, or provide these

services internally in a manner acceptable to the administrative authority.

3. Buffer Zone

a. General Requirement. Sites shall be shielded from adjoining noncompatible land uses by space, natural separation, or other means acceptable to the administrative authority.

b. Minimum Requirements. In no event shall the buffer be less than that stated for the following sites:

i. sites zoned industrially—sufficient space for security and drainage control facilities; or

ii. all other locations—200 feet between any facility (treatment pond, incinerator, tank, etc.) and property line unless a proper buffer is installed which is acceptable to the administrative authority (see LAC 33:V.2113 for container requirements).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990), LR 16:399 (May 1990), LR 18:1256 (November 1992).

## §1504. Construction Quality Assurance Program

A. CQA Program

1. A construction quality assurance (CQA) program is required for all surface impoundment, waste pile, and landfill units that are required to comply with LAC 33:V.2903.J and K, 2303.C and D, and 2503.L and M. The program must ensure that the constructed units meet or exceed all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

2. The CQA program must address the following physical components, where applicable:

a. foundations;

b. dikes;

c. low-permeability soil liners;

d. geomembranes (flexible membrane liners);

e. leachate collection and removal systems and leak detection systems; and

f. final cover systems.

B. Written CQA Plan. The owner or operator of units subject to the CQA program under LAC 33:V.1504.A must develop and implement a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:

1. identification of applicable units and a description of how they will be constructed;

2. identification of key personnel in the development and implementation of the CQA plan and CQA officer qualifications;

3. a description of inspection and sampling activities for all unit components identified in LAC 33:V.1504.A.2, including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover:

a. sampling size and locations;

b. frequency of testing;

c. data evaluation procedures;

d. acceptance and rejection criteria for construction materials;

e. plans for implementing corrective measures; and

f. data or other information to be recorded and retained in the operating record under LAC 33:V.1529.

C. Contents of Program

1. The CQA program must include observations, inspections, tests, and measurements sufficient to ensure:

a. structural stability and integrity of all components of the unit identified in LAC 33:V.1504.A.2;

b. proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit specifications and good engineering practices, and proper installation of all components (e.g., pipes) according to design specifications; and

c. conformity of all materials used with design and other material specifications under LAC 33:V.2303, 2503, and 2903.

2. The CQA program shall include test fills for compacted soil liners, using the same compaction methods as in the full-scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of LAC 33:V.2303.C.1.b, 2503.L.1.b, and 2903.J.1.b in the field. Compliance with the hydraulic conductivity requirements must be verified by using in situ testing on the constructed test fill. The administrative authority may accept an alternative demonstration, in lieu of a test fill, where data are sufficient to show that a constructed soil liner will meet the hydraulic conductivity requirements of LAC 33:V.2303.C.1.b, 2503.L.1.b, and 2903.J.1.b in the field.

D. Certification. Waste shall not be received in a unit subject to this Section until the owner or operator has submitted to the Office of Environmental Services, by certified mail or hand delivery, a certification signed by the CQA officer that the approved CQA plan has been successfully carried out, that the unit meets the requirements of LAC 33:V.2903.J or K, 2303.C or D, or 2503.L or M, and the procedure in LAC 33:V.309.L.3.b has been completed. Documentation supporting the CQA officer's certification

must be furnished to the administrative authority upon request.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2472 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2455 (October 2005), LR 33:2103 (October 2007).

## §1505. Discharges from the Site

A. General Requirements. All point-source discharges must be controlled and reported as follows:

1. water discharges, if any, must be in conformity with effluent limitations established by the Clean Water Act operating under an NPDES permit and reported as required by that permit. The NPDES Permit must be applied for prior to the issuance of a hazardous waste permit; or

2. air emissions, if any, must be in conformity with air limitations of the Clean Air Act administered by the Office of Environmental Services, operating under an Air Quality Permit as required, and reported as required by that permit. The air permit must be applied for prior to the issuance of a hazardous waste permit.

B. Surface. Offsite shipments of any hazardous waste material, containers, packaging, or similar material must be reported on a manifest and must be delivered to a permitted facility.

C. Spills

1. Any spill of hazardous waste which could possibly endanger health or adversely affect the environment off-site shall be reported to the department immediately as provided in the "Notification Regulations and Procedures for Unauthorized Discharges and Spills." (See LAC 33:I.Chapter 39.)

2. If a spill occurs on the site of a generator or TSD facility, and if that spill could endanger the public health or affect the environment off-site, the department and the Department of Public Safety have the authority to enter the site and investigate the spill. It is the responsibility of the operator to report spills of this nature to the department and the Department of Public Safety as soon as possible, as provided in LAC 33:V.1505.C.1.

3. Any spilled material or material trapped in sumps that is a hazardous waste or that will be disposed of as a hazardous waste must be cleaned up in a timely manner.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2472 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2456 (October 2005), LR 33:2103 (October 2007).

## §1507. Security

A. General Requirements. The security system shall insure that site ingress and egress by the public is controlled and that employees are protected from hazards to health resulting from contact with extremely hazardous operations.

B. Perimeter Control. The natural or created barrier to site ingress or egress around the entire perimeter of the hazardous waste area shall be continuously patrolled or monitored. Equipment will be installed, as necessary, to keep birds and wildlife off the site.

C. Entry. Each entry through the perimeter barrier shall be manned at all hours. The entry should be opened by security personnel or by an electronic system (card, code, handprint, etc. or television monitor) acceptable to the administrative authority.

D. Alternate Means of Meeting Security Requirements. Any operator may petition the administrative authority for acceptance of equivalent alternative means of meeting the requirements of LAC 33:V.1507 in whole or in part. This shall be done through submission of proof that necessary procedures for the protection of health and property are provided by other means and that representatives of local fire and police departments, if any, are adequately informed of such means.

E. Perimeter Barrier. A constructed barrier shall enclose the entire hazardous waste site and shall have the capability to deny unauthorized or unknowing ingress or egress and to prevent entry by domestic livestock.

F. Perimeter Clear Zone. A clear, lighted path shall be constructed and maintained inside the perimeter barrier to permit patrol by vehicle or foot.

G. Required entry facilities include the following:

1. gate at each entry point equipped with secure locking device;

2. gate house for guard, or electromechanical equipment permitting controlled access; and

3. floodlighting at each entry to insure a well-lighted, safe, and secure area at night.

H. Emergency Response Facilities

1. Communications. An alarm system with controls accessible to each area of potential spill, explosion, or fire; telephone contact to each facility location; two-way radios for key personnel; and

2. Fire Control. Portable fire extinguishers, decontamination facilities, fire control equipment at incinerators, mixing and treatment vats; and other fire-hazard facilities and fire hydrants (with capacity as required by state fire code) located not more than 200 feet from each fire-hazard facility.

I. Safety Control Devices

1. Moving Equipment Barriers. Steel or concrete posts or barriers capable of stopping trucks or other equipment used on the site (at maximum expected speed) shall be installed to protect all hazardous waste above-ground pipelines, valves, or other containers located adjacent to roadways.

2. Personnel Barriers. Barriers shall be installed at all locations where employees or visitors normally come in contact with ponds, lagoons, incinerators, treatment facilities, and other high-hazard locations.

J. Exterior Lighting

1. All personnel barriers shall be lighted; all vehicle barriers shall have reflectors.

2. Entry gates shall be lighted (see LAC 33:V.1507.G.3).

3. Perimeter barriers shall be lighted (see LAC 33:V.1507.B).

K. Signs. A sign with the legend "Danger - Unauthorized Personnel Keep Out" must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion but in no case shall the spacing be greater than 200-foot intervals. The legend must be written in English and in any other language predominant in the area surrounding the facility, and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

## §1509. General Inspection Requirements

A.1. The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to:

a. a release of hazardous waste; or

b. a threat to human health.

2. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

B. Inspection Schedule

1. The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

2. He must keep this schedule at the facility.

3. The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).

4. The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, a malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the terms and frequencies called for in LAC 33:V.1709, 1719, 1721, 1731, 1753, 1755, 1757, 1759, 1761, 1763, 1765, 1907, 1911, 2109, 2309, 2507, 2711, 2907, 3119, and 3205, where applicable.

[Comment: LAC 33:V.517.G requires the inspection schedule to be submitted with Part II of the permit application. The department will evaluate the schedule along with the rest of the application to ensure that it adequately protects human health and the environment. As part of this review, the department may modify or amend the schedule as may be necessary.]

C. The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals; a schedule must be set up to ensure that the problem does not lead to an environmental or human health hazard. When a hazard is imminent or has already occurred, remedial action must be taken immediately.

D. The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1695 (September 1998), LR 25:437 (March 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 34:993 (June 2008).

## §1511. Preparedness and Prevention

A. Applicability. The regulations in this Section apply to owners and operators of all hazardous waste facilities.

B. Design and Operation of a Facility. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

C. Required Equipment. All facilities must be equipped with the following, unless it can be demonstrated to the administrative authority that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

1. an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

2. a device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;

3. portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

4. water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

D. Testing and Maintenance of Equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

E. Access to Communications or Alarm System

1. Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless it can be demonstrated to the administrative authority that such a device is not required.

2. Anytime there is at least one employee on the premises while the facility is operating, he must have immediate access to a device such as a telephone, immediately available at the scene of operation, or a hand-held two-way radio, capable of summoning external emergency assistance, unless it can be demonstrated to the administrative authority that such a device is not required.

F. Required Aisle Space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the administrative authority that aisle space is not needed for any of these purposes.

G. Arrangements with Local Authorities

1. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:

a. arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

b. where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

c. agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

d. arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

2. Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §1513. Contingency Plan and Emergency Procedures

A. Purpose and Implementation of Contingency Plan

1. Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

2. A contingency plan to be implemented in the event of an emergency shall be filed with the Office of Environmental Services and, after approval, with the local fire and police departments (if any operate in the area), hospitals and emergency response teams operating in the area that are subject to call by the operator or the department.

3. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

4. The plan shall be revised each time the facility operations are changed due to expansion, change in type or quantity of waste handled, or other changes which affect the degree or type of possible emergency situation.

B. Content of Contingency Plan

1. The contingency plan must describe the actions facility personnel must take to comply with Subsections A and F of this Section in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste

or hazardous waste constituents to air, soil, or surface water at the facility.

2. If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR Part 112 or 40 CFR Part 300, or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with these requirements. The owner or operator may develop one contingency plan that meets all regulatory requirements. EPA recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan"). When modifications are made to non-RCRA provisions in an integrated contingency plan, the changes do not trigger the need for a RCRA permit modification.

3. The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services.

4. The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator, and this list must be kept up to date. When more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. For new facilities, this information must be supplied to the administrative authority at the time of certification, rather than at the time of permit application.

5. The plan must include a list of all emergency equipment (where required) at the facility, such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list and a brief outline of its capabilities.

6. The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. The plan must describe signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes.

C. Copies of Contingency Plan

1. The contingency plan must be submitted to the Office of Environmental Services with the permit application and, after modification or approval, will become a condition of any permit issued.

2. A copy of the contingency plan and all revisions to the plan must be maintained at the facility and additional copies must be submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

D. Amendment of Contingency Plan. The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

1. the facility permit is revised;

2. the plan fails in an emergency;

3. applicable regulations are revised;

4. the facility changes its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

5. the list of emergency coordinators changes; or

6. the list of emergency equipment changes.

E. Emergency Coordinator. At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures (see LAC 33:V.1513.F). This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

F. Emergency Procedures

1. Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

a. activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

b. notify appropriate state or local agencies with designated response roles if their help is needed.

2. Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifest, and, if necessary, by chemical analysis.

3. Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).

4. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, he must report his findings as follows:

a. if his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

b. he must immediately notify the state official designated as the on-scene coordinator for that geographical area and provide:

i. name and telephone number of reporter;

ii. name and address of facility;

iii. time and type of incident (e.g., release, fire);

iv. name and quantity of material(s) involved, to the extent known;

v. the extent of injuries, if any; and

vi. the possible hazards to human health or the environment, outside the facility.

5. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

6. If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

7. Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil, or surface water, or any other material that results from a release, fire, or explosion at the facility. Unless the owner or operator can demonstrate that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements.

8. The emergency coordinator must ensure that in the affected area(s) of the facility:

a. no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

b. all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

9. The owner or operator must note in the operating record the time, date, and details of any incident that requires implementation of the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to SPOC that includes:

a. name, address, and telephone number of the owner or operator;

b. name, address, and telephone number of the facility;

c. date, time, and type of incident (e.g., fire, explosion);

d. name and quantity of material(s) involved;

e. the extent of injuries, if any;

f. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and

g. estimated quantity and disposition of recovered material that resulted from the incident.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:614 (July 1990), LR 18:1256 (November 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2472 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2456 (October 2005), LR 33:2104 (October 2007), LR 34:993 (June 2008), LR 35:1879 (September 2009).

## §1515. Personnel Training

A. Instruction Program

1. Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this Section. The owner or operator must ensure that this program includes all the elements described in the document required in LAC 33:V.1515.D.3.

2. This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

3. At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

a. procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

b. key parameters for automatic waste feed cut-off systems;

c. communications or alarm systems;

d. response to fires or explosions;

e. response to groundwater contamination incidents; and

f. shutdown of operations.

4. The facility operator shall conduct training sessions to be held at regular intervals for personnel in routine plant operation and also to inform and train the plant contingency team, representatives of local fire and police departments, and emergency response teams of plant layout, location of possible hazards, emergency equipment location and operation, the evacuation plan and route, power and waste stream cut-offs, communications equipment and phone numbers of all required contacts, and other critical information and procedures.

5. For facility employees who receive emergency response training pursuant to Occupational Safety and Health Administration (OSHA) regulations in 29 CFR 1910.120(p)(8) and 1910.120(q), the facility is not required to provide separate emergency response training pursuant to this Section, provided that the overall facility training meets all the requirements of this Section.

B. Facility personnel must successfully complete the program required in LAC 33:V.1515.A within six months after the effective date of these regulations or six months after the date of their employment or assignment to a facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements in LAC 33:V.1515.A.

C. Facility personnel must take part in an annual review of the initial training required in LAC 33:V.1515.A.

D. The owner or operator must maintain the following documents and records at the facility:

1. the job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

2. a written job description for each position listed in LAC 33:V.1515.D.1. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications and duties of employees assigned to each position;

3. a written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed in LAC 33:V.1515.D.1; and

4. records documenting that the training or job experience required under LAC 33:V.1515.A, B, and C have been given to, and completed by, facility personnel.

E. Training records on current personnel must be kept until closure of the facility; training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of the Secretary, Legal Affairs Division, LR 34:993 (June 2008).

## §1516. Manifest System for Treatment, Storage, and Disposal (TSD) Facilities

A. Applicability

1. The regulations in this Section apply to owners and operators of both on-site and off-site TSD facilities, except as LAC 33:V.1501 provides. Subsections B, C, and D of this Section do not apply to owners and operators that do not receive any hazardous waste from off-site sources, or to off-site facilities with respect to military munitions exempt from requirements. Paragraph C.3 of this Section only applies to permitees who treat, store, or dispose of hazardous wastes on-site where such wastes were generated.

2. The revised manifest form and procedures in 40 CFR Part 262 and the Appendix to Part 262 shall be effective as of September 5, 2006. As of September 5, 2006, Uniform Hazardous Waste Manifest forms must be obtained only from EPA-registered and approved sources as identified by the Manifest Registry. Contact the Office of Environmental Services, or access the U.S. Environmental Protection Agency's website to obtain information on EPA-registered and approved sources.

B. Use of the Manifest System

1. If a facility receives a hazardous waste accompanied by a manifest, the owner or operator, or his or her agent, shall:

a. sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received, the waste was received except as noted in the Discrepancy block, or the waste was rejected;

b. note any significant discrepancies in the manifest (as defined in Paragraph C.1 of this Section) on each copy of the manifest. The administrative authority does not intend that the owner or operator of a facility whose procedures under LAC 33:V.1519.C include waste analysis must perform that analysis before signing the manifest and giving it to the transporter. Paragraph C.3 of this Section, however, requires reporting an unreconciled discrepancy discovered during later analysis;

c. immediately give the transporter at least one copy of the signed manifest;

d. within 30 working days after the delivery, send a signed copy of the manifest to the generator; and

e. retain at the facility a copy of each manifest for at least three years from the date of delivery.

2. If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste that is accompanied by a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers,

generator's certification, and signatures), the owner or operator, or his agent, shall:

a. sign and date each copy of the manifest, or the shipping paper if the manifest has not been received, to certify that the hazardous waste covered by the manifest or shipping paper was received;

b. note any significant discrepancies (as defined in Paragraph C.1 of this Section) in the manifest, or the shipping paper if the manifest has not been received, on each copy of the manifest or shipping paper. The administrative authority does not intend that the owner or operator of a facility whose procedures under LAC 33:V.1519.C include waste analysis must perform that analysis before signing the shipping paper and giving it to the transporter. Paragraph C.3 of this Section, however, requires reporting an unreconciled discrepancy discovered during later analysis;

c. immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest, or the shipping paper if the manifest has not been received;

d. within 30 days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within 30 days after delivery, the owner or operator, or his agent, must send a copy of the shipping paper, signed and dated, to the generator. LAC 33:V.1107.D.3 requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by water (bulk shipment); and

e. retain at the facility a copy of the manifest, and the shipping paper if signed in lieu of the manifest at the time of delivery, for at least three years from the date of delivery.

3. Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of LAC 33:V.1107.

4. Within three working days of the receipt of a shipment subject to LAC 33:V.Chapter 11.Subchapter B, the owner or operator of the facility must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 1200 Pennsylvania Ave, NW, Washington, DC 20460, and to competent authorities of all other concerned countries. A copy of the tracking document must be maintained at the facility for at least three years from the date of signature.

5. If a facility receives hazardous waste from a foreign source, the facility shall mail a copy of the manifest to the following address within 30 days of delivery: International Compliance Assurance Division, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW (2221A), Washington, D.C. 20460-0001. In addition, the facility must, within 30 days:

a. send a copy of the signed and dated manifest or shipping paper to the generator; and

b. determine whether the consignment state or the generator state regulates any additional wastes or requires submission of any copies of the manifest to that state.

C. Manifest Discrepancies

1. Manifest discrepancies are:

a. significant differences between the quantity or type of waste designated on the manifest and the quantity or type of waste a facility actually receives;

b. rejected wastes, either full or partial shipment, the TSD facility cannot accept; or

c. container residues exceeding the quantity for *empty containers,* as defined in LAC 33:V.109.

2. Significant discrepancies in quantity are, for bulk waste, greater than 10 percent in weight and, for batch waste, variation in piece count. Discrepancies in type are those discovered through inspection or waste analysis, or toxic constituents not reported on the manifest.

3. Upon discovering a significant discrepancy, the owner or operator shall attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator shall immediately submit to the Office of Environmental Services a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

4. Rejected Wastes or Residues

a. Upon rejecting waste or identifying container residue exceeding "empty" limits, the facility shall consult the generator prior to forwarding waste to a facility that can manage it. If it is impossible to locate an alternate facility, the facility may return the rejected waste to the generator. Waste must be sent to an alternate facility or returned to the generator within 60 days of rejection.

b. While the facility is making arrangements for forwarding rejected wastes or residues, it shall ensure that either the delivering transporter retains custody of the waste, or the facility provides custody of the waste, pending delivery of the waste to the first transporter designated on the manifest prepared under Paragraph C.5 or 6 of this Section.

5. Alternate Facility

a. Except as provided in Subparagraph C.5.b of this Section, for rejected wastes or residues to be sent to an alternate facility, the facility is required to prepare a new manifest in accordance with LAC 33:V.1107 and the following instructions.

i. Write the generator’s EPA ID number in Item 1 of the new manifest. Write the generator’s name and mailing address in Item 5, or if the generator’s site address is different, write the site address in Item 5.

ii. Write the name and EPA ID number of the alternate facility in Item 8 of the new manifest.

iii. Copy the manifest tracking number in Item 4 of the old manifest to the Special Handling and Additional Information block of the new manifest, and indicate that the shipment is rejected waste or residue from the previous shipment.

iv. Copy the manifest tracking number in Item 4 of the new manifest to the manifest reference number line in the Discrepancy block of the old manifest (Item 18a).

v. Write the DOT description for the rejected waste or residue in Item 9 of the new manifest and enter the container type, quantity, and waste volume.

vi. Sign the generator's/offeror's certification to certify that the waste has been properly packaged, marked, and labeled, and is in condition for transportation.

b. For full load rejections made while the transporter remains at the facility, the facility may forward the rejected shipment to the alternate facility by completing Item 18b of the original manifest and supplying the information in the Alternate Facility block. The facility must retain a copy of this manifest for its records and give the remaining copies to the transporter. If the original manifest is not used, then the facility must use a new manifest and comply with Clauses C.5.a.i.-vi of this Section.

6. Return to Generator

a. Except as provided in Subparagraph C.6.b of this Section, for rejected wastes or residues that must be sent back to the generator, the facility is required to prepare a new manifest in accordance with LAC 33:V.1107 and the following instructions.

i. Write the facility's EPA ID number in Item 1 of new manifest. Write the generator's name and mailing address in Item 5, unless the generator's site address is different, then write the site address in Item 5.

ii. Write the name and EPA ID number of the initial generator in Item 8 of the new manifest.

iii. Copy the manifest tracking number in Item 4 of the old manifest to the Special Handling and Additional Information block of the new manifest, and indicate that the shipment is rejected waste or residue from the previous shipment.

iv. Copy the manifest tracking number in Item 4 of the new manifest to the manifest reference number line in the Discrepancy block of the old manifest (Item 18a).

v. Write the DOT description for the rejected waste or residue in Item 9 of the new manifest and enter the container type, quantity, and waste volume.

vi. Sign the generator's/offeror's certification to certify that the waste has been properly packaged, marked, and labeled, and is in condition for transportation.

b. For full load rejections made while the transporter remains at the facility, the facility may return the rejected shipment to the generator with the original manifest by completing Items 18a and 18b of the original manifest and supplying the generator's information in the Alternate Facility block. The facility must retain a copy of this manifest for its records and give the remaining copies of the manifest to the transporter. If the original manifest is not used, then the facility must use a new manifest and comply with Clauses C.6.a.i-vi of this Section.

7. If a facility rejects waste, or identifies residue that exceeds the limits for *empty containers*, as defined in LAC 33:V.109, after it has signed, dated, and returned a copy of the manifest to the delivering transporter or generator, the facility shall amend its copy of the manifest to indicate the rejected waste or residue in the Discrepancy block of the amended manifest. The facility shall also copy the manifest tracking number in Item 4 of the new manifest to the Discrepancy block of the amended manifest, and shall re-sign and date the manifest to certify that the information is amended. The facility shall retain the amended manifest for at least three years, and shall send a copy of the amended manifest to the transporter and generator that received copies prior to amendment within 30 days.

D. Unmanifested Waste Report. If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described in LAC 33:V.1307.E.2, and if the waste is not excluded from the manifest requirements by LAC 33:V.108, then the owner or operator must prepare and submit a single copy of a report to the administrative authority within 15 days after receiving the waste. The unmanifested waste report must be submitted to the Office of Environmental Services. The report must be designated "Unmanifested Waste Report" and include the following information:

1. the EPA identification number, name, and address of the facility;

2. the date the facility received the waste;

3. the EPA identification number, name, and address of the generator and the transporter, if available;

4. a description and the quantity of each unmanifested hazardous waste the facility received;

5. the method of treatment, storage, or disposal for each hazardous waste;

6. the certification signed by the owner or operator of the facility, or his authorized representative; and

7. a brief explanation of why the waste was unmanifested, if known.

[Comment: Small quantities of hazardous waste are excluded from regulation under LAC 33:V.Chapters 15-21, 23-29, and 31-37 and do not require a manifest. Where a facility receives unmanifested hazardous wastes, the department suggests that the owner or operator obtain from each generator a certification that the waste qualifies for exclusion. Otherwise, the department suggests that the owner or operator file an unmanifested waste report for the hazardous waste movement.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 32:825 (May 2006), amended LR 33:2104 (October 2007), LR 34:623 (April 2008), LR 34:1012 (June 2008).

## §1517. General Requirements for Ignitable, Reactive, or Incompatible Wastes

A. The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must restrict smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

B. The owner or operator of a facility that treats, stores, or disposes of ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:

1. generate extreme heat or pressure, fire or explosions, or violent reactions;

2. produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;

3. produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

4. damage the structural integrity of the device or facility; and

5. through other like means threaten human health or the environment.

C. In landfills and burial sites, incompatible wastes shall be adequately separated to avoid mixing of the wastes during operation or after closure.

D. Treatment and storage facilities containing ignitable, reactive, or incompatible wastes shall be sufficiently separated or protected to prevent mixing, ignition, or reaction as a result of a spill, tank failure, or other cause. Protection shall include use of container materials compatible with the wastes contained therein.

E. When required to comply with LAC 33:V.1517.A and B, the owner or operator must document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of the Secretary, Legal Affairs Division, LR 34:73 (January 2008).

## §1519. General Waste Analysis

A. Hazardous Waste Chemical and Physical Analysis

1. Before an owner or operator treats, stores, or disposes of any hazardous waste, or non-hazardous wastes if applicable under LAC 33:V.3513.D, he or she must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with all requirements of LAC 33:V.Chapters 15 and 22.

2. The analysis may include data developed under LAC 33:V.Chapter 49 and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes.

[Comment: For example, the facility's records of analyses performed on the waste before the effective date of these regulations, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with Paragraph A.1 of this Section. The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part of the information required by Paragraph A.1 of this Section, except as otherwise specified in LAC 33:V.2247.A and A.1. If the generator does not supply the information and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this Section.]

3. The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:

a. when the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste or nonhazardous waste if applicable under LAC 33:V.3513.D, has changed; and

b. for off-site facilities, when the results of the inspection required in LAC 33:V.1519.A.4 indicate that the hazardous waste received at the facility does not match the waste designated in the accompanying manifest or shipping paper.

4. The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

B. The owner or operator must develop and follow a written waste analysis plan that describes the procedures that he or she will carry out to comply with LAC 33:V.1519.A. He or she must keep this plan at the facility. At a minimum, the plan must specify:

1. the parameters for which each hazardous waste, or non-hazardous waste if applicable under LAC 33:V.3513.D, will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will

provide sufficient information on the waste's properties to comply with LAC 33:V.1519.A);

2. the test methods as specified in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846 as incorporated by reference at LAC 33:V.110, or an equivalent method approved by the administrative authority, which will be used to test for these parameters; and

3. the sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using a method approved by the administrative authority;

[Comment: See LAC 33:V.105.I for related discussion.]

4. the plan must further specify the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date;

5. the Quality Assurance and Quality Control (QA/QC) procedures used to ensure the waste sampling and analysis are satisfactory;

6. the plan must further specify for off-site facilities the waste analyses that hazardous waste generators have agreed to supply; and

7. where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in LAC 33:V.1517, 1711.D, 1741.D, 1753, 2515, 3107, and 2245;

8. for surface impoundments exempted from land disposal prohibitions under LAC 33:V.2237, the procedures and schedules for:

a. the sampling of impoundment contents;

b. the analysis of test data; and

c. the annual removal of residues which are not delisted under LAC 33:V.105.M or which exhibit a characteristic of hazardous waste and either:

i. do not meet applicable treatment standards of LAC 33:V.Chapter 22.Subchapters A and B; or

ii. where no treatment standards have been established:

(a). such residues are prohibited from land disposal under LAC 33:V.2213; or

(b). such residues are prohibited from land disposal under LAC 33:V.2215; and

9. for owners and operators seeking an exemption to the air emission standards of LAC 33:V.Chapter 17. Subchapter C in accordance with LAC 33:V.1751:

a. if direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption; or

b. if knowledge of the waste is used for the waste determination, any information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from off-site, that is used as the basis for knowledge of the waste.

C. For off-site facilities, the required waste analysis plan must also specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

1. the procedures which will be used to determine the identity of each movement of waste managed at the facility; and

2. the sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling; (LAC 33:V.517.C requires that the waste analysis plan be submitted with Part II of the permit application.)

3. the procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container.

D. Certification. All waste analysis plans must be certified by a Louisiana licensed professional engineer (PE).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 15:378 (May 1989), LR 16:220 (March 1990), LR 17:478 (May 1991), LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 20:1109 (October 1994), LR 21:266 (March 1995), LR 21:1334 (December 1995), LR 22:818 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1695 (September 1998).

## §1521. Chemical, Physical, and Biological Treatment Facilities (Wastes Only)

In addition to the requirements listed below, a permit application shall address the technical requirements in LAC 33:V.Chapters 15, 19, 21, 29, 33, 35, and 37.

A. Below-surface basins are governed by LAC 33:V.2903.A.

B. Above-ground and mixing and other facilities in basins shall be certified by the designing engineer or manufacturer.

C. Treatment techniques shall include proper chemical analysis or data collecting such as is necessary to determine compatibility with existing treatment facilities, prevention of the release of toxic gases, and provisions for bacterial control and for safety of operating personnel.

D. Pilot or bench-scale tests or reliable operating data must be obtained for any new or altered hazardous waste

prior to introduction into an existing or new treatment sequence.

E. Storage and handling procedures insuring protection of human health and the environment must be observed for all treatment chemicals or reagents.

F. Proper design and operation of all equipment must be maintained to insure minimum spillage, foaming, or misting.

G. Reserve emergency storage must be maintained for critical process areas to insure against operational mishaps and inadvertent volumetric surges.

H. Flow safeguards and cut-offs must be included in the flow system to avoid improper operation, overflow, or treatment defects.

I. Residual sludges or by-products shall be analyzed before disposition within the treatment sequence.

J. An air monitoring system is required under LAC 33:V.3305.E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

## §1523. Surveillance and Monitoring

A. Primary responsibility for the proper handling of hazardous wastes is assumed by the industry operating under these rules and regulations and cooperating with the department in meeting the purposes of the Act. As part of this responsibility, the owner or operator of any treatment, storage, or disposal facility shall develop a schedule of routine facility inspections and shall keep a log or record of all inspections carried out thereunder. The owner or operator shall likewise develop and adhere to a waste analysis plan to be approved by the department.

B. Department surveillance and monitoring includes the following:

1. analysis of manifests and manifest reports to determine that all wastes generated are disposed of in permitted sites and that the proper disposal method has been used;

2. periodic inspections required by the permit maintenance program to insure that facilities treating, storing, and disposing of hazardous wastes are operated in conformity with the terms of the permit and these rules and regulations;

3. spot inspections and sampling by the traveling laboratory and the analytical and inspection team;

4. a systematic program to conduct or to require investigations and recording of the groundwater, leachate, and air monitoring systems;

5. response to citizen complaints and suggestions concerning operation of the system; and

6. such other procedures as may be deemed necessary by the administrative authority.

C. Violations discovered through such surveillance and monitoring shall be the subject of enforcement actions pursuant to LAC 33:V.107 of these regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §1525. Emergency Response

A. Purpose. To provide for control and clean-up of accidental spills and other emergency situations involving hazardous wastes resulting from a violation of a requirement of these regulations or the Act.

B. Program. The department, working with the Department of Public Safety, will establish the following program:

1. emergency response equipment and teams located in strategic locations;

2. emergency response plan involving a communication system, cooperation with local police and fire departments, training program based, as a minimum, on the "emergency information card," and an operations plan for each class of emergency situation; and

3. the Emergency Response Program will respond to all in-transit accidents and spills, and respond to on-site emergencies when called by the operator or in accordance with provisions of LAC 33:V.1513.F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §1527. Receiving and Monitoring Incoming Waste

A. Each site which treats, stores, or disposes of hazardous wastes generated off site shall be equipped to accomplish the following:

1. provide control of all incoming waste to prevent entry of unrecorded and unanalyzed hazardous waste; and

2. measure quantity and type by taking and analyzing a representative sample of waste received to verify the information on the manifest, and to determine proper method for handling and disposal.

B. Each facility within the site which receives hazardous wastes shall be equipped with necessary devices to record quantities, by classification or other identification, of hazardous wastes deposited into the facility system.

C. Each site shall be equipped with a central control and recordkeeping system which tabulates information from LAC 33:V.1527.A.2 and B.

D. Onsite Transfer Systems

1. All docking, mooring, loading, and unloading facilities for a hazardous waste treatment, storage, or disposal facility are considered part of the facility operation.

2. Hose couplings for truck, barge, or pipeline discharge shall be located within a natural or created containment, with an elevation above surface elevation sufficient to contain a 10-minute discharge. Groundwater protection shall be provided.

3. Hose couplings on a barge shall be in a containment area on the barge to prevent leakage from entering the waterway.

4. Hoses from a barge to the facility shall be supported by a land-based boom so that the low point of the hose is within the barge or site containment area.

5. Barge moorings shall be in a slack water area outside the navigation channel.

E. Receiving Waste from an Offsite Source. The owner or operator of a facility that receives hazardous waste from an off site source (except where the owner or operator is also the generator) must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.

F. Unmanifested Waste Reports. Any wastes presented for disposal that are not accompanied by a properly completed manifest shall be rejected. The TSD operator shall note the name of the driver, hauler, and the vehicle identification numbers. He shall notify SPOC by phone immediately and in writing within seven days of the refusal to accept the waste and provide the administrative authority with the required information.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2472 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2456 (October 2005), LR 33:2104 (October 2007).

## §1529. Operating Record and Reporting Requirements

A. The owner or operator must keep a written operating record at his facility.

B. The following information must be recorded, as it becomes available, and maintained in the operating record for three years, unless otherwise specified in Paragraphs B.1-22 of this Section:

1. a description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility, utilizing specifications in Tables 1 and 2 of this Section. This information must be maintained in the operating record until closure of the facility;

2. each hazardous waste listed in LAC 33:V.109, and each hazardous waste characteristic defined in LAC 33:V.105.B has a four-digit EPA hazardous waste number assigned to it. This number must be used for recordkeeping and reporting purposes. Where a hazardous waste contains more than one listed hazardous waste, or where more than one hazardous waste characteristic applies to the waste, the waste description must include all applicable EPA hazardous waste numbers;

3. record the estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1:

**Table 1. Units For Reporting**

| Unit of Measure | Code[1] |
|---|---|
| Gallons | G |
| Gallons per Hour | E |
| Gallons per Day | U |
| Liters | L |
| Liters per Hour | H |
| Liters per Day | V |
| Short Tons per Hour | D |
| Metric Tons per Hour | W |
| Short Tons per Day | N |
| Metric Tons per Day | S |
| Pounds per Hour | J |
| Kilograms per Hour | R |
| Cubic Yards | Y |
| Cubic Meters | C |
| Acres | B |
| Acre-feet | A |
| Hectares | Q |
| Hectare-meter | F |
| Btu's per Hour | I |
| Pounds | P |
| Short tons | T |
| Kilograms | K |
| Tons | M |

[1] Single digit symbols are used here for data processing purposes.

4. the method(s) [by handling code(s) as specified in Table 2] and date(s) of treatment, storage, or disposal:

**Table 2. Handling Codes for Treatment, Storage, and Disposal Methods**

Enter the handling code(s) listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

| | |
|---|---|
| **Storage** | |
| S01 | Container (barrel, drum, etc.) |
| S02 | Tank |
| S03 | Waste Pile |
| S04 | Surface Impoundment |
| S05 | Drip Pad |
| S06 | Containment Building (Storage) |
| S99 | Other Storage (specify) |
| **Treatment** | |
| **Thermal Treatment** | |
| T06 | Liquid injection incinerator |
| T07 | Rotary kiln incinerator |
| T08 | Fluidized bed incinerator |
| T09 | Multiple hearth incinerator |
| T10 | Infrared furnace incinerator |
| T11 | Molten salt destructor |
| T12 | Pyrolysis |
| T13 | Wet air oxidation |
| T14 | Calcination |
| T15 | Microwave discharge |
| T18 | Other (specify) |

| Table 2. Handling Codes for Treatment, Storage, and Disposal Methods | |
|---|---|
| **Chemical Treatment** | |
| T19 | Absorption mound |
| T20 | Absorption field |
| T21 | Chemical fixation |
| T22 | Chemical oxidation |
| T23 | Chemical precipitation |
| T24 | Chemical reduction |
| T25 | Chlorination |
| T26 | Chlorinolysis |
| T27 | Cyanide destruction |
| T28 | Degradation |
| T29 | Detoxification |
| T30 | Ion exchange |
| T31 | Neutralization |
| T32 | Ozonation |
| T33 | Photolysis |
| T34 | Other (specify) |
| **Physical Treatment** | |
| **Separation of Components:** | |
| T35 | Centrifugation |
| T36 | Clarification |
| T37 | Coagulation |
| T38 | Decanting |
| T39 | Encapsulation |
| T40 | Filtration |
| T41 | Flocculation |
| T42 | Flotation |
| T43 | Foaming |
| T44 | Sedimentation |
| T45 | Thickening |
| T46 | Ultrafiltration |
| T47 | Other (specify) |
| **Removal of Specific Components:** | |
| T48 | Absorption-molecular sieve |
| T49 | Activated carbon |
| T50 | Blending |
| T51 | Catalysis |
| T52 | Crystallization |
| T53 | Dialysis |
| T54 | Distillation |
| T55 | Electrodialysis |
| T56 | Electrolysis |
| T57 | Evaporation |
| T58 | High gradient magnetic separation |
| T59 | Leaching |
| T60 | Liquid ion exchange |
| T61 | Liquid-liquid extraction |
| T62 | Reverse osmosis |
| T63 | Solvent recovery |
| T64 | Stripping |
| T65 | Sand filter |
| T66 | Other (specify) |
| **Biological Treatment** | |
| T67 | Activated sludge |
| T68 | Aerobic lagoon |
| T69 | Aerobic tank |
| T70 | Anaerobic tank |
| T71 | Composting |
| T72 | Septic tank |
| T73 | Spray irrigation |
| T74 | Thickening filter |
| T75 | Trickling filter |
| T76 | Waste stabilization pond |
| T77 | Other (specify) |
| T78 | [Reserved] |
| T79 | [Reserved] |
| **Boilers and Industrial Furnaces** | |
| T80 | Boiler |
| T81 | Cement Kiln |
| T82 | Lime Kiln |

| Table 2. Handling Codes for Treatment, Storage, and Disposal Methods | |
|---|---|
| T83 | Aggregate Kiln |
| T84 | Phosphate Kiln |
| T85 | Coke Oven |
| T86 | Blast Furnace |
| T87 | Smelting, Melting, or Refining Furnace |
| T88 | Titanium Dioxide Chloride Process Oxidation Reactor |
| T89 | Methane Reforming Furnace |
| T90 | Pulping Liquor Recovery Furnace |
| T91 | Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid |
| T92 | Halogen Acid Furnaces |
| T93 | Other *Industrial Furnaces* Listed in LAC 33:V.109 (specify) |
| **Other Treatment** | |
| T94 | Containment Building (Treatment) |
| **Disposal** | |
| D79 | Underground Injection |
| D80 | Landfill |
| D81 | Land Treatment |
| D82 | Ocean Disposal |
| D83 | Surface Impoundment (to be closed as a landfill) |
| D99 | Other Disposal (specify) |
| **Miscellaneous (Chapter 32)** | |
| X01 | Open Burning/Open Detonation |
| X02 | Mechanical Processing |
| X03 | Thermal Unit |
| X04 | Geologic Repository |
| X99 | Other Chapter 32 (specify) |

5. the location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram that shows each cell or disposal area. For all facilities, this information must include cross-references to manifest document numbers, if the waste was accompanied by a manifest. This information must be maintained in the operating record until closure of the facility;

6. records and results of waste analyses and waste determinations performed as specified in these regulations and in LAC 33:V.1517, 1519, 1711, 1741, 1753, 2237.A, 2245, 2515, and 3107;

7. summary reports and details of all incidents that require implementing the contingency plan;

8. records and results of inspections required by LAC 33:V.1509.D;

9. monitoring, testing, or analytical data, and corrective action where required by LAC 33:V.1504, 1711.C-F, 1713, 1741.D-I, 1743, 1751, 1753, 1755, 1757, 1759, 1761, 1763, 1765, 1767, 1903, 1907, 1911, 2304, 2306, 2309, 2504, 2507, 2508, 2509, 2709, 2711, 2719, 2904, 2906, 2907, 3119, 3203, 3205, and Chapter 33, as well as corrective action cites. Maintain this information in the operating record for three years, except for records and results pertaining to groundwater monitoring and cleanup, which must be maintained in the operating record until closure of the facility;

10. for off-site facilities, notices to generators that the TSD facility has the appropriate permits for and will accept the waste the generator is shipping;

11. all closure cost estimates and, for disposal facilities, all post-closure cost estimates. This information must be maintained in the operating record until closure of the facility;

12. records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal prohibition granted in accordance with LAC 33:V.2239, a petition approved in accordance with LAC 33:V.2241 or 2271, a determination made under LAC 33:V.2273, or the applicable notice required by a generator under LAC 33:V.2245. This information must be maintained in the operating record until the closure of the facility;

13. for an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator under LAC 33:V.2245 or 2247;

14. for an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration, if applicable, required of the generator or the owner or operator under LAC 33:V.2245 or 2247;

15. for an off-site land disposal facility, a copy of the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator of a treatment facility under LAC 33:V.2245 or 2247, whichever is applicable;

16. for an on-site land disposal facility, the information contained in the notice required of the generator or owner or operator of a treatment facility under LAC 33:V.2245 or LAC 33:V.2247, except for the manifest number;

17. for an off-site storage facility, a copy of the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator under LAC 33:V.2245 or 2247;

18. for an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration, if applicable, required of the generator or the owner or operator under LAC 33:V.2245 or 2247;

19. a certification by the permittee no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the permittee to be economically practicable, and that the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment;

20. any records required under LAC 33:V.1501.H.13;

21. monitoring, testing, or analytical data where required by LAC 33:V.3119. This information must be maintained in the operating record for five years; and

22. certifications as required by LAC 33:V.1913.F. This information must be maintained in the operating record until closure of the facility.

C. Availability, Retention, and Disposition of Records

1. All records, including plans, required under this Part must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representatives who are duly designated by the administrative authority.

2. The retention period for all records required under this Section is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the administrative authority.

3. A copy of records of waste disposal locations and quantities must be submitted to the administrative authority and local land authority upon closure of the facility.

D. Annual Report. The owner or operator shall prepare and submit a single copy of an annual report to the Office of Environmental Services by March 1 of each year. The report form shall be used for this report. The annual report must cover facility activities during the previous calendar year. Information submitted on a more frequent basis may be included by reference or in synopsis form where it is not pertinent to reporting under LAC 33:V.1516 or monitoring reporting under LAC 33:V.3317. It shall include the following information:

1. the EPA identification number, name, and address of the facility;

2. the calendar year covered by the report;

3. for off-site facilities, the EPA identification number of each hazardous waste generator from which the facility received a hazardous waste during the year. For imported shipments, the report must give the name and address of the foreign generator;

4. a description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information must be listed by EPA identification number of each generator;

5. the method of treatment, storage, or disposal for each hazardous waste;

6. the most recent closure cost estimate under LAC 33:V.3705, and, for disposal facilities, the most recent post-closure cost estimate under LAC 33:V.3709;

7. the certification signed by the owner or operator of the facility or his authorized representative;

8. monitoring data where required;

9. for generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

10. for generators who treat, store, or dispose of hazardous waste on-site, a description of the changes in

volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984.

E. Additional Reports. In addition to submitting the annual reports and unmanifested waste reports described in LAC 33:V.1517.D and Subsection D of this Section, the owner or operator must also report to the administrative authority:

1. releases, fires, and explosions as specified in LAC 33:V.1513.F.9;

2. facility closures as specified in LAC 33:V.Chapter 35; and

3. as otherwise required by LAC 33:V.Chapters 17, 23, 25, 27, 29, and 33.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 15:378 (May 1989), LR 16:220 (March 1990), LR 16:399 (May 1990), LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 22:832 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1695 (September 1998), LR 25:437 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1799 (October 1999), LR 26:278 (February 2000), LR 26:2473 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 32:827 (May 2006), LR 33:2104 (October 2007), LR 34:623 (April 2008), LR 34:993 (June 2008), LR 34:1895 (September 2008), LR 35:1879 (September 2009).

## §1531. Required Notices

A. The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the Office of Environmental Services in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

B. The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to LAC 33:V.Chapter 11.Subchapter B must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 1200 Pennsylvania Ave, NW, Washington, DC 20460, and to the competent authorities of all other concerned countries within three working days of receipt of the shipment. The original of the signed tracking document must be maintained at the facility for at least three years.

C. The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.

D. Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of LAC 33:V.Subpart 1.

E. An owner's or operator's failure to notify the new owner or operator of the requirements in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 15:378 (May 1989), LR 16:220 (March 1990), LR 16:399 (May 1990), LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:666 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2473 (November 2000), LR 27:294 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2105 (October 2007).

## §1533. Relationship to Interim Status Standards

A. A facility owner or operator who has fully complied with the requirements for interim status, as defined in Section 3005(e) of RCRA and regulations under LAC 33:V.4301, must comply with the regulations specified in LAC 33:V.Chapter 43 in lieu of the regulations in this Chapter, until final administrative disposition of his permit application is made, except as provided under LAC 33:V.Chapter 26.

[Comment: As stated in Section 3005(a) of RCRA, after the effective date of regulations under that Section, i.e., LAC 33:V.Chapters 3, 5, and 7, the treatment, storage, or disposal of hazardous waste is prohibited except in accordance with a permit. Section 3005(e) of RCRA provides for the continued operation of an existing facility which meets certain conditions until final administrative disposition of the owner's or operator's permit application is made.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:278 (February 2000).

## §1535. Imminent Hazard Action

A. Notwithstanding any other provisions of these regulations, enforcement actions may be brought in accordance with R.S. 30:2050.8.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:278 (February 2000).

# Chapter 17. Air Emission Standards

## §1701. Applicability

A. The regulations in this Chapter apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in LAC 33:V.1501 and 1705).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1703. Definitions

A. As used in this Chapter, all terms not defined herein shall have the meanings given them in LAC 33:V.109.

*Air Stripping Operation*—a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

*Average Volatile Organic Concentration or Average VO Concentration*—the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of LAC 33:V.4727.

*Bottoms Receiver*—a container or tank used to receive and collect the heavier bottoms fractions of the distillation feedstream that remain in the liquid phase.

*Closed-Vent System*—a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

*Closure Device*—a cap, hatch, lid, plug, seal, valve, or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

*Condenser*—a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

*Connector*—flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, *connector* means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

*Continuous Recorder*—a data-recording device recording instantaneous data values at least every 15 minutes, or more frequently if reasonably available technology exists which will achieve increased recording frequency.

*Continuous Seal*—a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

*Control Device*—an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale (e.g., a primary condenser on a solvent recovery unit) is not a control device.

*Control Device Shutdown*—the cessation of operation of a control device for any purpose.

*Cover*—a device that provides a continuous barrier over the hazardous waste managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.

*Distillate Receiver*—a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

*Distillation Operation*—an operation, either batch or continuous, separating one or more feedstream(s) into two or more exit streams, each exit stream having component concentrations different from those in the feedstream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

*Double Block and Bleed System*—two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

*Enclosure*—a structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapors through a closed-vent system to a control device.

*Equipment*—each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, flange, or other connector and any control devices or systems required by this Chapter.

*External Floating Roof*—a pontoon-type or double-deck type cover that rests on the surface of the material managed in a tank with no fixed roof.

*First Attempt at Repair*—to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

*Fixed Roof*—a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.

*Flame Zone*—the portion of the combustion chamber in a boiler occupied by the flame envelope.

*Floating Membrane Cover*—a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous waste being managed in a surface impoundment.

*Floating Roof*—a cover consisting of a double deck, pontoon single deck, or internal floating cover which rests upon and is supported by the material being contained, and is equipped with a continuous seal.

*Flow Indicator*—a device that indicates whether gas flow is present in a vent stream.

*Fractionation Operation*—a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

*Hard-Piping*—pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.

*Hazardous Waste Management Unit Shutdown*—a work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit for less than 24 hours or a scheduled, routine work practice such as cessation of operation on a holiday or weekend is not a hazardous waste management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous waste management unit shutdowns.

*Hot Well*—a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

*In Gas/Vapor Service*—a piece of equipment that contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.

*In Heavy Liquid Service*—a piece of equipment that is not in gas/vapor service or in light liquid service.

*In Light Liquid Service*—a piece of equipment that contains or contacts a waste stream where the vapor pressure of one or more of the organic components in the stream is greater than 0.3 kilopascals (kPa) at 20°C, the total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20 percent by weight, and the fluid is a liquid at operating conditions.

*In Light Material Service*—the container is used to manage a material for which both of the following conditions apply: the vapor pressure of one or more of the organic constituents in the material is greater than 0.3 kilopascals (kPa) at 20°C; and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20 percent by weight.

*In Situ Sampling Systems*—nonextractive samplers or in-line samplers.

*In Vacuum Service*—equipment operating at an internal pressure that is at least 5 kPa below ambient pressure.

*Internal Floating Roof*—a cover that rests or floats on the material surface (but not necessarily in complete contact with it) inside a tank that has a fixed roof.

*Liquid-Mounted Seal*—a foam or liquid-filled primary seal mounted in contact with the hazardous waste between the tank wall and the floating roof continuously around the circumference of the tank.

*Malfunction*—any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

*Maximum Organic Vapor Pressure*—the sum of the individual organic constituent partial pressures exerted by the material contained in a tank at the maximum vapor pressure-causing conditions (e.g., temperature, agitation, pH effects of combining wastes, etc.) reasonably expected to occur in the tank. For the purpose of this Chapter, *maximum organic vapor pressure* is determined using the procedures specified in LAC 33:V.4727.

*Metallic Shoe Seal*—a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

*No Detectable Organic Emissions*—no escape of organics to the atmosphere as determined using the procedure specified in LAC 33:V.4727.

*Open-Ended Valve or Line*—any valve, except pressure relief valves, having one side of the valve seat in contact with hazardous waste and one side open to the atmosphere, either directly or through open piping.

*Point of Waste Origination*—as follows:

a. when the facility owner or operator is the generator of the hazardous waste, the point of waste origination means the point where a solid waste produced by a system, process, or waste management unit is determined to be a *hazardous waste* as defined in LAC 33:V.109; or

> [NOTE: In this case, this term is being used in a manner similar to the use of the term *point of generation* in air standards established for waste management operations under authority of the Clean Air Act in 40 CFR Parts 60, 61, and 63].

b. when the facility owner and operator are not the generator of the hazardous waste, point of waste origination

means the point where the owner or operator accepts delivery or takes possession of the hazardous waste.

*Point of Waste Treatment*—the point where a hazardous waste to be treated in accordance with LAC 33:V.4725 exits the treatment process. Any waste determination shall be made before the waste is conveyed, handled, or otherwise managed in a manner that allows the waste to volatilize to the atmosphere.

*Pressure Release*—the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

*Process Heater*—a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

*Process Vent*—any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

*Repaired*—equipment is adjusted, or otherwise altered, to eliminate a leak.

*Safety Device*—a closure device, such as a pressure relief valve, frangible disc, fusible plug, or any other type of device, which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this Chapter, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

*Sampling Connection System*—an assembly of equipment within a process or waste management unit used during periods of representative operation to take samples of the process or waste fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.

*Sensor*—a device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid level.

*Separator Tank*—a device used for separation of two immiscible liquids.

*Single-Seal System*—a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.

*Solvent Extraction Operation*—an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one or more components into the solvent.

*Start-Up*—the setting in operation of a hazardous waste management unit or control device for any purpose.

*Steam Stripping Operation*—a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

*Surge Control Tank*—a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

*Thin-Film Evaporation Operation*—a distillation operation that employs a heating surface consisting of a large-diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

*Vapor Incinerator*—any enclosed combustion device that is used for destroying organic compound vapors and does not extract energy in the form of steam or process heat.

*Vapor-Mounted Seal*—a continuous seal that is mounted such that there is a vapor space between the hazardous waste in the unit and the bottom of the seal.

*Vented*—discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading (working losses) or by natural means such as diurnal temperature changes.

*Volatile Organic Concentration or VO Concentration*—the fraction by weight of the volatile organic compounds contained in a hazardous waste expressed in terms of parts per million (ppmw) as determined by direct measurement or by knowledge of the waste in accordance with the requirements of LAC 33:V.4727. For the purpose of determining the VO concentration of a hazardous waste, organic compounds with a Henry's law constant value of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as $1.8 \times 10^{-6}$ atmospheres/gram-mole/$m^3$) at 25°C must be included. LAC 33:V.1799.Appendix, Table 1 presents a list of compounds known to have a Henry's law constant value less than the cutoff level.

*Waste Determination*—performing all applicable procedures in accordance with the requirements of LAC 33:V.4727 to determine whether a hazardous waste meets standards specified in this Chapter. Examples of a waste determination include performing the procedures in accordance with the requirements of LAC 33:V.4727 to determine the average VO concentration of a hazardous waste at the point of waste origination; the average VO concentration of a hazardous waste at the point of waste treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous waste; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous waste and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous waste in a tank and comparing the results to the applicable standards.

*Waste Stabilization Process*—any physical or chemical process used to either reduce the mobility of hazardous constituents in a hazardous waste or eliminate free liquids as determined by Test Method 9095B (Paint Filter Liquids Test) in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846 as incorporated by reference in LAC 33:V.110. A waste stabilization process includes mixing the hazardous waste with binders or other materials and curing the resulting hazardous waste and binder mixture. Other synonymous terms used to refer to this process are *waste fixation* and *waste solidification*. This does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1696 (September 1998), LR 25:437 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:278 (February 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1012 (June 2008).

# Subchapter A. Process Vents

## §1705. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in LAC 33:V.1501).

1. Except for LAC 33:V.1711.D and E, this Subchapter applies to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations of at least 10 parts per million by weight (ppmw), if these operations are conducted in one of the following:

a. a unit that is subject to the permitting requirements of LAC 33:V.Chapter 3, 5, 7, or 43;

b. a unit (including a hazardous waste recycling unit) that is not exempt from the permitting requirements under LAC 33:V.1109.E (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located on a hazardous waste management facility otherwise subject to the permitting requirements of LAC 33:V.Chapter 3, 5, 7, or 43; or

c. a unit that is exempt from permitting under the provisions of LAC 33:V.1109.E (i.e., a 90-day tank or container) and is not a recycling unit under the provisions of LAC 33:V.4105.

2. For the owner or operator of a facility subject to the requirements of this Subchapter and who received a final permit under RCRA Section 3005 and LAC 33:V.Subpart 1 prior to December 6, 1996, the requirements of this Subchapter shall be incorporated into the permit when the permit is reissued under LAC 33:V.705 or reviewed under LAC 33:V.315. Until such date when the owner or operator receives a final permit incorporating the requirements of this Subchapter, the owner or operator is subject to the requirements of LAC 33:V.Chapter 43.

[NOTE: The requirements of this Subchapter apply to process vents on hazardous waste recycling units previously exempt under LAC 33:V.4105.C. Other exemptions under LAC 33:V.105.D and 1501.C are not affected by these requirements.]

3. The requirements of this Subchapter do not apply to the process vents at a facility where the facility owner or operator certifies that all of the process vents that would otherwise be subject to this Subchapter are equipped with and operating air emission controls in accordance with the process vent requirements of an applicable Clean Air Act regulation codified under 40 CFR Part 60, Part 61, or Part 63. The documentation of compliance under regulations at 40 CFR Part 60, Part 61, or Part 63 shall be kept with, or made readily available with, the facility operating record.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 18:723 (July 1992), LR 20:1000 (September 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1698 (September 1998), LR 25:437 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:294 (March 2001), amended by the Office of Environmental Assessment, LR 31:1572 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 32:606 (April 2006).

## §1707. Standards: Process Vents

A. The owner or operator of a facility with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous wastes with organic concentrations of at least 10 ppmw shall either:

1. reduce total organic emissions from all affected process vents at the facility below 1.4 kg/h (3 lb/h) and 2.8 Mg/yr (3.1 tons/yr); or

2. reduce, by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent.

B. If the owner or operator installs a closed-vent system and control device to comply with the provisions of LAC 33:V.1707.A, the closed-vent system and control device must meet the requirements of LAC 33:V.1709.

C. Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests must conform with the requirements of LAC 33:V.1711.C.

D. When an owner or operator and the administrative authority do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in LAC 33:V.1711.C shall be used to resolve the disagreement.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1709. Standards: Closed-Vent Systems and Control Devices

A. Compliance

1. Owners or operators of closed-vent systems and control devices used to comply with provisions of LAC 33:V.Chapter 17 shall comply with the provisions of this Section.

2.a. The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this Subchapter on the effective date that the facility becomes subject to the provisions of this Subchapter must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this Subchapter for installation and start-up.

b. Any unit that begins operation after December 21, 1990, and is subject to the provisions of this Subchapter when operation begins, must comply with the rules immediately (i.e., must have control devices installed and operating on start-up of the affected unit); the 30-month implementation schedule does not apply.

c. The owner or operator of any facility in existence on the effective date of an EPA regulatory amendment that renders the facility subject to this Subchapter shall comply with all requirements of this Subchapter as soon as practicable, but no later than 30 months after the regulation's effective date. When control equipment required by this Subchapter cannot be installed and begin operation by the effective date of the regulation, the facility owner or operator shall prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for the control equipment; initiation of on-site installation of the control equipment; completion of the control equipment installation; and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this Subchapter. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

d. Owners and operators of facilities and units that become newly subject to the requirements of this Subchapter after December 8, 1997, due to an action other than those described in Subparagraph A.2.c of this Section must comply with all applicable requirements immediately (i.e., must have control devices installed and operating on the date the facility or unit becomes subject to this Subchapter; the 30-month implementation schedule does not apply).

B. Control Devices. A control device involving vapor recovery (e.g., a condenser or adsorber) shall be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of LAC 33:V.1707.A.1 for all affected process vents can be attained at an efficiency less than 95 weight percent.

C. Combustion Device. An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) shall be designed and operated to reduce the organic emissions vented to it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to 3 percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760°C. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

D. Flare

1. Visible Emissions. A flare shall be designed for and operated with no visible emissions as determined by the methods specified in LAC 33:V.1709.E.1, except for periods not to exceed a total of five minutes during any two consecutive hours.

2. Flame. A flare shall be operated with a flame present at all times, as determined by the methods specified in LAC 33:V.1709.F.2.c.

3. Combustible Heating Value. A flare shall be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted, or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas

being combusted shall be determined by the methods specified in LAC 33:V.1709.E.2.

4. Steam-Assisted or Nonassisted

a. A steam-assisted or nonassisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in LAC 33:V.1709.E.3, of less than 18.3 m/s (60 ft/s), except as provided in LAC 33:V.1709.D.4.b and c.

b. A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in LAC 33:V.1709.E.3, equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

c. A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in LAC 33:V.1709.E.3, of less than the velocity, $V_{max}$, as determined by the method specified in LAC 33:V.1709.E.4, and less than 122 m/s (400 ft/s), is allowed.

5. Air-Assisted. An air-assisted flare shall be designed and operated with an exit velocity less than the velocity, $V_{max}$, as determined by the method specified in LAC 33:V.1709.E.5.

6. Compliance. A flare used to comply with this Section shall be steam-assisted, air-assisted, or nonassisted.

E. Visible Emissions

1. Reference Method 22 in 40 CFR Part 60, Appendix A, incorporated by reference in LAC 33:III.3003, shall be used to determine the compliance of a flare with the visible emission provisions of this Subchapter. The observation period is two hours and shall be used according to Method 22.

2. The net heating value of the gas being combusted in a flare shall be calculated using the following equation.

$$H_T = K\left[\sum_{i=1}^{n} C_i H_i\right]$$

where:

$H_T$ = net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20°C

K = constant, 1.74 X $10^{-1}$ (1/ppm) (g mol/scm) (MJ/kcal), where standard temperature for (g mol/scm) is 20°C

$C_i$ = concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR Part 60, Appendix A, incorporated by reference in LAC 33:III.3003, and measured for hydrogen and carbon monoxide by ASTM D 1946-82

$H_i$ = net heat of combustion of sample component i, kcal/9 mol at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83 if published values are not available or cannot be calculated.

3. The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by the methods in LAC 33:III.Chapter 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

4. The maximum allowed velocity in m/s, $V_{max,}$ for a flare complying with LAC 33:V.1709.D.4.c shall be determined by the following equation.

$$LOG_{10}(V_{max}) = \frac{(H_T + 28.8)}{31.7}$$

where:

28.8 = constant

31.7 = constant

$H_T$ = the net heating value as determined in LAC 33:V.1709.E.2

5. The maximum allowed velocity in m/s, $V_{max}$, for an air-assisted flare shall be determined by the following equation.

$$V_{max} = 8.706 + 0.7084(H_T)$$

where:

8.706 = constant

0.7084 = constant

$H_T$ = the net heating value as determined in LAC 33:V.1709.E.2

F. Inspection and Monitoring. The owner or operator shall monitor and inspect each control device required to comply with this Section to ensure proper operation and maintenance of the control device by implementing the following requirements.

1. Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

2. Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

a. for a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5°C, whichever is greater. The temperature sensor shall be installed at a

location in the combustion chamber downstream of the combustion zone;

b. for a catalytic vapor incinerator, a temperature-monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5°C, whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet, and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet;

c. for a flare, a heat-sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame;

d. for a boiler or process heater having a design heat input capacity less than 44 MW, a temperature-monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in °C or ± 0.5°C, whichever is greater. The temperature sensor shall be installed at a location in the furnace downstream of the combustion zone;

e. for a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure a parameter or parameters that indicate that good combustion operating practices are being used;

f. for a condenser, either:

i. a monitoring device equipped with a continuous recorder to measure the concentration level of the total organic compounds in the exhaust vent stream from the condenser; or

ii. a temperature-monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5°C, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side);

g. for a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

i. a monitoring device equipped with a continuous recorder to measure the concentration level of the total organic compounds in the exhaust vent stream from the carbon bed; or

ii. a monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

3. Inspect the readings from each monitoring device required by LAC 33:V.1709.F.1 and 2 at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure that the control device operates in compliance with the requirements of this Section.

G. Carbon Adsorption System, Regenerative. An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined interval that is no longer than the carbon service life established as a requirement of LAC 33:V.1713.B.4.c.vi.

H. Carbon Adsorption System, Nonregenerative. An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly on-site in the control device shall replace the existing carbon in the control device with fresh carbon regularly by using one of the following procedures.

1. Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of LAC 33:V.1713.B.4.c.vii, whichever is longer.

2. Replace the existing carbon with fresh carbon at a regular, predetermined interval that is less than the design carbon replacement interval established as a requirement of LAC 33:V.1713.B.4.c.vii.

I. Alternative Process or Operational Parameters. An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

J. Alternative Control Device: Documentation. An owner or operator of an affected facility seeking to comply with the provisions of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37 by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

K. A closed-vent system shall meet either of the following design requirements:

1. a closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background as determined by the procedure in LAC 33:V.1711.B and by visual inspections; or

2. a closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be

equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

L. The owner or operator shall monitor and inspect each closed-vent system required to comply with this Section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements.

1. Each closed-vent system that is used to comply with Paragraph K.1 of this Section shall be inspected and monitored in accordance with the following requirements.

a. An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this Section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in LAC 33:V.1711.B to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

b. After initial leak detection monitoring required in Subparagraph L.1.a of this Section, the owner or operator shall inspect and monitor the closed-vent system as follows.

i. Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in LAC 33:V.1711.B to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

ii. Closed-vent system components or connections other than those specified in Clause L.1.b.i of this Section shall be monitored annually and at other times as requested by the administrative authority, except as provided for in Subsection O of this Section, using the procedures specified in LAC 33:V.1711.B to demonstrate that the components or connections operate with no detectable emissions.

c. In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of Paragraph L.3 of this Section.

d. The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in LAC 33:V.1713.

2. Each closed-vent system that is used to comply with Paragraph K.2 of this Section shall be inspected and monitored in accordance with the following requirements:

a. the closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections;

b. the owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this Section. Thereafter, the owner or operator shall perform the inspections at least once every year;

c. in the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of Paragraph L.3 of this Section; and

d. the owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in LAC 33:V.1713.

3. The owner or operator shall repair all detected defects as follows:

a. detectable emissions, as indicated by visual inspection or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in Subparagraph L.3.c of this Section;

b. a first attempt at repair shall be made no later than five calendar days after the emission is detected;

c. delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown; and

d. the owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in LAC 33:V.1713.

M. Closed-vent systems and control devices used to comply with provisions of this Chapter shall be operated at all times when emissions may be vented to them.

N. The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

1. regenerated or reactivated in a thermal treatment unit that meets one of the following:

a. the owner or operator of the unit has been issued a final permit under LAC 33:V.Chapter 5 which implements the requirements of LAC 33:V.Chapter 32;

b. the unit is equipped with and operating air emission controls in accordance with the applicable requirements of Subchapters A and C of this Chapter or of LAC 33:V.Chapter 43; or

c. the unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR Part 61 or Part 63;

2. incinerated in a hazardous waste incinerator for which the owner or operator either:

a. has been issued a final permit under LAC 33:V.Chapter 5 that implements the requirements of LAC 33:V.Chapter 31; or

b. has designed and operates the incinerator in accordance with the interim status requirements of LAC 33:V.Chapter 43.Subchapter N;

3. burned in a boiler or industrial furnace for which the owner or operator either:

a. has been issued a final permit under LAC 33:V.Chapter 5 that implements the requirements of LAC 33:V.Chapter 30; or

b. has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of LAC 33:V.Chapter 30.

O. Any components of a closed-vent system that are designated, as described in LAC 33:V.1713.C.9, as unsafe to monitor are exempt from the requirements of Clause L.1.b.ii of this Section if:

1. the owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Clause L.1.b.ii of this Section; and

2. the owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in Clause L.1.b.ii of this Section as frequently as practicable during safe-to-monitor times.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 20:1000 (September 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1698 (September 1998), LR 25:438 (March 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1895 (September 2008).

## §1711. Test Methods and Procedures

A. Each owner or operator subject to the provisions of this Subchapter shall comply with the test methods and procedures requirements provided in this Section.

B. When a closed-vent system is tested for compliance with no detectable emissions, as required in LAC 33:V.1709.L, the test shall comply with the following requirements.

1. Monitoring shall comply with Reference Method 21 in 40 CFR Part 60, Appendix A, incorporated by reference in LAC 33:III.3003.

2. The detection instrument shall meet the performance criteria of Reference Method 21.

3. The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

4. Calibration gases shall be:

a. zero air (less than 10 ppm of hydrocarbon in air);

b. a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

5. The background level shall be determined as set forth in Reference Method 21.

6. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible, as described in Reference Method 21.

7. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

C. Performance tests to determine compliance with LAC 33:V.1707.A and with the total organic compound concentration limit of LAC 33:V.1709.C shall comply with the following.

1. Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:

a. Method 2 in 40 CFR Part 60, Appendix A, incorporated by reference in LAC 33:III.3003, for velocity and volumetric flow rate;

b. Method 18 or Method 25A in 40 CFR Part 60, Appendix A, incorporated by reference in LAC 33:III.3003, for organic content. If Method 25A is used, the organic hazardous air pollutants (HAP) used as the calibration gas must be the single organic HAP representing the largest percent by volume of the emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

c. Each performance test shall consist of three separate runs; each run shall be conducted for at least one hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis.

d. Total organic mass flow rates shall be determined by one of the following equations:

i. for sources utilizing Method 18:

$$E_h = Q_{2sd}\left[\sum_{i=1}^{n} C_i MW_i\right](.0416)(10^{-6})$$

where:

$E_h$ = total organic mass flow rate, kg/h

$Q_{2sd}$ = volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h

n = number of organic compounds in the vent gas

$C_i$ = organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18

$MW_i$ = molecular weight of organic compound i in the vent gas, kg/kg-mol

0.0416 = conversion factor for molar volume, kg-mol/m$^3$ (@ 293 K and 760 mm Hg)

$10^{-6}$ = conversion from ppm

ii. for sources utilizing Method 25A:

$$E_h = (Q)(C)(MW)(0.0416)(10^{-6})$$

where:

$E_h$ = total organic mass flow rate, kg/h

Q = volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h

C = organic concentration in ppm, dry basis, as determined by Method 25A

MW = molecular weight of propane, 44

0.0416 = conversion factor for molar volume, kg-mol/m$^3$ (@ 293 K and 760 mm Hg)

$10^{-6}$ = conversion from ppm

e. The annual total organic emission rate shall be determined by the following equation.

$$E_A = (E_h)(H)$$

where:

$E_A$ = total organic mass emission rate, kg/y

$E_h$ = total organic mass flow rate for the process vent, kg/h

H = total annual hours of operations for the affected unit, h

f. Total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates ($E_h$ as determined in LAC 33:V.1711.C.1.d) and by summing the annual total organic mass emission rates ($E_A$, as determined in LAC 33:V.1711.C.1.e) for all affected process vents at the facility.

2. The owner or operator shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

3. The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

a. sampling ports adequate for the test methods specified in LAC 33:V.1711.C.1;

b. safe sampling platform(s);

c. safe access to sampling platform(s); and

d. utilities for sampling and testing equipment.

4. For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the administrative authority's approval, be determined using the average of the results of the two other runs.

D. To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this Subchapter, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than 10 ppmw using one of the following two methods.

1. Direct measurement of the organic concentration of the waste using the following procedures.

a. The owner or operator must take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.

b. For waste generated on-site, the grab samples must be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated off-site, the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

c. Each sample shall be analyzed, and the total organic concentration of the sample shall be computed using Method 9060A (incorporated by reference in LAC 33:V.110) of *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, or each sample shall be analyzed for its individual organic constituents.

d. The arithmetic mean of the results of the analyses of the four samples shall apply for each waste stream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.

2. Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a waste stream having a total organic content less than 10 ppmw, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

E. The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than 10 ppmw shall be made as follows:

1. by the effective date that the facility becomes subject to the provisions of this Subchapter or by the date when the waste is first managed in a waste management unit, whichever is later; and

2. for continuously generated waste, annually; or

3. whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

F. When an owner or operator and the administrative authority do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, the dispute may be resolved by using direct measurement as specified in Paragraph D.1 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 20:1000 (September 1994), LR 22:818 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1699 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1012 (June 2008), LR 34:1895 (September 2008).

## §1713. Recordkeeping Requirements

A. Compliance

1. Each owner or operator subject to the provisions of this Subchapter shall comply with the recordkeeping requirements of this Section.

2. An owner or operator of more than one hazardous waste management unit subject to the provisions of this Subchapter may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

B. Implementation Schedule and Documentation. Owners and operators must record the following information in the facility operating record:

1. for facilities that comply with the provisions of LAC 33:V.1709.A.2, an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of this Subchapter;

2. up-to-date documentation of compliance with the process vent standards in LAC 33:V.1707, including:

a. information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan);

b. information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (i.e., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required;

3. where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include:

a. a description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content

of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program;

b. a detailed engineering description of the closed-vent system and control device including:

i. manufacturer's name and model number of control device;

ii. type of control device;

iii. dimensions of the control device;

iv. capacity; and

v. construction materials;

c. a detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;

4. documentation of compliance with LAC 33:V.1709 shall include the following information:

a. a list of all information references and sources used in preparing the documentation;

b. records, including the dates, of each compliance test required by LAC 33:V.1709.K;

c. if engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions," as incorporated by reference at LAC 33:V.110, or other engineering texts acceptable to the administrative authority that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with LAC 33:V.1713.B.4.c.i-vii may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified below:

i. for a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time;

ii. for a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet;

iii. for a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone;

iv. for a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in LAC 33:V.1709.D;

v. for a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet;

vi. for a carbon adsorption system such as a fixed-bed absorber that regenerates the carbon bed directly on-site in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon;

vii. for a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly on-site in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule;

d. a statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur;

e. a statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of LAC 33:V.1707.A is achieved at an efficiency less than 95 weight percent, or the total organic emission limits of LAC 33:V.1707.A for all affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement;

f. if performance tests are used to demonstrate compliance, all test results.

C. Design: Documentation, Monitoring, Operating, and Inspection. Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37 shall be recorded and kept up-to-date in the facility operating record. The information shall include:

1. a description and the date of each modification made to the closed-vent system or control device design;

2. identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with LAC 33:V.1709.F.1 and 2;

3. monitoring, operating, and inspection information required by LAC 33:V.1709.F-K;

4. date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

a. for a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of 760°C, each period when the combustion temperature is below 760°C;

b. for a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 weight percent or greater, each period when the combustion zone temperature is more than 28°C below the design average combustion zone temperature established as a requirement of LAC 33:V.1713.B.4.c.i;

c. for a catalytic vapor incinerator, each period when:

i. temperature of the vent stream at the catalyst bed inlet is more than 28°C below the average temperature of the inlet vent stream established as a requirement of LAC 33:V.1713.B.4.c.ii; or

ii. temperature difference across the catalyst bed is less than 80 percent of the design average temperature difference established as a requirement of LAC 33:V.1713.B.4.c.ii;

d. for a boiler or process heater, each period when:

i. flame zone temperature is more than 28°C below the design average flame zone temperature established as a requirement of LAC 33:V.1713.B.4.c.iii; or

ii. position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of LAC 33:V.1713.B.4.c.iii;

e. for a flare, each period when the pilot flame is not ignited;

f. for a condenser that complies with LAC 33:V.1709.F.2.f.i, each period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as a requirement of LAC 33:V.1713.B.4.c.v;

g. for a condenser that complies with LAC 33:V.1709.F.2.f.ii, each period when:

i. temperature of the exhaust vent stream from the condenser is more than 6°C above the design average exhaust vent stream temperature established as a requirement of LAC 33:V.1713.B.4.c.v; or

ii. temperature of the coolant fluid exiting the condenser is more than 6°C above the design average coolant fluid temperature at the condenser outlet established as a requirement of LAC 33:V.1713.B.4.c.v;

h. for a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with LAC 33:V.1709.F.2.g.i, each period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of LAC 33:V.1713.B.4.c.v;

i. for a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with LAC 33:V.1709.F.2.g.ii, each period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of LAC 33:V.1713.B.4.c.vi;

5. explanation for each period recorded under LAC 33:V.1713.C.4 of the cause for the control device operating parameter exceeding the design value and the measures implemented to correct the control device operation;

6. for a carbon adsorption system operated subject to requirements specified in LAC 33:V.1709.G or H.2, the date when existing carbon in the control device is replaced with fresh carbon;

7. for a carbon adsorption system operated subject to requirements specified in LAC 33:V.1709.H.1, a log that records:

a. date and time when the control device is monitored for carbon breakthrough and the monitoring device reading; and

b. date when existing carbon in the control device is replaced with fresh carbon;

8. date of each control device start-up and shutdown;

9. an owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to LAC 33:V.1709.O shall record in a log that is kept in the

facility operating record, the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of LAC 33:V.1709.O, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component;

10. when each leak is detected as specified in LAC 33:V.1709.L, the following information shall be recorded:

a. the instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number;

b. the date the leak was detected and the date of first attempt to repair the leak;

c. the date of successful repair of the leak; and

d. maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A after it is successfully repaired or determined to be nonrepairable;

e. "repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak:

i. the owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure;

ii. if delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

D. Record Retention. Records of the monitoring, operating, and inspection information required by Paragraphs C.3-10 of this Section must be kept on site for three years following the date of each occurrence, measurement, maintenance, corrective action, or record.

E. Alternative Control Devices. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the administrative authority will specify the appropriate recordkeeping requirements.

F. Log. Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in LAC 33:V.1707 including supporting documentation as required by LAC 33:V.1711.D.2 when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, shall be recorded in a log that is kept in the facility operating record.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 18:723 (July 1992), LR 20:1000 (September 1994), LR 22:818 (September 1996), amended by the Office Of Waste Services, Hazardous Waste Division, LR 24:1700 (September 1998), LR 25:438 (March 1999).

### §1715. Reporting Requirements

A. A semiannual report shall be submitted by owners and operators subject to the requirements of this Subchapter to the Office of Environmental Services by dates specified by the administrative authority. The report shall include the following information:

1. the Environmental Protection Agency identification number, name, and address of the facility; and

2. for each month during the semiannual reporting period, dates when the control device exceeded or operated outside of the design specifications as defined in LAC 33:V.1713.C.4 and as indicated by the control device monitoring required by LAC 33:V.1709.F and such exceedances were not corrected within 24 hours, or that a flare operated with *visible emissions* as defined in LAC 33:V.1709.D and as determined by Method 22 monitoring, the duration and cause of each exceedance or visible emissions, and any corrective measures taken.

B. If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications as defined in LAC 33:V.1713.C.4 for more than 24 hours or a flare does not operate with *visible emissions* as defined in LAC 33:V.1709.D, a report to the administrative authority is not required.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2473 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2456 (October 2005), LR 33:2105 (October 2007).

## Subchapter B. Equipment Leaks

### §1717. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in LAC 33:V.1501).

B. Except as provided in LAC 33:V.1743.K, this Subchapter applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight that are managed in one of the following:

1. a unit that is subject to the permitting requirements of LAC 33:V.Chapter 3, 5, 7, or 43; or

2. a unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of LAC 33:V.1109.E.1 (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of LAC 33:V.Chapter 3, 5, 7, or 43; or

3. a unit that is exempt from permitting under the provisions of LAC 33:V.1109.E.1 (i.e., a 90-day tank or container) and is not a recycling unit under the provisions of LAC 33:V.4105.

C. For the owner or operator of a facility subject to the requirements of this Subchapter and who has received a final permit under RCRA Section 3005 and LAC 33:V.Subpart 1 prior to December 6, 1996, the requirements of this Subchapter must be incorporated when the permit is reissued under LAC 33:V.705 or reviewed under LAC 33:V.315. Until such date when the owner or operator receives a final permit incorporating the requirements of this Subchapter, the owner or operator is subject to the requirements of LAC 33:V.Chapter 43.Subchapter Q.

D. Each piece of equipment to which this Subchapter applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

E. Equipment that is in vacuum service is excluded from the requirements of LAC 33:V.1719-1735 if it is identified as required in LAC 33:V.1743.G.5.

F. Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year is excluded from the requirements of LAC 33:V.1719-1735 if it is identified, as required in LAC 33:V.1743.

G. Purged coatings and solvents from surface coating operations subject to the national emission standards for hazardous air pollutants (NESHAP) for the surface coating of automobiles and light-duty trucks at LAC 33:III.5122 (40 CFR Part 63, Subpart IIII), are not subject to the requirements of this Subchapter.

[NOTE: The requirements of this Subchapter apply to equipment associated with hazardous waste recycling units previously exempt under LAC 33:V.4105.C. Other exemptions under LAC 33:V.105.D and 1501.C are not affected by these requirements.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 20:1000 (September 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1700 (September 1998), LR 25:438 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:294 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2540 (October 2005), LR 32:607 (April 2006).

## §1719. Standards: Pumps in Light Liquid Service

A. Monitoring

1. Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in LAC 33:V.1741.B, except as provided in Subsections D, E, and F of this Section.

2. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

B. Leak Detection

1. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

2. If there are indications of liquids dripping from the pump seal, a leak is detected.

C. Repair

1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in LAC 33:V.1733.

2. A first attempt at repair (e.g., tightening the packing gland) shall be made no later than five calendar days after each leak is detected.

D. Dual Mechanical Seal Exemption. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of LAC 33:V.1719.A provided the following requirements are met.

1. Operation and Equipment. Each dual mechanical seal system must be:

a. operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

b. equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of LAC 33:V.1735; or

c. equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

2. Barrier Fluid System. The barrier fluid system must not be a hazardous waste with organic concentrations 10 percent or greater by weight.

3. Barrier Fluid System Sensor. Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

4. Pump Inspection. Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

5. Seal System and Sensor Function

a. Each sensor as described in LAC 33:V.1719.D.3 must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.

b. The owner or operator must determine, on the basis of design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

6. Leak Detection and Repair

a. If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both on the basis of the criterion determined in LAC 33:V.1719.D.5.b, a leak is detected.

b. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in LAC 33:V.1733.

c. A first attempt at repair (e.g., relapping the seal) shall be made no later than five calendar days after each leak is detected.

E. No Detectable Emission Exemption. Any pump that is designated, as described in LAC 33:V.1743.G.2, for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of LAC 33:V.1719.A, C, and D if the pump meets the following requirements.

1. The pump must have no externally actuated shaft penetrating the pump housing.

2. The pump must operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in LAC 33:V.1741.C.

3. The pump must be tested for compliance with LAC 33:V.1719.E.2 initially upon designation, annually, and at other times as requested by the administrative authority.

F. Closed Vent System Exemption. If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of LAC 33:V.1735, it is exempt from the requirements of LAC 33:V.1719.A-E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1721. Standards: Compressors

A. Equipment. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in LAC 33:V.1721.H and I.

B. Seal System. Each compressor seal system as required in LAC 33:V.1721.A shall be:

1. operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure; or

2. equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of LAC 33:V.1735; or

3. equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to atmosphere.

C. Barrier Fluid System. The barrier fluid must not be a hazardous waste with organic concentrations 10 percent or greater by weight.

D. Barrier Fluid System Sensor. Each barrier fluid system as described in LAC 33:V.1721.A-C shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

E. Seal System and Sensor Function

1. Each sensor as required in LAC 33:V.1721.D shall be checked daily or shall be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor must be checked daily.

2. The owner or operator shall determine, on the basis of design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

F. Leak Detection. If the sensor indicates failure of the seal system, the barrier fluid system, or both on the basis of the criterion determined under LAC 33:V.1721.E.2, a leak is detected.

G. Leak Repair

1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in LAC 33:V.1733.

2. A first attempt at repair (e.g., tightening the packing gland) shall be made no later than five calendar days after each leak is detected.

H. Closed-Vent System Exemption. A compressor is exempt from the requirements of LAC 33:V.1721.A and B if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of LAC 33:V.1735, except as provided in LAC 33:V.1721.I.

I. No Detectable Emission Exemption. Any compressor that is designated, as described in LAC 33:V.1743.G.2, for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of LAC 33:V.1721.A-H if the compressor:

1. is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in LAC 33:V.1741.C; and

2. is tested for compliance with LAC 33:V. 1721.I.1 initially upon designation, annually, and at other times as required by the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1723. Standards: Pressure Relief Devices in Gas/Vapor Service

A. Operation. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument

reading of less than 500 ppm above background, as measured by the method specified in LAC 33:V.1741.C.

B. Monitoring

1. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than five calendar days after each pressure release, except as provided in LAC 33:V.1733.

2. No later than five calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in LAC 33:V.1741.C.

C. Exemption. Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in LAC 33:V.1735 is exempt from the requirements of LAC 33:V.1723.A and B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1725. Standards: Sampling Connection Systems

A. Each sampling connection system shall be equipped with a closed purge, closed loop, or closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

B. Each closed-purge, closed loop, or closed-vent system, as required in Subsection A of this Section, shall meet one of the following requirements:

1. return the purged process fluid directly to the process line;

2. collect and recycle the purged process fluid; or

3. be designed and operated to capture and transport all the purged process fluid to a waste management unit that complies with the applicable requirements of LAC 33:V.1755-1759 or a control device that complies with the requirements of LAC 33:V.1735.

C. In situ sampling systems and sampling systems without purges are exempt from the requirements of Subsections A and B of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1700 (September 1998).

## §1727. Standards: Open-Ended Valves or Lines

A. Equipment

1. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.

2. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.

B. Operation. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.

C. Compliance. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with LAC 33:V.1727.A at all other times.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1729. Standards: Valves in Gas/Vapor Service or in Light Liquid Service

A. Monitoring, General. Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks by the methods specified in LAC 33:V.1741.B and shall comply with LAC 33:V.1729.B-E, except as provided in LAC 33:V.1729.F, G, and H, and LAC 33:V.1737 and 1739.

B. Leak Detection. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

C. Monitoring Intervals

1. Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

2. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months.

D. Repair, General

1. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in LAC 33:V.1733.

2. A first attempt at repair shall be made no later than five calendar days after each leak is detected.

E. Repair Methods. First attempts at repair include, but are not limited to, the following best practices where practicable:

1. tightening of bonnet bolts;

2. replacement of bonnet bolts;

3. tightening of packing gland nuts; and

4. injection of lubricant into lubricated packing.

F. No Detectable Emission Exemption. Any valve that is designated, as described in LAC 33:V.1743.G.2, for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of LAC 33:V.1729.A if the valve:

1. has no external actuating mechanism in contact with the hazardous waste stream;

2. is operated with emissions less than 500 ppm above background as determined by the method specified in LAC 33:V.1741.C; and

3. is tested for compliance with LAC 33:V.1729.F.2 initially upon designation, annually, and at other times as requested by the administrative authority.

G. Unsafe-to-Monitor Exemption. Any valve that is designated, as described in LAC 33:V.1743.H.1, as an unsafe-to-monitor valve is exempt from the requirements of LAC 33:V.1729.A if:

1. the owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with LAC 33:V.1729.A; and

2. the owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

H. Difficult-to-Monitor Exemption. Any valve that is designated, as described in LAC 33:V.1743.H.2, as a difficult-to-monitor valve is exempt from the requirements of LAC 33:V.1729.A if:

1. the owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface;

2. the hazardous waste management unit within which the valve is located was in operation before June 21, 1990; and

3. the owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1731. Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors

A. Monitoring. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within five days by the method specified in LAC 33:V.1741.B if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

B. Leak Detection. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

C. Repair

1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in LAC 33:V.1733.

2. The first attempt at repair shall be made no later than five calendar days after each leak is detected.

D. Repair Methods. First attempts at repair include, but are not limited to, the best practices described under LAC 33:V.1729.E.

E. Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined) is exempt from the monitoring requirements of Subsection A of this Section and from the recordkeeping requirements of LAC 33:V.1743.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1701 (September 1998).

## §1733. Standards: Delay of Repair

A. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous waste management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous waste management unit shutdown.

B. Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous waste management unit and that does not continue to contain or contact hazardous waste with organic concentrations at least 10 percent by weight.

C. Delay of repair for valves will be allowed if:

1. the owner or operator determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair;

2. repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with LAC 33:V.1735.

D. Delay of repair for pumps will be allowed if:

1. repair requires the use of a dual mechanical seal system that includes a barrier fluid system;

2. repair is completed as soon as practicable, but not later than six months after the leak was detected.

E. Delay of repair beyond a hazardous waste management unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the

hazardous waste management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will not be allowed unless the next hazardous waste management unit shutdown occurs sooner than six months after the first hazardous waste management unit shutdown.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §1735. Standards: Closed-Vent Systems and Control Devices

A. Owners or operators of closed-vent systems and control devices subject to this Subchapter shall comply with the provisions of LAC 33:V.1709.

B.1. The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this Subchapter on the effective date that the facility becomes subject to the provisions of this Subchapter must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this Subchapter for installation and start-up.

2. Any unit that begins operation after December 21, 1990, and is subject to the provisions of this Subchapter when operation begins, must comply with the rules immediately (i.e., must have control devices installed and operating on start-up of the affected unit); the 30-month implementation schedule does not apply.

3. The owner or operator of any facility in existence on the effective date of an EPA regulatory amendment that renders the facility subject to this Subchapter shall comply with all requirements of this Subchapter as soon as practicable, but no later than 30 months after the regulation's effective date. When control equipment required by this Subchapter can not be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: specific calendar dates for award or contracts or issuance of purchase orders for the control equipment; initiation of on-site installation of the control equipment; completion of the control equipment installation; and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this Subchapter. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

4. Owners and operators of facilities and units that become newly subject to the requirements of this Subchapter after December 8, 1997, due to an action other than those described in Paragraph B.3 of this Section must comply with all applicable requirements immediately (i.e., must have control devices installed and operating on the date the facility or unit becomes subject to this Subchapter; the 30-month implementation schedule does not apply).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:439 (March 1999).

## §1737. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak

A. An owner or operator subject to the requirements of LAC 33:V.1729 may elect to have all valves within a hazardous waste management unit comply with an alternative standard that allows no greater than 2 percent of the valves to leak.

B. The following requirements shall be met if an owner or operator decides to comply with the alternative standard of allowing 2 percent of the valves to leak.

1. A performance test as specified in Subsection C of this Section shall be conducted initially upon designation, annually, and at other times requested by the administrative authority.

2. If a valve leak is detected, it shall be repaired in accordance with LAC 33:V.1729.D and E.

C. Performance tests shall be conducted in the following manner.

1. All valves subject to the requirements of LAC 33:V.1729 within the hazardous waste management unit shall be monitored within one week by the methods specified in LAC 33:V.1741.B.

2. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

3. The leak percentage shall be determined by dividing the number of valves subject to the requirements in LAC 33:V.1729 for which leaks are detected by the total number of valves subject to the requirements in LAC 33:V.1729 within the hazardous waste management unit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2473 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2456 (October 2005), LR 33:2105 (October 2007), LR 34:994 (June 2008).

**§1739. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair**

A. Alternative Work Practices. An owner or operator subject to the requirements of LAC 33:V.1729 may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in Paragraphs B.2 and 3 of this Section.

B. Leak Detection Skip Period

1. An owner or operator shall comply with the requirements for valves, as described in LAC 33:V.1729, except as described in LAC 33:V.1739.B.2 and 3.

2. After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip one of the quarterly leak detection periods (i.e., monitor for leaks once every six months) for the valves subject to the requirements in LAC 33:V.1729.

3. After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip three of the quarterly leak detection periods (i.e., monitor for leaks once every year) for the valves subject to the requirements in LAC 33:V.1729.

4. If the percentage of valves leaking is greater than 2 percent, the owner or operator shall monitor monthly in compliance with the requirements in LAC 33:V.1729, but may again elect to use this Section after meeting the requirements of LAC 33:V.1729.C.1.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:439 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2473 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2457 (October 2005), LR 33:2105 (October 2007), LR 34:994 (June 2008).

**§1741. Test Methods and Procedures**

A. Each owner or operator subject to the provisions of this Subchapter shall comply with the test methods and procedures requirements provided in this Section.

B. Leak detection monitoring, as required in LAC 33:V.1719-1739, shall comply with the following requirements.

1. Monitoring shall comply with Reference Method 21 in 40 CFR Part 60, Appendix A, incorporated by reference in LAC 33:III.3003.

2. The detection instrument shall meet the performance criteria of Reference Method 21.

3. The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

4. Calibration gases shall be:

a. zero air (less than 10 ppm of hydrocarbon in air); and

b. a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

5. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

C. When equipment is tested for compliance with no detectable emissions, as required in LAC 33:V.1719.E, 1721.I, 1723, and 1729.F, the test shall comply with the following requirements.

1. The requirements of LAC 33:V.1741.B.1-4 shall apply.

2. The background level shall be determined as set forth in Reference Method 21.

3. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

4. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

D. In accordance with the waste analysis plan required by LAC 33:V.1519.B, an owner or operator of a facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following:

1. methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85, as incorporated by reference at LAC 33:V.110;

2. Method 9060A (incorporated by reference in LAC 33:V.110) of *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, for computing total organic concentration of the sample or analyzing for its individual organic constituents; or

3. application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced. A waste determination by knowledge must be documented. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than 10 percent, or prior speciation analysis results on the same waste stream where it can also be documented that no

process changes have occurred since that analysis that could affect the waste total organic concentration.

E. If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the determinations can be revised only after following the procedures in LAC 33:V.1741.D.1 or 2.

F. When an owner or operator and the administrative authority do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in LAC 33:V.1741.D.1 or 2 can be used to resolve the dispute.

G. Samples used in determining the percentage organic content shall be representative of the highest total organic content hazardous waste that is expected to be contained in or contact the equipment.

H. To determine whether pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86, as incorporated by reference at LAC 33:V.110.

I. Performance tests to determine whether a control device achieves 95 weight percent organic emission reduction shall comply with the procedures of LAC 33:V.1711.C.1-4.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 20:1000 (September 1994), LR 22:819 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1701 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1013 (June 2008), LR 34:1896 (September 2008).

## §1743. Recordkeeping Requirements

A. Compliance with Recordkeeping

1. Each owner or operator subject to the provisions of this Subchapter shall comply with the recordkeeping requirements of this Section.

2. An owner or operator of more than one hazardous waste management unit subject to the provisions of this Subchapter may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

B. Facility Operating Record. Owners and operators must record the following information in the facility operating record:

1. for each piece of equipment to which LAC 33:V.Chapter 17.Subchapter B, applies:

a. equipment identification number and hazardous waste management unit identification;

b. approximate locations within the facility (e.g., identify the hazardous waste management unit on a facility plot plan);

c. type of equipment (e.g., a pump or pipeline valve);

d. percent-by-weight total organics in the hazardous waste stream at the equipment;

e. hazardous waste state at the equipment (e.g., gas/vapor or liquid); and

f. method of compliance with the standard (i.e., "monthly leak detection and repair" or "equipped with dual mechanical seals");

2. for facilities that comply with the provisions of LAC 33:V.1709.A.2, an implementation schedule as specified in LAC 33:V.1709.A.2;

3. where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in LAC 33:V.1713.B.3;

4. documentation of compliance with LAC 33:V.1735, including the detailed design documentation or performance test results specified in LAC 33:V.1713.B.4.

C. Leak Detection. When each leak is detected as specified in LAC 33:V.1719, 1721, 1729, and 1731, the following requirements apply.

1. A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with LAC 33:V.1731.A, and the date the leak was detected, shall be attached to the leaking equipment.

2. The identification on equipment, except on a valve, may be removed after it has been repaired.

3. The identification on a valve may be removed after it has been monitored for two successive months as specified in LAC 33:V.1729.C, and no leak has been detected during those two months.

D. Inspection Log. When each leak is detected as specified in LAC 33:V.1719, 1721, 1729, and 1731, the following information shall be recorded in an inspection log and shall be kept in the facility operating record:

1. the instrument and operator identification numbers and the equipment identification number;

2. the date evidence of a potential leak was found in accordance with LAC 33:V.1731.A;

3. the date the leak was detected and the dates of each attempt to repair the leak;

4. repair methods applied in each attempt to repair the leak;

5. "above 10,000" if the maximum instrument reading measured by the methods specified in LAC 33:V.1741.B

after each repair attempt is equal to or greater than 10,000 ppm;

6. "repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;

7. documentation supporting the delay of repair of a valve in compliance with LAC 33:V.1733.C;

8. the signature of the owner or operator (or the designee authorized by the owner or operator in writing in the operating record) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown;

9. the expected date of successful repair of the leak if a leak is not repaired within 15 calendar days; and

10. the date of successful repair of the leak.

E. Design Documentation and Monitoring, Operating, and Inspection Information. Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of LAC 33:V.1735 shall be recorded and kept up-to-date in the facility operating record as specified in LAC 33:V.1713.C. Design documentation is specified in LAC 33:V.1713.C.1 and 2, and monitoring, operating, and inspection information in LAC 33:V.1713.C.3-8.

F. Control Device Exemptions. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the administrative authority will specify the appropriate recordkeeping requirements.

G. Equipment Information Log. The following information pertaining to all equipment subject to the requirements in LAC 33:V.1719-1735 shall be recorded in a log that is kept in the facility operating record.

1. Identification Numbers: General. A list of identification numbers for equipment (except welded fittings) subject to the requirements of this Subchapter shall be kept in the log.

2. Identification Numbers: No Detectable Emission Equipment

a. A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of LAC 33:V.1719.E, 1721.I, and 1729.F, shall be kept in the log.

b. The designation of this equipment as subject to the requirements of LAC 33:V.1719.E, 1721.I, or 1729.F shall be signed by the owner or operator.

3. Identification Numbers: Pressure Relief Devices. A list of equipment identification numbers for pressure relief devices required to comply with LAC 33:V.1723.A shall be kept in the log.

4. Compliance Test. The following compliance test information shall be included:

a. the dates of each compliance test required in LAC 33:V.1719.E, 1721.I, 1723, and 1729.F;

b. the background level measured during each compliance test; and

c. the maximum instrument reading measured at the equipment during each compliance test.

5. Identification Numbers: Equipment in Vacuum Service. A list of identification numbers for equipment in vacuum service shall be kept in the log.

6. Identification. Either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year.

H. Identification Numbers: Valves. The following information pertaining to all valves subject to the requirements of LAC 33:V.1729.G and H shall be recorded in a log that is kept in the facility operating record:

1. a list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve; and

2. a list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

I. Valve Information Log. The following information shall be recorded in the facility operating record for valves complying with LAC 33:V.1739:

1. a schedule of monitoring; and

2. the percentage of valves found leaking during each monitoring period.

J. Pump Seal System Information Log. The following information shall be recorded in a log that is kept in the facility operating record:

1. criteria required in LAC 33:V.1719.D.5.b and 1721.E.2 and an explanation of the design criteria; and

2. any changes to these criteria and the reasons for the changes.

K. Exemption Log. The following information shall be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability Section of this Subchapter and other specific Subchapters.

1. An analysis determining the design capacity of the hazardous waste management unit shall be recorded in the log.

2. A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in LAC 33:V.1719-1735 and an

analysis determining whether these hazardous wastes are heavy liquids shall be recorded in the log.

3. An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in LAC 33:V.1719-1735 shall be recorded in the log. The record shall include supporting documentation as required in LAC 33:V.1741.D.3 when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action (e.g., changing the process that produced the waste) that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in LAC 33:V.1719-1735, then a new determination is required.

L. Record Retention Period for Equipment Leak Information. Records of the equipment leak information required by LAC 33:V.1743.D and the operating information required by LAC 33:V.1743.E must be kept for three years.

M. The owner or operator of a facility with equipment that is subject to this Subchapter and to regulations at 40 CFR Part 60, Part 61, or Part 63 may elect to determine compliance with this Subchapter by documentation either in accordance with this Section or by documentation of compliance with the regulations at 40 CFR Part 60, Part 61, or Part 63 in accordance with the relevant provisions of the regulations at 40 CFR Part 60, Part 61, or Part 63. The documentation of compliance under the regulation at 40 CFR Part 60, Part 61, or Part 63 shall be kept with or made readily available with the facility operating record.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1701 (September 1998), LR 25:439 (March 1999).

### §1745. Reporting Requirements

A. A semiannual report shall be submitted by owners and operators subject to the requirements of this Subchapter to the Office of Environmental Services by dates specified by the administrative authority. The report shall include the following information.

1. The Environmental Protection Agency identification number, name, and address of the facility shall be included.

2. For each month during the semiannual reporting period, the following shall be included:

a. the equipment identification number of each valve for which a leak was not repaired as required in LAC 33:V.1729.D;

b. the equipment identification number of each pump for which a leak was not repaired as required in LAC 33:V.1719.C and D.6; and

c. the equipment identification number of each compressor for which a leak was not repaired as required in LAC 33:V.1721.G.

3. Dates of hazardous waste management unit shutdowns that occurred within the semiannual reporting period shall be included.

4. For each month during the semiannual reporting period, dates when the control device installed as required by LAC 33:V.1719, 1721, 1723, or 1725 exceeded or operated outside of the design specifications as defined in LAC 33:V.1743.E and as indicated by the control device monitoring required by LAC 33:V.1735 and was not corrected within 24 hours, the duration and cause of each exceedance, and any corrective measures taken shall be included.

B. If, during the semiannual reporting period, leaks from valves, pumps, and compressors are repaired as required in LAC 33:V.1729.D, LAC 33:V.1719.C and D.6, and LAC 33:V.1721.G, respectively, and the control device does not exceed or operate outside of the design specifications as defined LAC 33:V.1743.E for more than 24 hours, a report to the administrative authority is not required.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2474 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2457 (October 2005), LR 33:2105 (October 2007).

## Subchapter C. Air Emission Standards for Tanks, Surface Impoundments, and Containers

### §1747. Applicability

A. The requirements of this Subchapter apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either Chapter 19, 21, or 29, except as LAC 33:V.1501 and Subsection B of this Section provide otherwise.

B. The requirements of this Subchapter do not apply to the following waste management units at the facility:

1. a waste management unit that holds hazardous waste placed in the unit before December 6, 1996, and in which no hazardous waste is added to the unit on or after December 6, 1996;

2. a container that has a design capacity less than or equal to 0.1 $m^3$;

3. a tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan;

4. a surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan;

5. a waste management unit that is used solely for on-site treatment or storage of hazardous waste that is placed in the unit as a result of implementing remedial activities required under the corrective action authorities of RCRA Sections 3004(u), 3004(v), or 3008(h), CERCLA authorities, or similar state authorities;

6. a waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act;

7. a hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR Part 60, Part 61, or Part 63. For the purpose of complying with this Paragraph, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of LAC 33:V.1755.I, except as provided in LAC 33:V.1751.C.5; and

8. a tank that has a *process vent* as defined in LAC 33:V.1703.

C. For the owner and operator of a facility subject to this Chapter and who received a final permit under RCRA Section 3005 and LAC 33:V.Subpart 1 prior to December 6, 1996, the requirements of this Chapter must be incorporated into the permit when the permit is reissued in accordance with the requirements of LAC 33:V.705 or reviewed in accordance with the requirements of LAC 33:V.315. Until such date when the permit is reissued in accordance with the requirements of LAC 33:V.705 or reviewed in accordance with the requirements of LAC 33:V.315, the owner and operator are subject to the requirements of LAC 33:V.Chapter 43.Subchapter V.

D. The requirements of this Subchapter, except for the recordkeeping requirements specified in LAC 33:V.1765.I, are administratively stayed for a tank or a container used for the management of hazardous waste generated by organic peroxide manufacturing and its associated laboratory operations when the owner or operator of the unit meets all of the following conditions:

1. the owner or operator identifies that the tank or container receives hazardous waste generated by an organic peroxide manufacturing process producing more than one functional family of organic peroxides or multiple organic peroxides within one functional family, that one or more of these organic peroxides could potentially undergo self-accelerating thermal decomposition at or below ambient temperatures, and that organic peroxides are the predominant products manufactured by the process. For the purpose of meeting the conditions of this paragraph, *organic peroxide* means an organic compound that contains the bivalent —O—O— structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical;

2. the owner or operator prepares documentation, in accordance with the requirements of LAC 33:V.1765.I, explaining why an undue safety hazard would be created if air emission controls specified in LAC 33:V.1755-1761 are installed and operated on the tanks and containers used at the facility to manage the hazardous waste generated by the organic peroxide manufacturing process or processes meeting the conditions of Paragraph D.1 of this Section; and

3. the owner or operator notifies the Office of Environmental Services, in writing, that hazardous waste generated by an organic peroxide manufacturing process or processes meeting the conditions of Paragraph D.1 of this Section are managed at the facility in tanks or containers meeting the conditions of Paragraph D.2 of this Section. The notification shall state the name and address of the facility and be signed and dated by an authorized representative of the facility owner or operator.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1701 (September 1998), LR 25:440 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:279 (February 2000), LR 26:2474 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2457 (October 2005), LR 33:2105 (October 2007).

## §1749. Definitions

A. As used in this Chapter, all terms shall have the meaning given to them in LAC 33:V.1703 and 109.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1702 (September 1998).

## §1751. Standards: General

A. This Section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to this Subchapter.

B. The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in LAC 33:V.1755-1761, as applicable to the hazardous waste management unit, except as provided for in Subsection C of this Section.

C. A tank, surface impoundment, or container is exempt from standards specified in LAC 33:V.1755-1761, as applicable, provided that the waste management unit is one of the following:

1. a tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less

than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in LAC 33:V.1753.A. The owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit;

2. a tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

a. a process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit ($C_t$) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in LAC 33:V.1753.B;

b. a process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 100 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in LAC 33:V.1753.B;

c. a process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in LAC 33:V.1753.B;

d. a biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:

i. the organic reduction efficiency (R) for the process is equal to or greater than 95 percent and the organic biodegradation efficiency ($R_{bio}$) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in LAC 33:V.1753.B; or

ii. the total actual organic mass biodegradation rate ($MR_{bio}$) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in LAC 33:V.1753.B;

e. a process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:

i. from the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units that use air emission controls in accordance with the standards specified in LAC 33:V.1755-1761, as applicable to the waste management unit;

ii. from the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere. The EPA considers a drain system that meets the requirements of 40 CFR Part 63, Subpart RR—National Emission Standards for Individual Drain Systems to be a closed system; and

iii. the average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or 500 ppmw, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in LAC 33:V.1753.A. The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in LAC 33:V.1753.B;

f. a process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination shall be determined using the procedures specified in LAC 33:V.1753.A and B, respectively;

g. a hazardous waste incinerator for which the owner or operator has either:

i. been issued a final permit under LAC 33:V.Chapter 5 that implements the requirements of LAC 33:V.Chapter 31; or

ii. designed and operates the incinerator in accordance with the interim status requirements of LAC 33:V.Chapter 43.Subchapter N;

h. a boiler or industrial furnace for which the owner or operator has either:

i. been issued a final permit under LAC 33:V.Chapter 5 that implements the requirements of LAC 33:V.Chapter 30; or

ii. designed and operates the boiler or industrial furnace in accordance with the interim status requirements of LAC 33:V.Chapter 30;

i. for the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of Subparagraphs C.2.a-f of this Section, the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

i. if Method 25D in 40 CFR Part 60, Appendix A is used for the analysis, one-half the blank value determined in the method at Section 4.4 of Method 25D in 40 CFR 60, Appendix A, or a value of 25 ppmw, whichever is less; or

ii. if any other analytical method is used, one-half the limit of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8 x $10^{-6}$ atmospheres/gram-mole/$m^3$] at 25°C;

3. a tank or surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of Subparagraph C.2.d of this Section;

4. a tank, surface impoundment, or container for which all hazardous waste placed in the unit either:

a. meets the numerical concentration limits for organic hazardous constituents applicable to the hazardous waste, as specified in LAC 33:V.2299.Appendix, Table 2, Treatment Standards for Hazardous Waste; or

b. the organic hazardous constituents in the waste have been treated by the treatment technology established by the EPA for the waste in LAC 33:V.2227.A or have been removed or destroyed by an equivalent method of treatment approved by the department in accordance with LAC 33:V.2227.B;

5. a tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:

a. the tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR Part 61, Subpart FF—National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;

b. the enclosure and control device serving the tank were installed and began operation prior to November 25, 1996; and

c. the enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* annually.

D. The administrative authority may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this Section as follows.

1. The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of LAC 33:V.1753.A. The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of LAC 33:V.1753.B.

2. In performing a waste determination in accordance with Paragraph D.1 of this Section, the sample preparation and analysis shall be conducted as follows:

a. in accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in Subparagraph D.2.b of this Section; and

b. if the administrative authority determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the administrative authority may choose an appropriate method.

3. In a case when the owner or operator is requested to perform the waste determination, the administrative authority may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

4. In a case when the results of the waste determination performed or requested by the administrative authority do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of Paragraph D.1 of this Section shall be used to establish compliance with the requirements of this Subchapter.

5. In a case when the owner or operator has used an averaging period greater than one hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the administrative authority may elect to establish compliance with this Subchapter by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a one-hour period as follows:

a. the average VO concentration of the hazardous waste at the point of waste origination shall be determined

by direct measurement in accordance with the requirements of LAC 33:V.1753.A;

b. results of the waste determination performed or requested by the administrative authority showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw shall constitute noncompliance with this Subchapter, except in a case as provided for in Subparagraph D.5.c of this Section; and

c. for the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than one hour to be less than 500 ppmw, but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given one-hour period may be equal to or greater than 500 ppmw, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (e.g., test results, measurements, calculations, and other documentation) and recorded in the facility records in accordance with the requirements of LAC 33:V.1753.A and 1765 shall be considered by the administrative authority together with the results of the waste determination performed or requested by the administrative authority in establishing compliance with this Subchapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1702 (September 1998), LR 25:440 (March 1999).

## §1753. Waste Determination Procedures

A. Waste Determination Procedure to Determine Average Volatile Organic (VO) Concentration of a Hazardous Waste at the Point of Waste Origination

1. An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of LAC 33:V.1751.C.1 from using air emission controls in accordance with standards specified in LAC 33:V.4727, as applicable to the waste management unit.

a. An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the hazardous waste stream is placed in a waste management unit exempted under the provisions of LAC 33:V.1751.C.1 from using air emission controls, and thereafter, an initial determination of the average VO concentration of the waste stream shall be made for each averaging period that a hazardous waste is managed in the unit.

b. Perform a new waste determination whenever changes to the source generating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the applicable VO concentration limits specified in LAC 33:V.1751.

2. For a waste determination that is required by Paragraph A.1 of this Section, the average VO concentration of a hazardous waste at the point of waste origination shall be determined in accordance with the procedures specified in LAC 33:V.4727.A.2-4.

B. Waste Determination Procedures for Treated Hazardous Waste

1. An owner or operator shall perform the applicable waste determinations for each treated hazardous waste placed in waste management units exempted under the provisions of LAC 33:V.1751.C.2.a-f from using air emission controls in accordance with standards specified in LAC 33:V.1755-1761, as applicable to the waste management unit.

a. An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the treated waste stream is placed in the exempt waste management unit, and thereafter, the information used for the waste determination shall be updated at least once every 12 months following the date of the initial waste determination.

b. Perform a new waste determination whenever changes to the process generating or treating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level such that the applicable treatment conditions specified in LAC 33:V.1751.C.2 are not achieved.

2. The waste determination for a treated hazardous waste shall be performed in accordance with the procedures specified in LAC 33:V.4727, as applicable to the treated hazardous waste.

C. Procedure to Determine the Maximum Organic Vapor Pressure of a Hazardous Waste in a Tank

1. An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with standards specified in LAC 33:V.1755.C.

2. The maximum organic vapor pressure of the hazardous waste may be determined in accordance with the procedures specified in LAC 33:V.4727.

D. The procedure for determining no detectable organic emissions for the purpose of complying with this Subchapter shall be conducted in accordance with the procedures specified in LAC 33:V.4727.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1704 (September 1998), LR 25:440 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:279 (February 2000).

## §1755. Standards: Tanks

A. The provisions of this Section apply to the control of air pollutant emissions from tanks for which LAC 33:V.1751.B references the use of this Section for such air emission control.

B. The owner or operator shall control air pollutant emissions from each tank subject to this Section in accordance with the following requirements, as applicable;

1. for a tank that manages hazardous waste that meets all of the conditions specified in Subparagraphs B.1.a-c of this Section, the owner or operator shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in Subsection C of this Section or the Tank Level 2 controls specified in Subsection D of this Section:

a. the hazardous waste in the tank has a maximum organic vapor pressure that is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:

i. for a tank design capacity equal to or greater than 151 $m^3$, the maximum organic vapor pressure limit for the tank is 5.2 kPa;

ii. for a tank design capacity equal to or greater than 75 $m^3$, but less than 151 $m^3$, the maximum organic vapor pressure limit for the tank is 27.6 kPa;

iii. for a tank design capacity less than 75 $m^3$, the maximum organic vapor pressure limit for the tank is 76.6 kPa;

b. the hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with Subparagraph B.1.a of this Section; and

c. the hazardous waste in the tank is not treated by the owner or operator using a *waste stabilization process*, as defined in LAC 33:V.4721; and

2. for a tank that manages hazardous waste that does not meet all of the conditions specified in Subparagraphs B.1.a-c of this Section, the owner or operator shall control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with the requirements of Subsection D of this Section. Examples of tanks required to use Tank Level 2 controls include a tank used for a waste stabilization process and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in Subparagraph B.1.a of this Section.

C. Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in Paragraphs C.1-4 of this Section.

1. The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in LAC 33:V.1753.C. Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in Subparagraph B.1.a of this Section, as applicable to the tank.

2. The tank shall be equipped with a fixed roof designed to meet the following specifications.

a. The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).

b. The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

c. Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either:

i. equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

ii. connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever hazardous waste is managed in the tank, except as follows:

(a). during periods when it is necessary to provide access to the tank for performing the activities of Subclause C.2.c.ii.(b) of this Section, venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device; or

(b). during periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

d. The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life.

Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include organic vapor permeability; the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

3. Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows.

a. Opening of closure devices or removal of the fixed roof is allowed at the following times:

i. to provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank;

ii. to remove accumulated sludge or other residues from the bottom of the tank.

b. Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

c. Opening of a *safety device*, as defined in LAC 33:V.4721, is allowed at any time conditions require doing so to avoid an unsafe condition.

4. The owner or operator shall inspect the air emission control equipment in accordance with the following requirements:

a. the fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices;

b. the owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this Section. Thereafter, the owner or operator shall perform the inspections at least once every year, except under the special conditions provided for in Subsection L of this Section;

c. in the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection K of this Section; and

d. the owner or operator shall maintain a record of the inspection in accordance with the requirements specified in LAC 33:V.1765.B.

D. Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

1. a fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in Subsection E of this Section;

2. a tank equipped with an external floating roof in accordance with the requirements specified in Subsection F of this Section;

3. a tank vented through a closed-vent system to a control device in accordance with the requirements specified in Subsection G of this Section;

4. a pressure tank designed and operated in accordance with the requirements specified in Subsection H of this Section; or

5. a tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in Subsection I of this Section.

E. The owner or operator who controls air pollutant emissions from a tank using a fixed roof with an internal floating roof shall meet the requirements specified in Paragraphs E.1-3 of this Section.

1. The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements.

a. The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

b. The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

i. a single continuous seal that is either a *liquid-mounted seal* or a *metallic shoe seal*, as defined in LAC 33:V.4721; or

ii. two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

c. The internal floating roof shall meet the following specifications:

i. each opening in a noncontact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and the rim space vents, is to provide a projection below the liquid surface;

ii. each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains;

iii. each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening;

iv. each automatic bleeder vent and rim space vent shall be gasketed;

v. each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover; and

vi. each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

2. The owner or operator shall operate the tank in accordance with the following requirements:

a. when the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical;

b. automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports; and

c. prior to filling the tank, each cover, access hatch, gauge float well, or lid on any opening in the internal floating roof shall be bolted or fastened closed (i.e., no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

3. The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:

a. the floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, the internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than 10 percent open area;

b. the owner or operator shall inspect the internal floating roof components as follows, except as provided in Subparagraph E.3.c of this Section:

i. visually inspect the internal floating roof components through openings on the fixed-roof (e.g., manholes and roof hatches) at least once every 12 months after initial fill; and

ii. visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 10 years;

c. as an alternative to performing the inspections specified in Subparagraph E.3.b of this Section for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every five years;

d. prior to each inspection required by Subparagraph E.3.b or c of this Section, the owner or operator shall notify the Office of Environmental Services in advance of each inspection to provide the administrative authority with the opportunity to have an observer present during the inspection. The owner or operator shall notify the administrative authority of the date and location of the inspection as follows:

i. prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the administrative authority at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in Clause E.3.d.ii of this Section;

ii. when a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Office of Environmental Services as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the administrative authority at least seven calendar days before refilling the tank;

e. in the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection K of this Section; and

f. the owner or operator shall maintain a record of the inspection in accordance with the requirements specified in LAC 33:V.1765.B.

4. *Safety devices*, as defined in LAC 33:V.4721, may be installed and operated as necessary on any tank

complying with the requirements of Subsection E of this Section.

F. The owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in Paragraphs F.1-3 of this Section.

1. The owner or operator shall design the external floating roof in accordance with the following requirements:

a. the external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports;

b. the floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal:

i. the primary seal shall be a *liquid-mounted seal* or a *metallic shoe seal*, as defined in LAC 33:V.4721. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters ($cm^2$) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface; and

ii. the secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters ($cm^2$) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters (cm); and

c. the external floating roof shall meet the following specifications:

i. except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface;

ii. except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid;

iii. each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position;

iv. each automatic bleeder vent and each rim space vent shall be equipped with a gasket;

v. each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening;

vi. each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal;

vii. each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole;

viii. each slotted guide pole shall be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere; and

ix. each gauge hatch and each sample well shall be equipped with a gasketed cover.

2. The owner or operator shall operate the tank in accordance with the following requirements:

a. when the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical;

b. except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access;

c. covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position;

d. automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports;

e. rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting;

f. the cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank;

g. the cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access; and

h. both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

3. The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows.

a. The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

i. the owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every five years;

ii. the owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year;

iii. if a tank ceases to hold hazardous waste for a period of one year or more, subsequent introduction of hazardous waste into the tank shall be considered an initial operation for the purposes of Clauses F.3.a.i and ii of this Section;

iv. the owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

(a). the seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports;

(b). seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location;

(c). for a seal gap measured under Paragraph F.3 of this Section, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance;

(d). the total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in Subparagraph F.1.b of this Section;

v. in the event that the seal gap measurements do not conform to the specifications in Subparagraph F.1.b of this Section, the owner or operator shall repair the defect in accordance with the requirements of Subsection K of this Section; and

vi. the owner or operator shall maintain a record of the inspection in accordance with the requirements specified in LAC 33:V.1765.B.

b. The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

i. the floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices;

ii. the owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this Section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in Subsection L of this Section;

iii. in the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection K of this Section; and

iv. the owner or operator shall maintain a record of the inspection in accordance with the requirements specified in LAC 33:V.1765.B.

c. Prior to each inspection required by Subparagraph F.3.a or F.3.b of this Section, the owner or operator shall notify the Office of Environmental Services in advance of each inspection to provide the administrative authority with the opportunity to have an observer present during the inspection. The owner or operator shall notify the administrative authority of the date and location of the inspection as follows:

i. prior to each inspection to measure external floating roof seal gaps as required under Subparagraph F.3.a of this Section, written notification shall be prepared and sent by the owner or operator so that it is received by the administrative authority at least 30 calendar days before the date the measurements are scheduled to be performed;

ii. prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the administrative authority at least 30 calendar days before refilling the tank, except when an inspection is not planned as provided for in Clause F.3.c.iii of this Section; and

iii. when a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the administrative authority as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation stating why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the administrative authority at least seven calendar days before refilling the tank.

4. *Safety devices*, as defined in LAC 33:V.4721, may be installed and operated as necessary on any tank complying with the requirements of Subsection F of this Section.

G. The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device

shall meet the requirements specified in Paragraphs G.1-3 of this Section.

1. The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

a. the fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank;

b. each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions;

c. the fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed; and

d. the closed-vent system and control device shall be designed and operated in accordance with the requirements of LAC 33:V.1761.

2. Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows.

a. Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

i. to provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank; and

ii. to remove accumulated sludge or other residues from the bottom of a tank.

b. Opening of a *safety device*, as defined in LAC 33:V.4721, is allowed at any time conditions require doing so to avoid an unsafe condition.

3. The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

a. the fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices;

b. the closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in LAC 33:V.1761;

c. the owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this Section. Thereafter, the owner or operator shall perform the inspections at least once every year, except for the special conditions provided for in Subsection L of this Section;

d. in the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection K of this Section; and

e. the owner or operator shall maintain a record of the inspection in accordance with the requirements specified in LAC 33:V.1765.B.

H. The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements:

1. the tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity;

2. all tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in LAC 33:V.1753.D; and

3. whenever a hazardous waste is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except under either of the following conditions as specified in Subparagraphs H.3.a and b of this Section:

a. at those times when opening of a *safety device*, as defined in LAC 33:V.1703, is required to avoid an unsafe condition; or

b. at those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of LAC 33:V.1761.

I. The owner or operator who controls air pollutant emissions by using an enclosure vented through a

closed-vent system to an enclosed combustion control device shall meet the requirements specified in Paragraphs I.1-4 of this Section:

1. the tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* initially when the enclosure is first installed and, thereafter, annually;

2. the enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in LAC 33:V.1761;

3. *safety devices*, as defined in LAC 33:V.4721, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of Paragraphs I.1 and 2 of this Section; and

4. the owner or operator shall inspect and monitor the closed-vent system and control device as specified in LAC 33:V.1761.

J. The owner or operator shall transfer hazardous waste to a tank subject to this Section in accordance with the following requirements:

1. transfer of hazardous waste, except as provided in Paragraph J.2 of this Section, to the tank from another tank subject to this Section or from a surface impoundment subject to LAC 33:V.1757 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR Part 63, Subpart RR—National Emission Standards for Individual Drain Systems; and

2. the requirements of Paragraph J.1 of this Section do not apply when transferring a hazardous waste to the tank under any of the following conditions:

a. the hazardous waste meets the average VO concentration conditions specified in LAC 33:V.1751.C.1 at the point of waste origination;

b. the hazardous waste has been treated by an organic destruction or removal process to meet the requirements in LAC 33:V.1751.C.2; or

c. the hazardous waste meets the requirements of LAC 33:V.1751.C.4.

K. The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of Paragraph C.4, E.3, F.3, or G.3 of this Section as follows:

1. the owner or operator shall make first efforts at repair of the defect no later than five calendar days after detection, and repair shall be completed as soon as possible, but no later than 45 calendar days after detection, except as provided in Paragraph K.2 of this Section; and

2. repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

L. Following the initial inspection and monitoring of the cover as required by the applicable provisions of this Subchapter, subsequent inspection and monitoring may be performed at intervals longer than one year under the following special conditions:

1. in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

a. prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required; and

b. develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable Section of this Subchapter, as frequently as practicable during those times when a worker can safely access the cover; and

2. in the case when a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this Section, only those portions of the tank cover and those connections to the tank (e.g., fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1704 (September 1998), amended LR 25:440 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:279 (February 2000), LR 26:2474 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2106 (October 2007).

**§1757. Standards: Surface Impoundments**

A. The provisions of this Section apply to the control of air pollutant emissions from surface impoundments for which LAC 33:V.1751.B references the use of this Section for such air emission control.

B. The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:

1. a floating membrane cover in accordance with the provisions specified in Subsection C of this Section; or

2. a cover that is vented through a closed-vent system to a control device in accordance with the provisions specified in Subsection D of this Section.

C. The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in Paragraphs C.1-3 of this Section:

1. the surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:

a. the floating membrane cover shall be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid;

b. the cover shall be fabricated from a synthetic membrane material that is either:

i. high density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (mm); or

ii. a material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in Clause C.1.b.i of this Section and chemical and physical properties that maintain the material integrity for the intended service life of the material;

c. the cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings;

d. except as provided for in Subparagraph C.1.e of this Section, each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device;

e. the floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal; and

f. the closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed;

2. whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

a. opening of closure devices or removal of the cover is allowed at the following times:

i. to provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable; and

ii. to remove accumulated sludge or other residues from the bottom of the surface impoundment; and

b. opening of a *safety device*, as defined in LAC 33:V.4721, is allowed at any time conditions require doing so to avoid an unsafe condition; and

3. the owner or operator shall inspect the floating membrane cover in accordance with the following procedures:

a. the floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices; and

b. the owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to this Section. Thereafter, the owner or operator shall perform the inspections at least once every year, except for the special conditions provided for in Subsection G of this Section;

c. in the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection F of this Section; and

d. the owner or operator shall maintain a record of the inspection in accordance with the requirements specified in LAC 33:V.1765.C.

D. The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in Paragraphs D.1-3 of this Section.

1. The surface impoundment shall be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:

a. the cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment;

b. each opening in the cover not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions using the procedure specified in LAC 33:V.1753.D;

c. the cover and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed; and

d. the closed-vent system and control device shall be designed and operated in accordance with the requirements of LAC 33:V.1761.

2. Whenever a hazardous waste is in the surface impoundment, the cover shall be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows.

a. Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:

i. to provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment; and

ii. to remove accumulated sludge or other residues from the bottom of the surface impoundment.

b. Opening of a *safety device*, as defined in LAC 33:V.4721, is allowed at any time conditions require doing so to avoid an unsafe condition.

3. The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

a. the surface impoundment cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices;

b. the closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in LAC 33:V.1761;

c. the owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to this Section. Thereafter, the owner or operator shall perform the inspections at least once every year, except for the special conditions provided for in Subsection G of this Section;

d. in the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subsection F of this Section; and

e. the owner or operator shall maintain a record of the inspection in accordance with the requirements specified in LAC 33:V.1765.C.

E. The owner or operator shall transfer hazardous waste to a surface impoundment subject to this Section in accordance with the following requirements:

1. transfer of hazardous waste, except as provided in Paragraph E.2 of this Section, to the surface impoundment from another surface impoundment subject to this Section or from a tank subject to LAC 33:V.1755 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR Part 63, Subpart RR—National Emission Standards for Individual Drain Systems; and

2. the requirements of Paragraph E.1 of this Section do not apply when transferring a hazardous waste to the surface impoundment under either of the following conditions:

a. the hazardous waste meets the average VO concentration conditions specified in LAC 33:V.1751.C.1 at the point of waste origination;

b. the hazardous waste has been treated by an organic destruction or removal process to meet the requirements in LAC 33:V.1751.C.2;

c. the hazardous waste meets the requirements of LAC 33:V.1751.C.4.

F. The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of Paragraph C.3 or D.3 of this Section.

1. The owner or operator shall make first efforts at repair of the defect no later than five calendar days after detection, and repair shall be completed as soon as possible, but no later than 45 calendar days, after detection except as provided in Paragraph F.2 of this Section.

2. Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the surface impoundment stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

G. Following the initial inspection and monitoring of the cover as required by the applicable provisions of this Subchapter, subsequent inspection and monitoring may be performed at intervals longer than one year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

1. prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required; and

2. develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable Section of this Subchapter as frequently as practicable during those times when a worker can safely access the cover.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1710 (September 1998), amended LR 25:441 (March 1999).

## §1759. Standards: Containers

A. The provisions of this Section apply to the control of air pollutant emissions from containers for which LAC 33:V.1751.B references the use of this Section for such air emission control.

B. General Requirements

1. The owner or operator shall control air pollutant emissions from each container subject to this Section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in Paragraph B.2 of this Section apply to the container:

a. for a container having a design capacity greater than 0.1 $m^3$ and less than or equal to 0.46 $m^3$, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in Subsection C of this Section;

b. for a container having a design capacity greater than 0.46 $m^3$ that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in Subsection C of this Section; and

c. for a container having a design capacity greater than 0.46 $m^3$ that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in Subsection D of this Section.

2. When a container having a design capacity greater than 0.1 $m^3$ is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 3 standards specified in Subsection E of this Section at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

C. Container Level 1 Standards

1. A container using Container Level 1 controls is one of the following:

a. a container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation, as specified in Subsection F of this Section;

b. a container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap);

c. an open-top container in which an organic-vapor-suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor-suppressing foam.

2. A container used to meet the requirements of Subparagraph C.1.b or c of this Section shall be equipped

with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity, for as long as the container is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

3. Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

a. opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

i. in the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation; and

ii. in the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level, the completion of a batch loading after which no additional material will be added to the container within 15 minutes, the person performing the loading operation leaving the immediate vicinity of the container, or the shutdown of the process generating the material being added to the container, whichever condition occurs first;

b. opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

i. for the purpose of meeting the requirements of this Section an *empty container*, as defined in LAC 33:V.109, may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container);

ii. in the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an *empty container*, as defined in LAC 33:V.109, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first;

c. opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container;

d. opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations; and

e. opening of a *safety device*, as defined in LAC 33:V.4721, is allowed at any time conditions require doing so to avoid an unsafe condition.

4. The owner or operator of containers using Container Level 1 controls shall inspect the containers and their covers and closure devices as follows.

a. In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., does not meet the conditions for an *empty container* as specified in LAC 33:V.109), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the LAC 33:V.Chapter 17.Subchapter C container is accepted at the facility (i.e., the date the container becomes subject to the container standards of this Section). For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest (EPA Forms 8700-22 and 8700-22A, DEQ Form HW-3), as required under LAC 33:V.1516.B. If a defect is

detected, the owner or operator shall repair the defect in accordance with the requirements of Subparagraph C.4.c of this Section.

b. In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and, thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subparagraph C.4.c of this Section.

c. When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible, but no later than five calendar days, after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

5. The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with a capacity of 0.46 $m^3$ or greater, which do not meet applicable DOT regulations as specified in Subsection F of this Section, are not managing hazardous waste in light material service.

D. Container Level 2 Standards

1. A container using Container Level 2 controls is one of the following:

a. a container that meets the applicable DOT regulations on packaging hazardous materials for transportation, as specified in Subsection F of this Section;

b. a container that operates with *no detectable organic emissions* as defined in LAC 33:V.4721 and determined in accordance with the procedure specified in Subsection G of this Section;

c. a container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40 CFR Part 60, Appendix A, Method 27 in accordance with the procedure specified in Subsection H of this Section.

2. Transfer of hazardous waste in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the EPA considers to meet the requirements of this Paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container, a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations, or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

3. Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator shall install all covers and closure devices for the container and secure and maintain each closure device in the closed position except as follows.

a. Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows.

i. In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

ii. In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level, the completion of a batch loading after which no additional material will be added to the container within 15 minutes, the person performing the loading operation leaving the immediate vicinity of the container, or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

b. Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows.

i. For the purpose of meeting the requirements of this Section an *empty container*, as defined in LAC 33:V.109, may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

ii. In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an *empty container*, as defined in LAC 33:V.109, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

c. Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity the owner or

operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

d. Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

e. Opening of a *safety device*, as defined in LAC 33:V.4721, is allowed at any time conditions require doing so to avoid an unsafe condition.

4. The owner or operator of containers using Container Level 2 controls shall inspect the containers and their covers and closure devices as follows.

a. In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., does not meet the conditions for an *empty container* as specified in LAC 33:V.109), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (i.e., the date the container becomes subject to the LAC 33:V.Chapter 17.Subchapter C container standards of this Section). For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest (EPA Forms 8700-22 and 8700-22A, DEQ Form HW-3), as required under LAC 33:V.1516.B. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subparagraph D.4.c of this Section.

b. In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and, thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Subparagraph D.4.c of this Section.

c. When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible, but no later than five calendar days, after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

E. Container Level 3 Standards

1. A container using Container Level 3 controls is one of the following:

a. a container that is vented directly through a closed-vent system to a control device in accordance with the requirements of Subparagraph E.2.b of this Section;

b. a container that is vented inside an enclosure that is exhausted through a closed-vent system to a control device in accordance with the requirements of Subparagraphs E.2.a and b of this Section.

2. The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

a. the container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access, passage of containers through the enclosure by conveyor or other mechanical means, entry of permanent mechanical or electrical equipment, or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* initially when the enclosure is first installed and, thereafter, annually; and

b. the closed-vent system and control device shall be designed and operated in accordance with the requirements of LAC 33:V.1761.

3. *Safety devices*, as defined in LAC 33:V.4721, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of Paragraph E.1 of this Section.

4. Owners and operators using Container Level 3 controls in accordance with the provisions of this Subchapter shall inspect and monitor the closed-vent systems and control devices as specified in LAC 33:V.1761.

5. Owners and operators that use Container Level 3 controls in accordance with the provisions of this Subchapter shall prepare and maintain the records specified in LAC 33:V.1765.D.

6. Transfer of hazardous waste in or out of a container using Container Level 3 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the department considers to meet the requirements of this Paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

F. For the purpose of compliance with Subparagraph C.1.a or D.1.a of this Section, containers shall be used that meet the applicable DOT regulations on packaging hazardous materials for transportation as follows:

1. the container meets the applicable requirements specified in 49 CFR Part 178—Specifications for Packaging or 49 CFR Part 179—Specifications for Tank Cars;

2. hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR Part 107, Subpart B—Exemptions; 49 CFR Part 172—Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR Part 173—Shippers—General Requirements for Shipments and Packages; and 49 CFR Part 180—Continuing Qualification and Maintenance of Packagings;

3. for the purpose of complying with this Subchapter, no exceptions to the 49 CFR Part 178 or Part 179 regulations are allowed except as provided for in Paragraph F.4 of this Section; and

4. for a lab pack that is managed in accordance with the requirements of 49 CFR Part 178 for the purpose of complying with this Subchapter, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

G. To determine compliance with the detectable organic emissions requirement of Subparagraph D.1.b of this Section, the procedure specified in LAC 33:V.1753.D shall be used.

1. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to, the interface of the cover rim and the container wall, the periphery of any opening on the container or container cover and its associated closure device, and the sealing seat interface on a spring-loaded pressure-relief valve.

2. The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

H. The owner or operator shall use the procedure for determining a container to be vapor-tight using Method 27 of 40 CFR Part 60, Appendix A for the purpose of complying with Subparagraph D.1.c of this Section.

1. The test shall be performed in accordance with Method 27 of 40 CFR Part 60, Appendix A.

2. A pressure measurement device shall be used that has a precision of ±2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

3. If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within five minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1712 (September 1998), amended LR 25:441 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:279 (February 2000).

## §1761. Standards: Closed-Vent Systems and Control Devices

A. This Section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this Subchapter.

B. The closed-vent system shall meet the following requirements:

1. shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in Subsection C of this Section;

2. shall be designed and operated in accordance with the requirements specified in LAC 33:V.1709.K;

3. in the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in Subparagraph B.3.a of this Section or a seal or locking device as specified in Subparagraph B.3.b of this Section. For the purpose of complying with this Paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring-loaded pressure-relief

valves, and other fittings used for safety purposes are not considered to be bypass devices:

a. if a flow indicator is used to comply with this Subsection, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a *flow indicator* means a device that indicates the presence of either gas or vapor flow in the bypass line;

b. if a seal or locking device is used to comply with this Subsection, the device shall be placed on the mechanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position;

4. shall be inspected and monitored by the owner or operator in accordance with the procedure specified in LAC 33:V.1709.L.

C. The control device shall meet the following requirements:

1. shall be one of the following devices:

a. a control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

b. an enclosed combustion device designed and operated in accordance with the requirements of LAC 33:V.1709.C; or

c. a flare designed and operated in accordance with the requirements of LAC 33:V.1709.D;

2. the owner or operator who elects to use a closed-vent system and control device to comply with the requirements of this Section shall comply with the requirements specified in Subparagraphs C.2.a-f of this Section:

a. periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of Subparagraph C.1.a, b, or c of this Section, as applicable, shall not exceed 240 hours per year;

b. the specifications and requirements in Subparagraph C.1.a, b, or c of this Section for control devices do not apply during periods of planned routine maintenance;

c. the specifications and requirements in Subparagraph C.1.a, b, or c of this Section for control devices do not apply during a control device system malfunction;

d. the owner or operator shall demonstrate compliance with the requirements of Subparagraph C.2.a of this Section (i.e., planned routine maintenance of a control device, during which the control device does not meet the specifications of Subparagraph C.1.a, b, or c of this Section, as applicable, shall not exceed 240 hours per year) by recording the information specified in LAC 33:V.1765.E.1.e;

e. the owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants; and

f. the owner or operator shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (i.e., periods when the control device is not operating or not operating normally) except in cases when it is necessary to vent the gases, vapors, and/or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions;

3. the owner or operator using a carbon adsorption system to comply with Paragraph C.1 of this Section shall operate and maintain the control device in accordance with the following requirements:

a. following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of LAC 33:V.1709.G or H; and

b. all carbon that is a hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of LAC 33:V.1709.N, regardless of the average volatile organic concentration of the carbon;

4. an owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with Paragraph C.1 of this Section shall operate and maintain the control device in accordance with the requirements of LAC 33:V.1709.J;

5. the owner or operator shall demonstrate that a control device achieves the performance requirements of Paragraph C.1 of this Section as follows:

a. an owner or operator shall demonstrate, using either a performance test as specified in Subparagraph C.5.c of this Section or a design analysis as specified in Subparagraph C.5.d of this Section, the performance of each control device except for the following:

i. a flare;

ii. a boiler or process heater with a design heat input capacity of 44 megawatts or greater;

iii. a boiler or process heater into which the vent stream is introduced with the primary fuel;

iv. a boiler or industrial furnace burning hazardous waste for which the owner or operator has been issued a final permit under LAC 33:V.Chapter 5 and has designed

and operates the unit in accordance with the requirements of LAC 33:V.Chapter 30; or

v. a boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in accordance with the interim status requirements of LAC 33:V.Chapter 30;

b. an owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in LAC 33:V.1709.E;

c. for a performance test conducted to meet the requirements of Subparagraph C.5.a of this Section, the owner or operator shall use the test methods and procedures specified in LAC 33:V.1711.C.1-4;

d. for a design analysis conducted to meet the requirements of Subparagraph C.5.a of this Section, the design analysis shall meet the requirements specified in LAC 33:V.1713.B.4.c; and

e. the owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of Paragraph C.1 of this Section based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal;

6. if the owner or operator and the administrative authority do not agree on a demonstration of control device performance using a design analysis, then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of Subparagraph C.5.c of this Section. The administrative authority may choose to have an authorized representative observe the performance test; and

7. the closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in LAC 33:V.1709.F.2 and L. The readings from each monitoring device required by LAC 33:V.1709.F.2 shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1716 (September 1998), amended LR 25:442 (March 1999).

## §1763. Inspection and Monitoring Requirements

A. The owner or operator shall inspect and monitor air emission control equipment used to comply with this Chapter in accordance with the applicable requirements specified in LAC 33:V.1755-1761.

B. The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by Subsection A of this Section. The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under LAC 33:V.1509.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1718 (September 1998).

## §1765. Recordkeeping Requirements

A. Each owner or operator of a facility subject to requirements in this Subchapter shall record and maintain the information specified in Subsections B-J of this Section, as applicable to the facility. Except for air emission control equipment design documentation and information required by Subsections I and J of this Section, records required by this Section shall be maintained in the operating record for a minimum of three years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by Subsections I and J of this Section shall be maintained in the operating record for as long as the waste management unit is not using air emission controls specified in LAC 33:V.1755-1761 in accordance with the conditions specified in LAC 33:V.1747.B.7 or D, respectively.

B. The owner or operator of a tank using air emission controls in accordance with the requirements of LAC 33:V.1755 shall prepare and maintain records for the tank that include the following information:

1. for each tank using air emission controls in accordance with the requirements of LAC 33:V.1755, the owner or operator shall record:

a. a tank identification number (or other unique identification description as selected by the owner or operator); and

b. a record for each inspection required by LAC 33:V.1755 that includes the following information:

i. date inspection was conducted; and

ii. for each defect detected during the inspection the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the requirements of LAC 33:V.1755, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected; and

2. in addition to the information required by Paragraph B.1 of this Section, the owner or operator shall record the following information, as applicable to the tank:

a. the owner or operator using a fixed roof to comply with the Tank Level 1 control requirements specified in LAC 33:V.1755.C shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of LAC 33:V.1755.C. The records

shall include the date and time the samples were collected, the analysis method used, and the analysis results;

b. the owner or operator using an internal floating roof to comply with the Tank Level 2 control requirements specified in LAC 33:V.1755.E shall prepare and maintain documentation describing the floating roof design;

c. owners and operators using an external floating roof to comply with the Tank Level 2 control requirements specified in LAC 33:V.1755.F shall prepare and maintain the following records:

i. documentation describing the floating roof design and the dimensions of the tank; and

ii. records for each seal gap inspection required by LAC 33:V.1755.F.3 describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in LAC 33:V.1755.F.1, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary; and

d. each owner or operator using an enclosure to comply with the Tank Level 2 control requirements specified in LAC 33:V.1755.I shall prepare and maintain the following records:

i. records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* under 40 CFR 52.741, Appendix B; and

ii. records required for the closed-vent system and control device in accordance with the requirements of Subsection E of this Section.

C. The owner or operator of a surface impoundment using air emission controls in accordance with the requirements of LAC 33:V.1757 shall prepare and maintain records for the surface impoundment that include the following information:

1. a surface impoundment identification number (or other unique identification description as selected by the owner or operator);

2. documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design and certification by the owner or operator that the cover meets the specifications listed in LAC 33:V.1757.C;

3. a record for each inspection required by LAC 33:V.1757 that includes the following information:

a. date inspection was conducted; and

b. for each defect detected during the inspection, include the following, the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of LAC 33:V.1757.F, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected; and

4. for a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the records specified in Subsection E of this Section.

D. The owner or operator of containers using Container Level 3 air emission controls in accordance with the requirements of LAC 33:V.1759 shall prepare and maintain records that include the following information:

1. records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in *Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure* under 40 CFR 52.741, Appendix B; and

2. records required for the closed-vent system and control device in accordance with the requirements of Subsection E of this Section.

E. The owner or operator using a closed-vent system and control device in accordance with the requirements of LAC 33:V.1761 shall prepare and maintain records that include documentation for the closed-vent system and control device that includes:

1. certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in Paragraph E.2 of this Section or by performance tests as specified in Paragraph E.3 of this Section when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur;

2. if a design analysis is used, then design documentation as specified in LAC 33:V.1713.B.4. The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with LAC 33:V.1713.B.4.c and certification by the owner or operator that the control equipment meets the applicable specifications;

3. if performance tests are used, then a performance test plan as specified in LAC 33:V.1713.B.3 and all test results;

4. information as required by LAC 33:V.1713.C.1 and 2, as applicable;

5. an owner or operator shall record, on a semiannual basis, the information specified in Subparagraphs E.5.a and b of this Section for those planned routine maintenance operations that would require the control device not to meet

the requirements of LAC 33:V.1761.C.1.a, b, or c, as applicable:

a. a description of the planned routine maintenance that is anticipated to be performed for the control device during the next six-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods; and

b. a description of the planned routine maintenance that was performed for the control device during the previous six-month period. This description shall include the type of maintenance performed and the total number of hours during those six months that the control device did not meet the requirements of LAC 33:V.1761.C.1.a, b, or c, as applicable, due to planned routine maintenance;

6. an owner or operator shall record the information specified in Subparagraphs E.6.a-c of this Section for those unexpected control device system malfunctions that would require the control device not to meet the requirements of LAC 33:V.1761.C.1.a, b, or c, as applicable:

a. the occurrence and duration of each malfunction of the control device system;

b. the duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning; and

c. actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation; and

7. records of the management of carbon removed from a carbon adsorption system conducted in accordance with LAC 33:V.1761.C.3.b.

F. The owner or operator of a tank, surface impoundment, or container exempted from standards in accordance with the provisions of LAC 33:V.1751.C shall prepare and maintain the following records, as applicable.

1. For tanks, surface impoundments, and containers exempted under the hazardous waste organic concentration conditions specified in LAC 33:V.1751.C.1 or 2.a-f, the owner or operator shall record the information used for each waste determination (e.g., test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of LAC 33:V.1753.

2. For tanks, surface impoundments, or containers exempted under the provisions of LAC 33:V.1751.C.2.g or h, the owner or operator shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

G. An owner or operator designating a cover as "unsafe to inspect and monitor" in accordance with LAC 33:V.1755.L or 1757.G shall record in a log that is kept in the facility operating record the following information: the identification numbers for waste management units with covers that are designated as "unsafe to inspect and monitor"; the explanation for each cover stating why the cover is unsafe to inspect and monitor; and the plan and schedule for inspecting and monitoring each cover.

H. The owner or operator of a facility that is subject to this Subchapter and to the control device standards in 40 CFR Part 60, Subpart VV or 40 CFR Part 61, Subpart V may elect to demonstrate compliance with the applicable Sections of this Subchapter by documentation either in accordance with this Subchapter or the provisions of 40 CFR Part 60, Subpart VV or 40 CFR Part 61, Subpart V, to the extent that the documentation required by 40 CFR Part 60 or 61 duplicates the documentation required by this Section.

I. For each tank or container not using air emission controls specified in LAC 33:V.1755-1761 in accordance with the conditions specified in LAC 33:V.1747.D, the owner or operator shall record and maintain the following information:

1. a list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in LAC 33:V.1747.D.1;

2. a description of how the hazardous waste containing the organic peroxide compounds identified in Paragraph I.1 of this Section are managed at the facility in tanks and containers. This description shall include:

a. for the tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe, for each tank, a facility identification number for the tank; the purpose and placement of this tank in the management train of this hazardous waste, and the procedures used to ultimately dispose of the hazardous waste managed in the tanks; and

b. for containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe a facility identification number for the container or group of containers, the purpose and placement of this container or group of containers in the management train of this hazardous waste, and the procedures used to ultimately dispose of the hazardous waste handled in the containers;

3. an explanation of why managing the hazardous waste containing the organic peroxide compounds identified in Paragraph I.1 of this Section in the tanks and containers as described in Paragraph I.2 of this Section would create an undue safety hazard if the air emission controls, as required under LAC 33:V.1755-1761, are installed and operated on these waste management units. This explanation shall include the following information:

a. for tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain how use of the required air emission controls on the tanks would affect the tank design features and facility

operating procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the tanks, and why installation of safety devices on the required air emission controls, as allowed under this Subchapter, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides; and

b. for containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain how use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers, and why installation of safety devices on the required air emission controls, as allowed under this Subchapter, will not address those situations in which evacuation of containers equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

J. For each hazardous waste management unit not using air emission controls specified in LAC 33:V.1755-1761 in accordance with the requirements of LAC 33:V.1747.B.7, the owner and operator shall record and maintain the following information:

1. certification that the waste management unit is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR Part 60, Part 61, or Part 63; and

2. identification of the specific requirements codified under 40 CFR Part 60, Part 61, or Part 63 with which the waste management unit is in compliance.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1718 (September 1998), amended LR 25:442 (March 1999).

## §1767. Reporting Requirements

A. Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of LAC 33:V.1751.C shall report to the Office of Environmental Compliance each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in LAC 33:V.1751.C.1 or 2, as applicable. Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than 500 ppmw at the point of waste origination or placing in the waste management unit a treated hazardous waste of which the organic content has been reduced by an organic destruction or removal process that fails to achieve the applicable conditions specified in LAC 33:V.1751.C.2.a-f. The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

B. Each owner or operator using air emission controls on a tank in accordance with the requirements LAC 33:V.1755.C shall report to the Office of Environmental Compliance each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in LAC 33:V.1755.B. The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

C. Each owner or operator using a control device in accordance with the requirements of LAC 33:V.1761 shall submit a semiannual written report to the Office of Environmental Compliance, except as provided for in Subsection D of this Section. The report shall describe each occurrence during the previous six-month period when either:

1. a control device is operated continuously for 24 hours or longer in noncompliance with the applicable operating values defined in LAC 33:V.1713.C.4; or

2. a flare is operated with *visible emissions* for five minutes or longer in a two-hour period, as defined in LAC 33:V.1709.D. The written report shall include the EPA identification number, facility name and address, an explanation why the control device could not be returned to compliance within 24 hours, and actions taken to correct the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

D. A report to the administrative authority in accordance with the requirements of Subsection C of this Section is not required for a six-month period during which all control devices subject to this Chapter are operated by the owner or operator such that:

1. during no period of 24 hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in LAC 33:V.1713.C.4; and

2. no flare was operated with *visible emissions* for five minutes or longer in a two-hour period, as defined in LAC 33:V.1709.D.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1720 (September 1998), amended LR 25:442 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2474 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2106 (October 2007).

## §1799. Appendix—Table 1, Compounds with Henry's Law Constant Less than 0.1 Y/X [At 25°C]

**Table 1**

**Compounds with Henry's Law Constant Less than 0.1 Y/X [At 25°C]**

| Compound Name | CAS Number |
|---|---|
| Acetaldol | 107-89-1 |
| Acetamide | 60-35-5 |
| 2-Acetylaminofluorene | 53-96-3 |
| 3-Acetyl-5-hydroxypiperidine | |
| 3-Acetylpiperidine | 618-42-8 |
| 1-Acetyl-2-thiourea | 591-08-2 |
| Acrylamide | 79-06-1 |
| Acrylic acid | 79-10-7 |
| Adenine | 73-24-5 |
| Adipic acid | 124-04-9 |
| Adiponitrile | 111-69-3 |
| Alachlor | 15972-60-8 |
| Aldicarb | 116-06-3 |
| Ametryn | 834-12-8 |
| 4-Aminobiphenyl | 92-67-1 |
| 4-Aminopyridine | 504-24-5 |
| Aniline | 62-53-3 |
| o-Anisidine | 90-04-0 |
| Anthraquinone | 84-65-1 |
| Atrazine | 1912-24-9 |
| Benzenearsonic acid | 98-05-5 |
| Benzenesulfonic acid | 98-11-3 |
| Benzidine | 92-87-5 |
| Benzo (a) anthracene | 56-55-3 |
| Benzo (k) fluoranthene | 207-08-9 |
| Benzoic acid | 65-85-0 |
| Benzo (g,h,i) perylene | 191-24-2 |
| Benzo (a) pyrene | 50-32-8 |
| Benzyl alcohol | 100-51-6 |
| gamma-BHC | 58-89-9 |
| Bis (2-ethylhexyl) phthalate | 117-81-7 |
| Bromochloromethyl acetate | |
| Bromoxynil | 1689-84-5 |
| Butyric acid | 107-92-6 |
| Caprolactam (hexahydro-2H-azepin-2-one) | 105-60-2 |
| Catechol (o-dihydroxybenzene) | 120-80-9 |
| Cellulose | 9004-34-6 |
| Cell wall | |
| Chlorohydrin (3 Chloro-1,2-propanediol) | 96-24-2 |
| Chloroacetic acid | 79-11-8 |
| 2-Chloracetophenone | 93-76-5 |
| p-Chloroaniline | 106-47-8 |
| p-Chlorobenzophenone | 134-85-0 |
| Chlorobenzylate | 510-15-6 |
| p-Chloro-m-cresol (6-chloro-m-cresol) | 59-50-7 |
| 3-Chloro-2,5-diketopyrrolidine | |
| Chloro-1,2-ethane diol | |
| 4-Chlorophenol | 106-48-9 |
| Chlorophenol polymers (2-chlorophenol and 4-chlorophenol) | 95-57-8 and 106-48-9 |
| 1-(o-Chlorophenyl) thiourea | 5344-82-1 |
| Chrysene | 218-01-9 |
| Citric acid | 77-92-9 |
| Creosote | 8001-58-9 |
| m-Cresol | 108-39-4 |

**Table 1**

**Compounds with Henry's Law Constant Less than 0.1 Y/X [At 25°C]**

| Compound Name | CAS Number |
|---|---|
| o-Cresol | 95-48-7 |
| p-Cresol | 106-44-5 |
| Cresol (mixed isomers) | 1319-77-3 |
| 4-Cumylphenol | 27576-86 |
| Cyanide | 57-12-5 |
| 4-Cyanomethyl benzoate | |
| Diazinon | 333-41-5 |
| Dibenzo (a, h) anthracene | 53-70-3 |
| Dibutylphthalate | 84-74-2 |
| 2,5-Dichloroaniline (N,N'-Dichlotoaniline) | 95-82-9 |
| 2,6-Dichlorobenzonitrile | 1194-65-6 |
| 2,6-Dichloro-4-nitroaniline | 99-30-9 |
| 2,5-Dichlorophenol | 333-41-5 |
| 3,4-Dichlorotetrahydrofuran | 3511-19 |
| Dichlorvos (DDVP) | 62-73-7 |
| Diethanolamine | 111-42-2 |
| N,N-Diethylaniline | 91-66-7 |
| Diethylene glycol | 111-46-6 |
| Diethylene glycol dimethyl ether (dimethyl Carbitol) | 111-96-6 |
| Diethylene glycol monobutyl ether (butyl Carbitol) | 112-34-5 |
| Diethylene glycol monoethyl ether acetate (Carbitol acetate) | 112-15-2 |
| Diethylene glycol monoethyl ether (Carbitol Cellosolve) | 111-90-0 |
| Diethylene glycol monomethyl ether (methyl Carbitol) | 111-77-3 |
| N,N'-Diethylhydrazine | 1615-80-1 |
| Diethyl (4-methylumbelliferyl) thiophosphate | 299-45-6 |
| Diethyl phosphorothioate | 126-75-0 |
| N,N'-Diethyl propionamide | 15299-99-77 |
| Dimethoate | 60-51-5 |
| 2,3-Dimethoxystrychnidin-10-one | 357-57-3 |
| 4-Dimethylaminoazobenzene | 60-11-7 |
| 7,12-Dimethylbenz(a)anthracene | 57-97-6 |
| 3,3-Dimethylbenzidine | 119-93-7 |
| Dimethylcarbamoyl chloride | 79-44-7 |
| Dimethyldisulfide | 624-92-0 |
| Dimethylformanide | 68-12-2 |
| 1,1-Dimethylhydrazine | 57-14-7 |
| Dimethylphthalate | 131-11-3 |
| Dimethylsulfone | 67-71-0 |
| Dimethylsulfoxide | 67-68-5 |
| 4,6-Dinitro-o-cresol | 534-52-1 |
| 1,2-Diphenylhydrazine | 122-66-7 |
| Dipropylene glycol (1,1'-oxydi-2-propanol) | 110-98-5 |
| Endrin | 72-20-8 |
| Epinephrine | 51-43-4 |
| Mono-Ethanolamine | 141-43-5 |
| Ethyl carbamate (urethane) | 5-17-96 |
| Ethylene glycol | 107-21-1 |
| Ethylene glycol monobutyl ether (butyl Cellosolve) | 111-76-2 |
| Ethylene glycol monoethel ether (Cellosolve) | 110-80-5 |
| Ethylene glycol monoethyl ether acetate (Cellosolve acetate) | 111-15-9 |
| Ethylene glycol monomethyl ether (methyl Cellosolve) | 109-86-4 |
| Ethylene glycol monophenyl ether (phenyl Cellosolve) | 122-99-6 |
| Ethylene glycol monopropyl ether (propyl Cellosolve) | 2807-30-9 |
| Ethylene thiourea (2-imidazolidinethione) | 96-45-7 |
| 4-Ethylmorpholine | 100-74-3 |
| 3-Ethylphenol | 620-17-7 |
| Fluoroacetic acid, sodium salt | 62-74-8 |

| Table 1 | |
|---|---|
| Compounds with Henry's Law Constant Less than 0.1 Y/X [At 25°C] | |
| **Compound Name** | **CAS Number** |
| Formaldehyde | 50-00-0 |
| Formamide | 75-12-7 |
| Formic acid | 64-18-6 |
| Fumaric acid | 110-17-8 |
| Glutaric acid | 110-94-1 |
| Glycerin (Glycerol) | 56-81-5 |
| Glycidol | 556-52-5 |
| Glycinamide | 598-41-4 |
| Glyphosate | 1071-83-6 |
| Guthion | 86-50-0 |
| Hexamethylene-1,6-diisocyanate (1,6-Disocyanatohexane) | 822-06-0 |
| Hexamethyl phosphoramide | 680-31-9 |
| Hexanoic acid | 142-62-1 |
| Hydrazine | 302-01-2 |
| Hydrocyanic acid | 74-90-8 |
| Hydroquinone | 123-31-9 |
| Hydroxy-2-propionitrile (hydracrylonitrile) | 109-78-4 |
| Indeno (1, 2, 3-cd) pyrene | 193-39-5 |
| Lead acetate | 301-04-2 |
| Lead subacetate (lead acetate, monobasic) | 1335-32-6 |
| Leucine | 61-90-5 |
| Malathion | 121-75-5 |
| Maleic acid | 110-16-7 |
| Maleic anhydride | 108-31-6 |
| Mesityl oxide | 141-79-7 |
| Methane sulfonic acid | 75-75-2 |
| Methomyl | 16752-77-5 |
| p-Methoxyphenol | 150-76-5 |
| Methyl acrylate | 96-33-3 |
| 4,4'-Methylene-bis-(2-chloroaniline) | 101-14-4 |
| 4,4-Methylenediphenyl diisocyanate (diphenyl methane diisocyanate) | 101-68-8 |
| 4,4'-Methylenedianiline | 101-77-9 |
| Methylene diphenylamine (MDA) | |
| 5-Methylfurfural | 620-02-0 |
| Methylhydrazine | 60-34-4 |
| Methyliminoacetic acid | |
| Methyl methane sulfonate | 66-27-3 |
| 1-Methyl-2-methoxyaziridine | |
| Methylparathion | 298-00-0 |
| Methyl sulfuric acid (sulfuric acid, dimethyl ester) | 77-78-1 |
| 4-Methylthiophenol | 106-45-6 |
| Monomethylformanide (N-methylformamide) | 123-39-7 |
| Nabam | 142-59-6 |
| alpha-Naphthol | 90-15-3 |
| beta-Naphthol | 135-19-3 |
| alpha-Naphthylamine | 134-32-7 |
| beta-Naphthylamine | 91-59-8 |
| Neopentyl glycol (dimethylpropane) | 126-30-7 |
| Niacinamide | 98-92-0 |
| o-Nitroaniline | 88-74-4 |
| Nitroglycerin | 55-63-0 |
| 2-Nitrophenol | 88-75-5 |
| 4-Nitrophenol | 100-02-7 |
| N-Nitrosodimethylamine | 62-75-9 |
| Nitrasoguanidine | 674-81-7 |
| N-Nitroso-n-methylurea | 684-93-5 |
| N-Nitrosomorpholine (4-Nitrosomorpholine) | 59-89-2 |
| Oxalic acid | 144-62-7 |
| Parathion | 56-38-2 |
| Pentaerythritol | 115-77-5 |
| Phenacetin | 62-44-2 |
| Phenol | 108-95-2 |
| Phenylacetic acid | 103-82-2 |

| Table 1 | |
|---|---|
| Compounds with Henry's Law Constant Less than 0.1 Y/X [At 25°C] | |
| **Compound Name** | **CAS Number** |
| m-Phenylene diamine | 108-45-2 |
| o-Phenlyene diamine | 95-54-5 |
| p-Phenylene diamine | 106-50-3 |
| Phenyl mercuric acetate | 62-38-4 |
| Phorate | 298-02-2 |
| Phthalic anhydride | 85-44-9 |
| alpha-Piciline (2-methyl pyridine) | 109-06-8 |
| 1,3-Propane sultone | 1120-71-4 |
| Beta-Propiolactone | 57-57-8 |
| Proporur (Baygon) | |
| Porpylene glycol | 57-55-6 |
| Pyrene | 129-00-0 |
| Pyridinium bromide | 39416-48-3 |
| Quinoline | 91-22-5 |
| Quinone (p-benzoquinone) | 106-51-4 |
| Resorcinol | 108-46-3 |
| Simazine | 122-34-9 |
| Sodium acetate | 127-09-3 |
| Sodium formate | 141-53-7 |
| Strychnine | 57-24-9 |
| Succinic acid | 110-15-6 |
| Succinimide | 123-56-8 |
| Sulfanilic acid | 121-47-1 |
| Terephthalic acid | 100-21-0 |
| Tetraethyldithiopyrophosphate | 3689-24-5 |
| Tetraethylenepentamine | 112-57-2 |
| Thiofanox | 39196-18-4 |
| Thiosemicarbazide | 79-19-6 |
| 2,4-Toluenediamine | 95-80-7 |
| 2,6-Toluenediamine | 823-40-5 |
| 3,4-Toluenediamine | 496-72-0 |
| 2,4-Toluene diisocyanate | 584-84-9 |
| p-Toluic acid | 99-94-5 |
| m-Toluidine | 108-44-1 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 |
| Triethanolamine | 102-71-6 |
| Triethylene glycol dimethyl ether | |
| Tripropylene glycol | 24800-44-0 |
| Warfarin | 81-81-2 |
| 3,4-Xylenol (3,4-dimethylphenol) | 95-65-8 |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1721 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:624 (April 2008).

# Chapter 18. Containment Buildings

## §1801. Applicability

A. The requirements of this Section apply to owners or operators who store or treat hazardous waste in units designed and operated under LAC 33:V.1802. These provisions became effective on February 18, 1993, although an owner or operator may have notified EPA or the administrative authority of his intent to be bound by this Section or its federal equivalent at an earlier time. The owner or operator is not subject to the definition of land disposal in LAC 33:V.2203 or R.S. 30:2193 provided that the unit:

1. is a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, uplift, physical contact with the hazardous wastes to which they are exposed, climatic conditions, and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;

2. has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel, wastes, and handling equipment within the unit;

3. when used to manage liquids:

a. has a primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;

b. has a liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and

c. has a secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time, unless the unit has been granted a variance from the secondary containment system requirements under LAC 33:V.1802.B.4;

4. has controls as needed to permit fugitive dust emissions to meet the no visible emission standard in LAC 33:V.1802.C.1.d; and

5. has been designed and is operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 21:944 (September 1995).

## §1802. Design and Operating Standards

A. All containment buildings must comply with the following design standards.

1. The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on) and to ensure containment of managed wastes.

2. The floor and containment walls of the unit, including the secondary containment system if required under LAC 33:V.1802.B, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit and to prevent failure due to pressure gradients, settlement, compression, uplift, physical contact with the hazardous wastes to which they are exposed, climatic conditions, and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. The administrative authority will consider standards established by professional organizations generally recognized by the industry, such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM), in judging the structural integrity requirements of LAC 33:V.1802.A. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria:

a. they provide an effective barrier against fugitive dust emissions under LAC 33:V.1802.C.1.d; and

b. the unit is designed and operated in a fashion that ensures that wastes will not actually come in contact with these openings.

3. Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

4. A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and be appropriate for the physical and chemical characteristics of the waste to be managed.

B. For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:

1. a primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface);

2. a liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building:

a. the primary barrier must be sloped to drain liquids to the associated collection system; and

b. liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time;

3. a secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time;

a. the requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

i. constructed with a bottom slope of 1 percent or more; and

ii. constructed of a granular drainage material with a hydraulic conductivity of 1 x $10^{-2}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3 x $10^{-5}$ $m^2$/sec or more;

b. if treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building;

c. the secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of LAC 33:V.1907.E.1. In addition, the containment building must meet the requirements of LAC 33:V.1907.B and C.1 and 2 to be considered an acceptable secondary containment system for a tank.);

4. for existing units other than 90-day generator units, the administrative authority or EPA may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this Section. In making this demonstration, the owner or operator must:

a. have provided written notice to the administrative authority of their request by November 16, 1992. This notification must describe the unit and its operating practices with specific reference to the performance of existing containment systems and specific plans for retrofitting the unit with secondary containment;

b. respond to any comments from the administrative authority on these plans within 30 days; and

c. fulfill the terms of the revised plans, if such plans are approved by the administrative authority.

C. Owners or operators of all containment buildings must:

1. use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:

a. maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

b. maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

c. take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and

d. take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see 40 CFR Part 60, Appendix A, Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares). In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices (see LAC 33:III.3544 for guidance). This state of no visible emissions must be maintained effectively at all times during normal operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit;

2. obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of LAC 33:V.1802.A-C. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit;

3. promptly repair any condition which the owner or operator detects throughout the active life of the containment building that could lead to or has caused a release of hazardous waste in accordance with the following procedures:

a. upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator must:

i. enter a record of the discovery in the facility operating record;

ii. immediately remove the portion of the containment building affected by the condition from service;

iii. determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and

iv. within seven days after the discovery of the condition, notify the Office of Environmental Services of the condition and, within 14 working days, provide a written notice to the administrative authority with a description of the steps taken to repair the containment building and the schedule for accomplishing the work;

b. the administrative authority will review the information submitted, make a determination regarding whether the containment building must be removed from

service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing;

c. upon completing all repairs and cleanup, the owner or operator must notify the Office of Environmental Services in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with LAC 33:V.1802.C.3.a.iv; and

4. inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

D. For a containment building that contains both areas with and without secondary containment, the owner or operator must:

1. design and operate each area in accordance with the requirements enumerated in LAC 33:V.1802.A-C;

2. take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

3. keep in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

E. Notwithstanding any other provision of this Chapter, the administrative authority may waive requirements for secondary containment for a permitted containment building where the owner or operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements and where containment of managed wastes and liquids can be ensured without a secondary containment system.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2475 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2106 (October 2007), LR 34:624 (April 2008).

### §1803. Closure and Post-Closure Care

A. At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate and manage them as hazardous waste unless LAC 33:V.109.*Hazardous Waste* applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in LAC 33:V.Chapters 35 and 37.

B. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection A of this Section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must either:

1. close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (LAC 33:V.2521). In addition, for the purposes of closure, post-closure, and financial responsibility, such a containment building is then considered to be a landfill and the owner or operator must meet all of the requirements for landfills specified in LAC 33:V.Chapters 35 and 37; or

2. perform a risk assessment to demonstrate that closure with the remaining contaminant levels in protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment.

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HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of the Secretary, LR 24:2245 (December 1998).

## Chapter 19. Tanks

### §1901. Applicability

The requirements of this Chapter apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in Subsections A and B of this Section or LAC 33:V.1501.

A. Tank systems that are used to store or treat hazardous waste that contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements of LAC 33:V.1907. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test method must be used: EPA Method 9095B (Paint Filter Liquids Test) as described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.

B. *Tank systems*, including *sumps*, as defined in LAC 33:V.109, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in LAC 33:V.1907.A.

C. Tanks, sumps, and other such collection devices or systems used in conjunction with *drip pads*, as defined in LAC 33:V.109 and regulated under LAC 33:V.Chapter 28, must meet the requirements of this Chapter.

D. Tanks meeting the requirements for the accumulation time exclusion of LAC 33:V.305.C and 1109.E.1 are subject to the requirements of LAC 33:V.1903.A, 1905.B-H,

1907.A, 1907.B-I, 1909, 1911, 1913, 1915.D, 1917, and 1919.

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## §1903. Assessment of Existing Tank System's Integrity

A. For each existing tank system that does not have secondary containment meeting the requirements of LAC 33:V.1907.B-I, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in Subparagraph B.5.c of this Section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified professional engineer, in accordance with LAC 33:V.513, that attests to the tank system's integrity by November 20, 1988. Tanks excluded from permitting requirements under LAC 33:V.1109.E.1 must have an assessment as described in this Section by November 20, 1990.

B. This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated, to ensure that it will not collapse, rupture or fail. At a minimum, this assessment must consider the following:

1. design standards(s), if available, according to which the tank and ancillary equipment were constructed;

2. hazardous characteristics of the waste(s) that have been and will be handled;

3. existing corrosion protection measures;

4. documented age of the tank system, if available (otherwise, an estimate of the age); and

5. results of a leak test, internal inspection or other tank integrity examination such that:

a. for non-enterable underground tanks, the assessment must include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets and high water table effects; and

b. for other than non-enterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination, that is certified by an independent, qualified professional engineer in accordance with LAC 33:V.513, that addresses cracks, leaks, corrosion and erosion;

c. tank systems that store or treat materials that become hazardous wastes subsequent to July 14, 1986, must conduct this assessment within 12 months after the date that the waste becomes a hazardous waste;

d. if, as a result of the assessment conducted in accordance with LAC 33:V.1903.A, a tank system is found to be leaking or unfit for use, the owner or operator must comply with the requirements of LAC 33:V.1913.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 16:614 (July 1990), LR 18:1256 (November 1992), amended by the Office of the Secretary, Legal Affairs Division, LR 34:994 (June 2008).

## §1905. Design and Installation of New Tank Systems or Components

A. Owners or operators of new tank systems or components must obtain and submit to the Office of Environmental Services, at the time of submittal of Part II information, a written assessment, reviewed and certified by an independent, qualified professional engineer, in accordance with LAC 33:V.513, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture or fail. This assessment, which will be used by the administrative authority to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:

1. design standard(s) according to which tank(s) and/or the ancillary equipment are constructed;

2. hazardous characteristics of the waste(s) to be handled;

3. for new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:

a. factors affecting the potential for corrosion, including but not limited to:

i. soil moisture content;

ii. soil pH;

iii. soil sulfides level;

iv. soil resistivity;

v. structure to soil potential;

vi. influence of nearby underground metal structures (e.g., piping);

vii. existence of stray electric current;

viii. existing corrosion-protection measures (e.g., coating, cathodic protection); and

b. the type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

i. corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, etc;

ii. corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g. impressed current or sacrificial anodes); and

iii. electrical isolation devices such as insulating joints, flanges, etc.;

4. for underground tank systems components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

5. design considerations to ensure that:

a. tank foundations will maintain the load of a full tank;

b. tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of LAC 33:V.1503.A.3; and

c. tank systems will withstand the effects of frost heave.

B. The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation.

1. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:

a. weld breaks;

b. punctures;

c. scrapes of protective coatings;

d. cracks;

e. corrosion;

f. other structural damage or inadequate construction/installation.

2. All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

C. New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

D. All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed into use.

E. Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

F. The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, licensed in Louisiana, based on the information provided under LAC 33:V.1905.A.3 of this Section, or other corrosion protection if the administrative authority believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

G. The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of LAC 33:V.1905.A, C, D, E and F of this Section, that attest that the tank system was properly designed and installed and that repairs, pursuant to LAC 33:V.1905.B, C and D of this Section, were performed. These written statements must also include the certification statement as required in LAC 33:V.513.

H. Owners or operators of new tanks systems or components subject to the accumulation time exclusion of LAC 33:V.1109.E.1 must obtain and submit to the Office of Environmental Services, prior to placing the tank system in service, a written assessment, reviewed and certified by an independent registered professional engineer, in accordance with LAC 33:V.513, attesting that the tank system has sufficient structural integrity and is acceptable for storing or treating hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed, and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. The assessment, which will be used by the administrative authority to review the acceptability of the tank system design, must include at a minimum the requirements specified in LAC 33:V.1905.A.1-5.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

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Affairs Division, LR 33:2107 (October 2007), LR 34:995 (June 2008).

## §1907. Containment and Detection of Releases

A. In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this Section must be provided (except as provided in Subsections F and G of this Section):

1. for all new and existing tank systems or components, prior to their being put into service; and

2. for tank systems that store or treat materials that become hazardous wastes, within two years of the hazardous waste listing, or when the tank system has reached 15 years of age, whichever comes later.

B. Secondary containment systems must be:

1. designed, installed and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater or surface water at any time during the use of the tank system; and

2. capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

C. To meet the requirements of Subsection B of this Section, secondary containment systems must be at a minimum:

1. constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic);

2. placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

3. provide with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the administrative authority that existing detection technologies or site conditions will not allow detection of a release within 24 hours; and

4. sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the administrative authority that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

[NOTE: If the collected material is a *hazardous waste* as defined in LAC 33:V.109, it is subject to management as a hazardous waste in accordance with all applicable requirements of LAC 33:V.Chapters 11, 13, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 33, 35, 37, and 43. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of Sections 301, 304, and 402 of the Clean Water Act, as amended. If discharged to a Publicly Owned Treatment Works (POTW), it is subject to the requirements of Section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR Part 302.]

D. Secondary containment for tanks must include one or more of the following devices:

1. a liner (external to the tank);

2. a vault;

3. a double-walled tank; or

4. an equivalent device as approved by the administrative authority.

E. In addition to the requirements of Subsections B-D of this Section, secondary containment systems must satisfy the following requirements.

1. External liner systems must be:

a. designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

b. designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

c. free of cracks or gaps; and

d. designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s) (i.e., capable of preventing lateral as well as vertical migration of the waste).

2. Vault systems must be:

a. designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

b. designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

c. constructed with chemical-resistant water stops in place at all joints (if any);

d. provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;

e. provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:

i. meets the definitions of ignitable waste under LAC 33:V.4903.B; or

ii. meets the definition of reactive waste under LAC 33:V.4903.D, and may form an ignitable or explosive vapor; and

f. provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

3. Double-walled tanks must be:

a. designed as an integral structure (i.e., an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell;

b. protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and

c. provided with a built-in continuous leak detection system capable of detecting a release within 24 hours, or at the earliest practicable time, if the owner or operator can demonstrate to the administrative authority, and the administrative authority concludes that the existing detection technology or site conditions would not allow detection of a release within 24 hours.

F. Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of Subsections B and C of this Section, except for:

1. aboveground piping (exclusive of flanges, joints, valves and other connections) that are visually inspected for leaks on a daily basis;

2. welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;

3. sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks daily; and

4. pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

G. The owner or operator may obtain a variance from the requirements of this Section if the administrative authority finds, as a result of a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous constituents into the groundwater; or surface water at least as effectively as secondary containment during the active life of the tank system or that in the event of a release that does migrate to groundwater or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with Paragraph G.2 of this Section, be exempted from the secondary containment requirements of this Section.

1. In deciding whether to grant a variance based on a demonstration of equivalent protection of groundwater and surface water, the administrative authority will consider:

a. the nature and quantity of the wastes;

b. the proposed alternate design and operation;

c. the hydrogeologic setting of the facility, including the thickness of soils present between the tank system and groundwater; and

d. all other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to groundwater or surface water.

2. In deciding whether to grant a variance based on a demonstration of no substantial present or potential hazard, the administrative authority will consider:

a. the potential adverse effects on groundwater, surface water, and land quality, taking into account:

i. the physical and chemical characteristics of the waste in the tank system, including its potential for migration;

ii. the hydrogeological characteristics of the facility and surrounding land;

iii. the potential for health risks caused by human exposure to waste constituents;

iv. the potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

v. the persistence and permanence of the potential adverse effects;

b. the potential adverse effects of a release on groundwater quality, taking into account:

i. the quantity and quality of groundwater and the direction of groundwater flow;

ii. the patterns of rainfall in the region;

iii. the proximity and withdrawal rates of groundwater users;

iv. the current and future uses of groundwater in the area; and

v. the existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality.

c. the potential adverse effects of a release on surface water quality, taking into account:

i. the quantity and quality of groundwater and the direction of groundwater flow;

ii. the patterns of rainfall in the region;

iii. the proximity of the tank system to surface waters;

iv. the current and future uses of surface waters in the area, and any water quality standards established for those surface waters; and

v. the existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality.

3. The owner or operator of a tank system, for which a variance from secondary containment has been granted in accordance with requirements of Paragraph G.1 of this Section, at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control (as established in the variance), must:

a. comply with the requirements of LAC 33:V.1913, except 1913.D; and

b. decontaminate or remove contaminated soil to the extent necessary to:

i. enable the tank system for which the variance was granted to resume operation with the capability for the detection of releases at least equivalent to the capability it had prior to the release; and

ii. prevent the migration of hazardous waste or hazardous constituents to groundwater or surface water; or

c. if contaminated soil cannot be removed or decontaminated in accordance with Subparagraph G.3.b of this Section, comply with the requirements of LAC 33:V.1915.B.

4. The owner or operator of a tank system, for which a variance from secondary containment has been granted in accordance with the requirements of Paragraph G.1 of this Section, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), must:

a. comply with requirements of LAC 33:V.1913.A-D;

b. prevent the migration of hazardous waste or hazardous constituents to groundwater or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed or if groundwater has been contaminated, the owner or operator must comply with requirements of LAC 33:V.1915.B; and

c. if repairing, replacing or reinstalling the tank system, provide secondary containment in accordance with the requirements of Subsections A-F of this Section or reapply for a variance from secondary containment and meet the requirements for new tank systems in LAC 33:V.1905 if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed and groundwater or surface water has not been contaminated.

H. The following procedures must be followed in order to request a variance from secondary containment.

1. The Office of Environmental Assessment must be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in Subsection G of this Section according to the following schedule:

a. for existing tank systems, at least 24 months prior to the date that secondary containment must be provided in accordance with Subsection A of this Section;

b. for new tank systems, at least 30 days prior to entering into a contract for installation.

2. As part of the notification, the owner or operator must also submit to the administrative authority a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in Paragraph G.1 or 2 of this Section.

3. The demonstration for a variance must be completed within 180 days after notifying the administrative authority of an intent to conduct the demonstration.

4. If a variance is granted under this Paragraph, the administrative authority will require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the variance.

I. All tank systems, until such time as secondary containment that meets the requirements of this Section is provided, must comply with the following.

1. For non-enterable underground tanks, a leak test that meets the requirements of LAC 33:V.1903.A or other tank integrity method, as approved or required by the administrative authority, must be conducted at least annually.

2. For other than non-enterable underground tanks, the owner or operator must either:

a. conduct a leak test as in Paragraph I.1 or 2 of this Section; or

b. develop a schedule and procedure for an assessment of the overall condition of the tank system by an independent, qualified professional engineer. The schedule and procedure must be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed. The frequency of these assessments must be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated.

3. For ancillary equipment, a leak test or other integrity assessment as approved by the administrative authority must be conducted at least annually.

4. The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with Paragraphs I.1-3 of this Section.

5. If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in Paragraphs I.1-3 of this Section, the owner or operator must comply with the requirements of LAC 33:V.1913.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 14:790 (November 1988), LR 16:614 (July 1990), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2475 (November 2000), amended by the Office of Environmental Assessment, LR 31:1572 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2107 (October 2007), LR 34:624 (April 2008), LR 34:995 (June 2008), LR 34:1896 (September 2008).

## §1909. General Operating Requirements

A. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

B. The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

1. spill prevention controls (e.g., check valves, dry disconnect couplings);

2. overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff or bypass to a standby tank); and

3. maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

C. The owner or operator must comply with the requirements of LAC 33:V.1913 if a leak or spill occurs in the tank system.

D. Owners or operators must provide documentation, maintained on-site, that tanks subject to the accumulation time exclusion of LAC 33:V.1109.E have been emptied and cleaned of all residues and/or sludges at least once in each 90-day period.

1. A tank is deemed emptied and cleaned for the purposes of this Subsection if it has been emptied to the maximum extent practicable and:

a. for tanks used to store similar wastes (compatible), cleaning/rinsing or removal of hazardous waste to a level at which no more than 2.5 centimeters (1 inch) of waste on the bottom of the tank or 3 percent by volume of the total tank capacity remains in the tank is required; or

b. for tanks that may be used to store dissimilar (incompatible) wastes, cleaning/rinsing by method(s) necessary to remove all hazardous wastes to a level which precludes any incompatibility reactions and is sufficient to allow visible inspection of all tank interior surfaces is required.

2. Notwithstanding the provisions of Paragraph D.1 of this Section, except to the extent otherwise approved by the administrative authority, tanks subject to the exclusion of LAC 33:V.1109.E must be completely emptied and cleaned once per year to a level sufficient to allow visual inspection of all tank interior surfaces.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 16:614 (July 1990), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1804 (October 1999).

## §1911. Inspections

A. The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls.

B. The owner or operator must inspect, at least once each operating day, data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design.

C. In addition, except as noted under Subsection D of this Section, the owner or operator must inspect at least once each operating day:

1. aboveground portions of the tank system, if any, to detect corrosion or releases of waste; and

2. the construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

D. Owners or operators of tank systems that either use leak detection systems to alert facility personnel to leaks, or implement established workplace practices to ensure that leaks are promptly identified, must inspect at least weekly those areas described in Paragraphs C.1 and 2 of this Section. Use of the alternate inspection schedule must be documented in the facility's operating record. This documentation must include a description of the established workplace practices at the facility.

E. Ancillary equipment that is not provided with secondary containment, as described in LAC 33:V.1907.F.1-4, must be inspected at least once each operating day.

F. The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum,

the following schedule to ensure that they are functioning properly:

1. the proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and

2. all sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (i.e., every other month).

G. The owner or operator must document in the operating record of the facility an inspection of those items in Subsections A-C and F of this Section.

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## §1913. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems

A tank system or secondary containment system from which there has been a leak or spill, or that is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements.

A. Cessation of Use; Prevent Flow or Addition of Wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

B. Removal of Waste from Tank System or Secondary Containment System

1. If the release was from the tank system, the owner/operator must, within 24 hours after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

2. If the material released was to a secondary containment system all released material must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

C. Containment of Visible Releases to the Environment. The owner/operator must immediately conduct a visual inspection of the release and, based upon that inspection:

1. prevent further migration of the leak or spill to soils or surface water; and

2. remove, and properly dispose of, any visible contamination of the soil or surface water.

D. Notifications, Reports (LAC 33:V.105.A)

1. Any release to the environment, except as provided in LAC 33:V.1913.D.2, must be reported to the Office of Environmental Compliance in accordance with LAC 33:I.3923 within 24 hours of its detection. If the release has been reported in accordance with LAC 33:V.105.J, that report will satisfy this requirement.

2. A leak or spill of hazardous waste is exempted from this Subsection if it is:

a. less than or equal to a quantity of one pound; and

b. immediately contained and cleaned-up.

3. Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to SPOC:

a. likely route of migration of the release;

b. characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

c. results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the administrative authority as soon as they become available;

d. proximity to downgradient drinking water, surface water, and population areas; and

e. description of response actions taken or planned.

E. Provision of Secondary Containment, Repair or Closure

1. Unless the owner/operator satisfies the requirements of LAC 33:V.1913.E.2-3 the tank system must be closed in accordance with LAC 33:V.1915.

2. If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

3. If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

4. If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of LAC 33:V.1907 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of LAC 33:V.1913.F are satisfied. If a component is replaced to comply with the requirements of this Subparagraph, that component must satisfy the requirements for new tank systems or components in LAC 33:V.1905 and 1907. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground

tank), the entire component must be provided with secondary containment in accordance with LAC 33:V.1907 prior to being returned to use.

F. Certification of Major Repairs. If the owner/operator has repaired a tank system in accordance with Subsection E of this Section and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified professional engineer in accordance with LAC 33:V.513 that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be placed in the operating record and maintained until closure of the facility.

[NOTE: The administrative authority may, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the environment, issue an order requiring corrective action or such other response as is deemed necessary to protect human health or the environment.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 13:651 (November 1987), LR 16:614 (July 1990), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2475 (November 2000), LR 30:1673 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2457 (October 2005), LR 33:2107 (October 2007), LR 34:996 (June 2008).

## §1915. Closure and Post-Closure Care

A. At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless LAC 33:V.109.*Hazardous Waste*.6 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all the requirements specified in LAC 33:V.Chapters 35 and 37.

B. If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in Subsection A of this Section, then the owner or operator must either:

1. close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills, LAC 33:V.2521. In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all the requirements for landfills specified in LAC 33:V.Chapters 35 and 37;

2. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment.

C. If an owner or operator has a tank system that does not have secondary containment that meets the requirements of LAC 33:V.1907.B-F and is not exempt from the secondary containment requirements in accordance with LAC 33:V.1907.G, then:

1. the closure plan for the tank system must include both a plan for complying with Subsection A of this Section and a contingent plan for complying with Subsection B of this Section;

2. a contingent post-closure plan for complying with Subsection B of this Section must be prepared and submitted as part of the permit application;

3. the cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under Subsection A of this Section;

4. financial assurance must be based on the cost estimates in LAC 33:V.1915.C.3;

5. for the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements for landfills under LAC 33:V.Chapters 35 and 37.

D. Owners or operators of tanks subject to the accumulation exclusion of LAC 33:V.1109.E.1 are exempt from the requirements of LAC 33:V.Chapters 35 and 37, except for LAC 33:V.3507.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 13:651 (November 1987), amended LR 16:614 (July 1990), LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1511 (November 1997), amended by the Office of the Secretary, LR 24:2245 (December 1998).

## §1917. Special Requirements for Ignitable or Reactive Wastes

A. Ignitable or reactive waste must not be placed in tank systems, unless:

1. the waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:

a. the resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under LAC 33:V.4903.B or D; and

b. LAC 33:V.1517.B is complied with; or

2. the waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

3. the tank system is used solely for emergencies.

B. The owner or operator of a facility where ignitable or reactive waste is stored or treated in a tank must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's *Flammable and Combustible Liquids Code*, (1977 or 1981), as incorporated by reference at LAC 33:V.110.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 13:651 (November 1987), amended LR 22:819 (September 1996), amended by the Office of Environmental Assessment, LR 31:1572 (July 2005).

### §1919. Special Requirements for Incompatible Wastes

A. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank system, unless LAC 33:V.1517.B is complied with.

B. Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless LAC 33:V.1517.B is complied with.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 13:651 (November 1987).

### §1921. Air Emission Standards

A. The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of LAC 33:V.Chapter 17.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1724 (September 1998).

# Chapter 20. Integration with Maximum Achievable Control Technology (MACT) Standards

### §2001. Options for Incinerators, Cement and Lightweight Aggregate Kilns, Solid Fuel and Liquid Fuel Boilers, and Hydrochloric Acid Production Furnaces to Minimize Emissions from Startup, Shutdown, and Malfunction Events

[NOTE: This Chapter is written in a special format to make it easier to understand the regulatory requirements. Like other department regulations, this establishes enforceable legal requirements. For this Chapter, I and you refer to the owner/operator.]

A. Facilities with Existing Permits

1. Revisions to Permit Conditions after Documenting Compliance with MACT. The owner or operator of a RCRA-permitted incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace may request that the administrative authority address permit conditions that minimize emissions from startup, shutdown, and malfunction events under any of the following options when requesting removal of permit conditions that are no longer applicable according to LAC 33:V.3105.B and LAC 33:V.3001.B.

a. Retain Relevant Permit Conditions. Under this option, the administrative authority will:

i. retain permit conditions that address releases during startup, shutdown, and malfunction events, including releases from emergency safety vents, as these events are defined in the facility's startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2); and

ii. specify that these permit conditions apply only when the facility is operating under its startup, shutdown, and malfunction plan.

b. Revise Relevant Permit Requirements

i. Under this option, the administrative authority will:

(a). identify a subset of relevant existing permit requirements, or develop alternative permit requirements, that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan, design, and operating history; and

(b). retain or add these permit requirements to the permit to apply only when the facility is operating under its startup, shutdown, and malfunction plan.

ii. Changes That May Significantly Increase Emissions

(a). You must notify the administrative authority in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. You must notify the administrative authority of such changes within five days of making such changes. You must identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

(b). The administrative authority may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either upon permit renewal or, if

warranted, by modifying the permit under LAC 33:V.323.B.2.c or LAC 33:V.321.C.

c. Remove Permit Conditions. Under this option:

i. you must document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the administrator under 40 CFR 63.1206(c)(2)(ii)(B); and

ii. the administrative authority will remove permit conditions that are no longer applicable according to LAC 33:V.3105.B and LAC 33:V.3001.B.

2. Addressing Permit Conditions upon Permit Reissuance. The owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that has conducted a comprehensive performance test and submitted to the administrator a Notification of Compliance documenting compliance with the standards of 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, may request in the application to reissue the permit for the combustion unit that the administrative authority control emissions from startup, shutdown, and malfunction events under any of the following options.

a. RCRA Option A. Under this option, the administrative authority will:

i. include, in the permit, requirements that ensure compliance with LAC 33:V.3117.B and C or LAC 33:V.3005.E.1 and 2.c to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, including releases from emergency safety vents; and

ii. specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan.

b. RCRA Option B

i. Under this option, the administrative authority will:

(a). include, in the permit, conditions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan, design, and operating history; and

(b). specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan.

ii. Changes That May Significantly Increase Emissions

(a). You must notify the administrative authority in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. You must notify the administrative authority of such changes within five days of making such changes. You must identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

(b). The administrative authority may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either upon permit renewal or, if warranted, by modifying the permit under LAC 33:V.323.B.2.c or LAC 33:V.321.C.

c. CAA Option. Under this option:

i. you must document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the administrator under 40 CFR 63.1206(c)(2)(ii)(B); and

ii. the administrative authority will remove permit conditions that are no longer applicable under LAC 33:V.3105.B and LAC 33:V.3001.B.

B. Interim Status Facilities

1. Interim Status Operations. In compliance with LAC 33:V.4513 and LAC 33:V.3001.B, the owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of LAC 33:V.Chapters 30 and 43 may control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options after conducting a comprehensive performance test and submitting to the administrator a Notification of Compliance documenting compliance with the standards of 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122.

a. RCRA Option. Under this option, you must continue to comply with the interim status emission standards and operating requirements of LAC 33:V.Chapters 30 and 43 relevant to control of emissions from startup, shutdown, and malfunction events. Those standards and requirements apply only during startup, shutdown, and malfunction events.

b. CAA Option. Under this option, you are exempt from the interim status standards of LAC 33:V.Chapters 30 and 43 relevant to control of emissions of toxic compounds during startup, shutdown, and malfunction events upon submission of written notification and documentation to the administrative authority that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the administrator under 40 CFR 63.1206(c)(2)(ii)(B).

2. Operations under a Subsequent RCRA Permit. When an owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of LAC 33:V.Chapters 30 and 43 submits a RCRA permit

application, the owner or operator may request that the administrative authority control emissions from startup, shutdown, and malfunction events under any of the options provided by Subparagraph A.2.a, b, or c of this Section.

C. New Units. Hazardous waste incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, and hydrochloric acid production furnace units that become subject to RCRA permit requirements after October 12, 2005, must control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options:

1. comply with the requirements specified in 40 CFR 63.1206(c)(2); or

2. request to include in the RCRA permit, conditions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information, including the source's startup, shutdown, and malfunction plan and design. The administrative authority will specify that these permit conditions apply only when the facility is operating under its startup, shutdown, and malfunction plan.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 29:320 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 34:624 (April 2008).

# Chapter 21. Containers

## §2101. Applicability

The regulations in this Chapter apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as specified in LAC 33:V.1501, or if the container is empty (see LAC 33:V.109).

A. Containers not exempted from these regulations shall be considered hazardous and shall be disposed of or treated by an acceptable waste disposal or treatment method.

B. If a hazardous waste is emptied from a container, the residue remaining in the container is not considered a hazardous waste if the container is empty as defined in LAC 33:V.109. In that event, management of the container is exempt from the requirements of this Chapter.

C. Empty containers sent to a reclaimer are considered product, and thus are not subject to these rules and regulations. Residue from the reclaimer's operations must be disposed of in a permitted facility.

D. The storage of hazardous waste prohibited from land disposal must also be in accordance with the requirements of LAC 33:V.2205.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1107 (June 1998).

## §2103. Condition of Containers

A. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §2105. Compatibility of Waste with Containers

A. The owner or operator must use a container made of or lined with materials which will not react with, or be incompatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §2107. Management of Containers

A. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

B. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), repromulgated LR 18:1256 (November 1992).

## §2109. Inspections

A. At least weekly, the owner or operator must inspect areas where containers are stored. The owner or operator must look for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors. Remedial action as described in LAC 33:V.1513 shall be taken.

B. All containers must be stacked in such a fashion that each container identification label can be read from the access aisle.

C. All inspection records must be maintained according to the recordkeeping requirements of LAC 33:V.1529.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), repromulgated LR 18:1256 (November 1992), amended by the Office of the Secretary, Legal Affairs Division, LR 34:996 (June 2008).

### §2111. Containment

A. Container storage areas must have a containment system that is designed and operated in accordance with LAC 33:V.2111.B except as otherwise provided by LAC 33:V.2111.C.

B. A containment system must be designed and operated as follows:

1. a base must underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

2. the base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

3. the containment system must have sufficient capacity to contain 10 percent of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination;

4. run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in LAC 33:V.2111.B.3 to contain any run-on which might enter the system;

5. spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system; and

6. if the collected material is a hazardous waste, it must be managed as a hazardous waste in accordance with all applicable requirements.

C. Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by LAC 33:V.2111.B, except as provided by LAC 33:V.2111.D or provided that:

1. the storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or

2. the containers are elevated or are otherwise protected from contact with accumulated liquid.

D. Storage areas that store containers holding the wastes listed below must have a containment system defined by LAC 33:V.2111.B even when these wastes do not contain free liquids: F020, F021, F022, F023, F026, and F027.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990).

### §2113. Special Requirements for Ignitable or Reactive Wastes

A. Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility property line. (See LAC 33:V.1517 for additional requirements or LAC 33:V.4321 for additional requirements for interim status facilities.)

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §2115. Special Requirements for Incompatible Wastes

A. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same container unless LAC 33:V.1517 or LAC 33:V.4321 for interim status facilities is complied with.

B. Hazardous wastes must not be placed in an unwashed container that previously held an incompatible waste or material.

C. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, other device, or approved management technique.

D. The owner or operator must place the results of each waste analysis and trial test and any documented information regarding compatibility testing in the operating record of the facility.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 18:1256 (November 1992).

### §2117. Closure

A. At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with LAC 33:V.109.*Hazardous Waste*.6 that the solid waste removed from the containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of LAC 33:V.Chapters 9-43.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

### §2119. Air Emission Standards

A. The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of LAC 33:V.Chapter 17.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1724 (September 1998).

# Chapter 22. Prohibitions on Land Disposal

## Subchapter A. Land Disposal Restrictions

### §2201. Purpose, Scope, and Applicability

A. This Chapter is adopted pursuant to the authority of Act 1984, Number 803, as amended by Act 1986, Number 422, and Act 1987, Number 852, cited as Louisiana Revised Statutes Title 30, Section 2193.

B. The purpose of these regulations is to provide for prohibitions and incentives designed to encourage alternative methods of hazardous waste disposal, destruction, and reduction; to lessen the possibility of hazardous waste releases from existing land disposal sites; and to provide for the eventual prohibition of land disposal of hazardous waste.

C. This Chapter identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

D. The requirements of this Chapter apply to all persons who generate or transport hazardous waste and to owners and operators of hazardous waste treatment, storage, and disposal facilities.

E. These regulations shall be construed and implemented to support the use of the following waste management practices in the following order of priority:

1. reduction of hazardous waste generated;

2. recycling of hazardous waste;

3. treatment of hazardous waste; and

4. land disposal of residuals from hazardous waste recycling and treatment.

F. The policies and determinations that the administrative authority makes pursuant to these regulations shall assert and reflect the primacy of waste reduction.

G. Prohibited wastes may continue to be land disposed as follows:

1. where persons have been granted an extension to the effective date of a prohibition under LAC 33:V.Chapter 22.Subchapter A or in accordance with LAC 33:V.2239 with respect to those wastes covered by the extension;

2. where persons have been granted an approval from a prohibition in accordance with a petition under LAC 33:V.2241 or 2271, or a determination made in accordance with LAC 33:V.2273, with respect to those wastes and units covered by the petition;

3. where an extension of the effective date or an exemption from a prohibition has been granted by EPA, and the administrative authority grants an emergency variance to allow continued land disposal. In such a case the land disposal may continue until the administrative authority makes a decision regarding the extension or exemption. Following a decision by the administrative authority, the waste may be land disposed only in accordance with the provisions of the extension or exemption;

4. wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this Chapter, are not prohibited if the wastes:

a. are disposed into a nonhazardous or hazardous injection well as defined in LAC 43:XVII.203.C; and

b. do not exhibit any prohibited characteristic of hazardous waste identified in LAC 33:V.4903 at the point of injection at the well head;

5. wastes that are hazardous only because they exhibit a hazardous characteristic and which are otherwise prohibited under this Chapter are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in LAC 33:V.2299.Appendix, Table 2, or are D003 reactive cyanide:

a. the wastes are managed in a treatment system which subsequently discharges to waters of the United States pursuant to a permit issued under Section 402 of the Clean Water Act; or

b. the wastes are treated for purposes of the pretreatment requirements of Section 307 of the Clean Water Act; or

c. the wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in LAC 33:V.2221.D.1; and

d. the wastes no longer exhibit a prohibited characteristic at the point of land disposal (i.e., placement in a surface impoundment).

H. The requirements of this Section shall not affect the availability of a waiver under Section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

I. The following hazardous wastes are not subject to any provision of this Chapter:

1. waste pesticides that a farmer disposes of in accordance with LAC 33:V.1101.D;

2. waste identified or listed as hazardous after November 8, 1984, for which EPA has not promulgated land disposal prohibitions or treatment standards;

3. de minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks, or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding 1 percent of the total flow of wastewater into the facility's headworks on an annual basis or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility;

4. waste generated by small quantity generators of less than 100 kg of nonacute hazardous waste or less than 1 kg of acute hazardous waste per month, as defined in LAC 33:V.108;

5. *universal waste handlers* and *universal waste transporters* (as defined in LAC 33:V.3813) are exempt from LAC 33:V.2205, 2245.A-I, 2246.E, and 2247 for the wastes listed below. These handlers are subject to regulation under LAC 33:V.Chapter 38, when handling the below listed universal wastes:

a. batteries as described in LAC 33:V.3803;

b. pesticides as described in LAC 33:V.3805;

c. mercury-containing equipment as described in LAC 33:V.3807;

d. lamps as described in LAC 33:V.3809;

e. electronics as described in LAC 33:V.3810; and

f. antifreeze as described in LAC 33:V.3811.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:398 (May 1990), LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 18:723 (July 1992), LR 21:266 (March 1995), LR 22:22 (January 1996), LR 23:568 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:300 (February 1998), LR 24:666 (April 1998), LR 24:1107 (June 1998), LR 24:1724 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1799 (October 1999), LR 27:711 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3117 (December 2005).

## §2203. Definitions Applicable to This Chapter

A. When used in this Chapter the following terms have the meanings given below.

*Cone of Influence*—that area around the well within which increased injection zone pressures caused by injection into the waste injection well could drive fluids into an underground source of drinking water (USDW).

*Confining Zone*—a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone.

*Debris*—solid material exceeding a 60-mm particle size that is intended for disposal and that is a manufactured object, or plant or animal matter, or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in LAC 33:V.Chapter 22.Subchapter A, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75 percent of their original volume. A mixture of debris that has not been treated to the standards provided by LAC 33:V.2230 with other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

*Duly Authorized Representative*—an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager or superintendent, or a position of equivalent responsibility (a duly authorized representative may be thus be either a named individual or any individual occupying a named position), designated or named in writing by one of the following:

a. for a corporation, by a responsible corporate officer; for the purposes of this Chapter, *responsible corporate officer* means:

i. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. for a partnership or sole proprietorship, by a general partner or the proprietor, respectively;

c. for a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official.

*Formation*—a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.

*Halogenated Organic Compounds* or *HOCs*—those compounds having a carbon-halogen bond which are listed in LAC 33:V.2299.Appendix, Table 5.

*Hazardous Constituent(s)*—those constituents listed in LAC 33:V.3105, Table 1.

*Hazardous Debris*—debris that contains a hazardous waste listed in LAC 33:V.4903 or that exhibits a characteristic of hazardous waste identified in LAC 33:V.4901. Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification (i.e., from waste to hazardous debris) is not allowed under the dilution prohibition in LAC 33:V.2207.

*Injection Interval*—the part of the injection zone in which the well is screened, or in which the waste is otherwise directly emplaced.

*Injection Zone*—a geological formation, group of formations, or part of a formation receiving fluids through an injection well.

*Inorganic Metal-Bearing Waste*—a waste for which the department has established treatment standards for metal hazardous constituents and which does not otherwise contain significant organic or cyanide content as described in LAC 33:V.2207.C.1, and is specifically listed in LAC 33:V.2299.Appendix, Table 12.

*Land Disposal*—placement in or on the land, except in a corrective action management unit or staging pile, and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt-dome formation, salt-bed formation, underground mine or cave, or placement in a concrete vault or bunker intended for disposal purposes.

*Mechanical Integrity*—an injection well has mechanical integrity if:

a. there is no significant leak in the casing, tubing, or packer; and

b. there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore.

*Nonwastewaters*—wastes that do not meet the criteria for wastewaters defined in this Section.

*Petitioner*—a person, or his or her duly authorized representative, who has legal authority and responsibility for a facility that generates, transports, treats, stores, or disposes of any hazardous waste, and who submits a written request to the administrative authority for an exemption, extension, or variance to allow the land disposal of an otherwise prohibited waste.

*Polychlorinated Biphenyls* or *PCBs*—any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees, or any combination of substances which contains such substance.

*Soil*—unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Soil Conservation Service, or a mixture of such materials with liquids, sludges, or solids, that is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification (i.e., from waste to contaminated soil) is not allowed under the dilution prohibition in LAC 33:V.2207.

*Transmissive Fault or Fracture*—a fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations.

*Treatment*—any method, technique, or process, including incineration, occurring at permitted facilities or facilities operating under interim status that changes the physical, chemical, or biological character or composition of any hazardous waste such that the waste becomes nonhazardous, significantly less hazardous, or more suitable for land disposal because of removal or substantial reduction of undesirable properties, such as toxicity, mobility, persistence, reactivity, bioaccumulation, flammability, or corrosivity. Treatment does not include any of the following if one or more of the following is the only method used:

a. solidification of hazardous waste by the addition of absorbent material which produces a change only in the physical character of the waste without a corresponding change in the chemical character of the waste;

b. treatment occurring directly in or on the land, such as land treatment, except that treatment may include in situ treatment necessary for site remediation;

c. dilution of hazardous waste by the addition of nonhazardous material; and/or

d. evaporation in a surface impoundment.

*Underground Source of Drinking Water* or *USDW*—an aquifer or its portion:

a. which supplies any public water system; or

b. which contains a sufficient quantity of groundwater to supply a public water system and:

i. currently supplies drinking water for human consumption; or

ii. contains fewer that 10,000 mg/L total dissolved solids; and

c. which is not an aquifer exempted by the Department of Natural Resources, Office of Conservation.

*Underlying Hazardous Constituent*—any constituent listed in LAC 33:V.2299.Appendix, Table 7, Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standard.

*Wastewaters*—wastes that contain less than 1 percent by weight total organic carbon (TOC) and less than 1 percent by weight total suspended solids (TSS).

B. All other terms are used as defined in Chapter 1 of these regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:221 (March 1990), LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 21:266 (March 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:667 (April 1998), LR 25:442 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:280 (February 2000).

## §2205. Storage of Prohibited Wastes

A. The storage of hazardous wastes prohibited from land disposal is prohibited except under the following conditions.

1. A generator may store such wastes in tanks, containers, or containment buildings on-site solely for the purpose of accumulating such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal and the generator complies with the requirements of LAC 33:V.1109.E, Chapters 11, 15, 17, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 35, 37, 43, and 51.

2. An owner/operator of a hazardous waste treatment, storage, or disposal facility may store such wastes in tanks, containers, or containment buildings solely for the purpose of accumulating such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal provided that each container or tank is clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at that facility. Regardless of whether the tank itself is marked, an owner/operator must comply with the operating record requirements specified in LAC 33:V.1529 or 4357.

3. A transporter may store manifested shipments of such wastes at a transfer facility for 10 days or less with the approval of the administrative authority in accordance with LAC 33:V.1305.

B. An owner/operator of a treatment, storage, or disposal facility may store such wastes for up to one year provided that such storage is solely for the purpose of accumulating such quantities of hazardous wastes as are necessary to facilitate proper recovery, treatment, or disposal. In response to a request from the administrative authority, the owner/operator must prove that storage for less than one year is solely for the purpose of accumulating such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

C. An owner/operator of a treatment, storage, or disposal facility may store such wastes beyond one year with the approval of the administrative authority; however, the owner/operator bears the burden of proving that such storage is solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

D. The prohibition in Subsection A of this Section does not apply to hazardous wastes that are the subject of an approval under LAC 33:V.2241 or 2271, or a determination under LAC 33:V.2273, a case-by-case extension of time under LAC 33:V.2239, or a national capacity variance.

E. The prohibition in Subsection A of this Section does not apply to hazardous wastes that:

1. meet the treatment standards specified under LAC 33:V.2223 or 2227; or

2. have been granted a variance under LAC 33:V.2231; or

3. if treatment standards have not been specified, are in compliance with the applicable prohibitions specified in LAC 33:V.2213.

F. Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm must be stored at a facility that meets the requirements of 40 CFR 761.65(b) and must be removed from storage and treated or disposed as required by this Chapter within one year of the date when such wastes are first placed into storage. The provisions of Subsection C of this Section do not apply to PCB wastes prohibited under LAC 33:V.2213.

G. Notwithstanding the above, any storage facility must be in full compliance with all applicable hazardous waste rules pertaining to storage.

H. The prohibition and requirements in this Section do not apply to hazardous remediation wastes stored in a staging pile approved in accordance with to LAC 33:V.2605.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:220 (March 1990), LR 17:658 (July 1991), LR 21:266 (March 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1724 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1799 (October 1999), LR 26:280 (February 2000), LR 27:711 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 32:827 (May 2006).

## §2207. Dilution Prohibited as a Substitute for Treatment

A. Except as provided in Subsection B of this Section, no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a prohibited waste or the residual from treatment of a prohibited waste as a substitute for adequate treatment to achieve compliance with this Chapter, to circumvent the effective date of or otherwise avoid a prohibition listed in Subchapter A of this Chapter, or to circumvent a land disposal prohibition imposed by RCRA Section 3004.

B. Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems that include land-based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under Section 402 of the Clean Water Act (CWA) or which treat wastes in a CWA-equivalent treatment system or which treat wastes for purposes of pretreatment requirements under Section 307 of the CWA is not impermissible dilution for purposes of this Section unless a method other than DEACT has been specified in LAC 33:V.2223 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

C. Combustion of the hazardous waste codes listed in LAC 33:V.2299.Appendix, Table 12 is prohibited, unless the waste, at the point of generation, or after any bona fide treatment, such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria (unless otherwise specifically prohibited from combustion):

1. the waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in LAC 33:V.2299.Appendix, Table 7;

2. the waste consists of organic, debris-like materials (e.g., wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;

3. the waste, at point of generation, has reasonable heating value, such as greater than or equal to 5,000 BTU per pound;

4. the waste is cogenerated with wastes for which combustion is a required method of treatment;

5. the waste is subject to federal and/or state requirements necessitating reduction of organics (including biological agents); or

6. the waste contains greater than 1 percent Total Organic Carbon (TOC).

D. It is a form of impermissible dilution, and therefore prohibited, to add iron filings or other metallic forms of iron to lead-containing hazardous wastes in order to achieve any land disposal restriction treatment standard for lead. Lead-containing wastes include D008 wastes (wastes exhibiting a characteristic due to the presence of lead), all characteristic wastes containing lead as an underlying hazardous constituent, listed wastes containing lead as a regulated constituent, and hazardous media containing any of the aforementioned lead-containing wastes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:1057 (December 1990), LR 21:266 (March 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:667 (April 1998), LR 25:443 (March 1999).

## §2208. Waste-Specific Prohibitions—Dyes and/or Pigments Production Wastes

A. Effective August 23, 2005, the waste specified in 40 CFR Part 261 as EPA Hazardous Waste Number K181, and soil and debris contaminated with this waste, radioactive wastes mixed with this waste, and soil and debris contaminated with radioactive wastes mixed with this waste are prohibited from land disposal.

B. The requirements of Subsection A of this Section do not apply if:

1. the wastes meet the applicable treatment standards specified in LAC 33:V.2223;

2. persons have been granted an exemption from a prohibition pursuant to a petition under LAC 33:V.2241, with respect to those wastes and units covered by the petition;

3. the wastes meet the applicable treatment standards established pursuant to a petition granted under LAC 33:V.2231;

4. hazardous debris has met the treatment standards in LAC 33:V.2223, or the alternative treatment standards in LAC 33:V.2230; or

5. persons have been granted an extension to the effective date of a prohibition in accordance with LAC 33:V.2239, with respect to those wastes covered by the extension.

C. To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in LAC 33:V.2223, the initial generator must test a sample of the waste extract or the entire waste, depending on whether or not the treatment standards are expressed as concentrations in the waste extract of the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable LAC 33:V.2223 levels, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 32:828 (May 2006).

## §2209. Waste-Specific Prohibitions—Wood Preserving Wastes

A. Effective September 20, 1998, the following wastes are prohibited from land disposal: the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers F032, F034, and F035.

B. Effective May 12, 1999, the following wastes are prohibited from land disposal: soil and debris contaminated with F032, F034, F035, and radioactive wastes mixed with EPA Hazardous Waste Numbers F032, F034, and F035.

C. Between September 20, 1998 and May 12, 1999, soil and debris contaminated with F032, F034, F035, and

radioactive waste mixed with F032, F034, and F035 may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in LAC 33:V.2239.I.2.

D. The requirements of Subsections A and B of this Section do not apply if:

1. an exemption or an approval has been granted in accordance with a petition under LAC 33:V.2241 or 2271, or a determination made under LAC 33:V.2273, with respect to those wastes and units covered by the petition;

2. the wastes meet the applicable alternate treatment standards established in accordance with a petition granted under LAC 33:V.2231;

3. the wastes meet the applicable treatment standards specified in this Subchapter; or

4. persons have been granted an extension to the effective date of a prohibition in accordance with LAC 33:V.2239, with respect to those wastes covered by the extension.

E. To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in LAC 33:V.2223, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of LAC 33:V.2299.Appendix, Table 7, the waste is prohibited from land disposal and all requirements of this Chapter are applicable, except as otherwise specified.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 17:658 (July 1991), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1725 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1800 (October 1999).

## §2211. Waste-Specific Prohibitions—Dioxin-Containing Wastes

A. The following wastes containing dioxin are deemed to pose the greatest risk to the public when disposed of on land. Therefore, the dioxin-containing wastes specified in LAC 33:V.Chapter 49 as Hazardous Waste Numbers F020, F021, F022, F023, F026, F027, and F028 are prohibited from land disposal.

B. The requirements of Subsection A of this Section do not apply if:

1. the wastes are treated to meet the standard of LAC 33:V.Chapter 22.Subchapter A; or

2. the wastes are disposed of at a facility that has been granted an approval from a prohibition in accordance with a petition under LAC 33:V.2241 or 2271, or a determination made under LAC 33:V.2273, with respect to those wastes covered by the exemption or approval or determination; or

3. an extension to the effective date of a prohibition in accordance with LAC 33:V.2239, with respect to those wastes covered by the extension.

C. Between the effective date of these regulations and November 8, 1990, wastes which are contaminated soil or debris resulting from a response action taken under Section 104 or 106 of CERCLA or a corrective action taken under Subtitle C of RCRA may be land disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in LAC 33:V.2239.A.1 and 2 and all other applicable requirements of LAC 33:V.Chapter 15 or Chapter 43.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1725 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1800 (October 1999).

## §2213. Waste-Specific Prohibitions—Chlorinated Aliphatic Wastes

A. Effective May 8, 2001, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers K174 and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

B. The requirements of Subsection A of this Section do not apply if:

1. the wastes meet the applicable treatment standards specified in this Chapter;

2. persons have been granted an exemption from a prohibition in accordance with a petition under LAC 33:V.2241 or 2271, with respect to those wastes and units covered by the petition;

3. the wastes meet the applicable treatment standards established in accordance with a petition granted under LAC 33:V.2231;

4. hazardous debris has met the treatment standards in LAC 33:V.2223 or the alternative treatment standards in LAC 33:V.2230; or

5. persons have been granted an extension to the effective date of the prohibition granted in accordance with LAC 33:V.2239, with respect to the wastes covered by the extension.

C. To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in LAC 33:V.2223, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as

concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels of LAC 33:V.2223, the waste is prohibited from land disposal and all requirements of this Chapter are applicable, except as otherwise specified.

D. Disposal of K175 wastes that have complied with all applicable LAC 33:V.2223 treatment standards must also be macroencapsulated in accordance with LAC 33:V.2299.Appendix, Table 8, unless the waste is placed in:

1. a RCRA Subtitle C monofill containing only K175 wastes that meet all applicable LAC 33:V.2223 treatment standards; or

2. a dedicated RCRA Subtitle C landfill cell in which all other wastes being disposed are at a pH less than or equal to 6.0.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1000 (May 2002).

## §2215. Waste Specific Prohibitions—Soils Exhibiting the Toxicity Characteristic for Metals and Containing PCBs

A. Effective December 26, 2000, the following wastes are prohibited from land disposal: any volume of soils exhibiting the toxicity characteristic solely because of metals (D004-D011) and containing PCBs.

B. Requirements of Subsection A of this Section do not apply if:

1. the wastes contain halogenated organic compounds (see LAC 33:V.2299.Appendix, Table 9) in total concentrations of less than 1,000 mg/kg and meet the treatment standards specified in LAC 33:V.2223 for EPA Hazardous Waste Numbers D004-D011, as applicable;

2. the wastes contain halogenated organic compounds in total concentrations of less than 1,000 mg/kg and meet the alternative treatment standards specified in LAC 33:V.2236 for contaminated soil;

3. persons have been granted an exemption from a prohibition in accordance with a petition under LAC 33:V.2241, with respect to those wastes and units covered by the petition; or

4. the wastes meet applicable alternative treatment standards established in accordance with a petition granted under LAC 33:V.2231.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1001 (May 2002).

## §2216. Waste-Specific Prohibitions—Toxicity Characteristic Metal Wastes

A. Effective April 20, 1999, the following wastes are prohibited from land disposal: the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers D004-D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the toxicity characteristic leaching procedure, but not the extraction procedure) and waste, soil, or debris from mineral processing operations that is identified as hazardous by the specifications in LAC 33:V.Chapter 49.

B. Effective April 20, 1999, the following waste is prohibited from land disposal: slag from secondary lead smelting which exhibits the toxicity characteristic due to the presence of one or more metals.

C. Effective May 26, 2000, the following wastes are prohibited from land disposal: newly identified characteristic wastes from elemental phosphorus processing; radioactive wastes mixed with EPA Hazardous Waste Numbers D004-D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the toxicity characteristic leaching procedure, but not the extraction procedure); or mixed with newly identified characteristic mineral processing wastes, soil, or debris.

D. Between April 20, 1999 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with EPA Hazardous Waste Numbers D004-D011, wastes that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the toxicity characteristic leaching procedure, but not the extraction procedure) or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in LAC 33:V.2239.H.2.

E. The requirements of Subsections A and B of this Section do not apply if:

1. the wastes meet the applicable treatment standards specified in LAC 33:V.2223-2236;

2. persons have been granted an exemption from a prohibition in accordance with a petition under LAC 33:V.2241 or 2271, with respect to those wastes and units covered by the petition;

3. the wastes meet the applicable alternate treatment standards established in accordance with a petition granted under LAC 33:V.2231; or

4. persons have been granted an extension to the effective date of a prohibition in accordance with LAC 33:V.2239, with respect to these wastes covered by the extension.

F. To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in LAC 33:V.2223, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as

concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents (including underlying hazardous constituents in characteristic wastes) in excess of the applicable universal treatment standard levels of LAC 33:V.2233, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 25:443 (March 1999), repromulgated LR 25:855 (May 1999).

### §2218. Waste Specific Prohibitions—Petroleum Refining Wastes

A. Effective April 20, 1999, the wastes specified in LAC 33:V.4901.C, Table 2 as EPA Hazardous Wastes Numbers K169, K170, K171, and K172, soils and debris contaminated with these hazardous wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal.

B. The requirements of Subsection A of this Section do not apply if:

1. the wastes meet the applicable treatment standards specified in LAC 33:V.2223-2236;

2. persons who have been granted an exemption from a prohibition in accordance with a petition under LAC 33:V.2241 or 2271, with respect to those wastes and units covered by the petition;

3. the wastes meet the applicable treatment standards established in accordance with a petition granted under LAC 33:V.2231;

4. hazardous debris that have meet the treatment standards in LAC 33:V.2223 or in the alternative treatment standards in LAC 33:V.2230; or

5. persons have been granted an extension to the effective date of a prohibition in accordance with LAC 33:V.2239.

C. To determine whether a hazardous waste identified in this Subsection exceeds the applicable treatment standards specified in LAC 33:V.2223, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable universal treatment standard levels of LAC 33:V.2233, the waste is prohibited from land disposal and all requirements of this Chapter are applicable, except as otherwise stated.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 25:444 (March 1999), repromulgated LR 25:856 (May 1999).

### §2219. Waste Specific Prohibitions—Inorganic Chemical Wastes

A. Effective May 20, 2002, the wastes specified in 40 CFR Part 261 as EPA Hazardous Waste Numbers K176, K177, and K178, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

B. The requirements of Subsection A of this Section do not apply if:

1. the wastes meet the applicable treatment standards specified in LAC 33:V.2223 and LAC 33:V.2299.Appendix, Table 2;

2. persons have been granted an exemption from a prohibition in accordance with a petition under LAC 33:V.2241, with respect to those wastes and units covered by the petition;

3. the wastes meet the applicable treatment standards established in accordance with a petition granted under LAC 33:V.2231;

4. hazardous debris has met the treatment standards in LAC 33:V.2223 or the alternative treatment standards in LAC 33:V.2230; or

5. persons have been granted an extension to the effective date of a prohibition in accordance with LAC 33:V.2239, with respect to those wastes covered by the extension.

C. To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in LAC 33:V.2223, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels in LAC 33:V.2223 and LAC 33:V.2299.Appendix, Table 2, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 29:321 (March 2003).

### §2221. Schedule of Wastes Identified or Listed after November 8, 1984

A. The administrative authority shall review these regulations and shall study and identify additional wastes to be incorporated into the regulations and prohibited from land disposal. He or she shall also study and report on changes in technology which make alternative methods of treatment of hazardous waste available that may provide alternatives to

land disposal. Such review shall be done on or before December 31 each year beginning with 1989.

B. The administrative authority shall develop a schedule within six months after the date of identification or listing of a new hazardous waste to make a land disposal determination.

C. Reserved.

D. Waste-Specific Prohibitions: Ignitable and Corrosive Characteristic Wastes Whose Treatment Standards Were Vacated

1. Effective March 20, 1995, the wastes specified in LAC 33:V.4903.B as D001 (and is not in the High TOC Ignitable Liquids Subcategory) and specified in LAC 33:V.4903.C as D002 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA) or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA) or that are zero-dischargers that engage in CWA-equivalent treatment before ultimate land disposal are prohibited from land disposal. *CWA-equivalent treatment* means biological treatment for organics, alkaline chlorination, or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

2. Effective March 20, 1995, the wastes specified in LAC 33:V.4903.B as D001 (and is not in the High TOC Ignitable Liquids Subcategory) and specified in LAC 33:V.4903.C as D002 that are managed in systems defined in LAC 43:XVII.103.C as Class V injection wells that do not engage in CWA-equivalent treatment before injection are prohibited from land disposal.

E. Waste-Specific Prohibitions: Newly Identified Organic Toxicity Characteristic Wastes and Newly Listed Coke By-product and Chlorotoluene Production Wastes

1. Effective September 20, 1995, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with EPA Hazardous Waste Numbers F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, and U359 and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, and D043 that are not radioactive or that are managed in systems other than those whose discharge is regulated under the CWA or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal or that are injected in Class I deep wells regulated under the SDWA are prohibited from land disposal. *CWA-equivalent treatment* means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

2. On September 19, 1996, radioactive wastes that are mixed with D018-D043 that are managed in systems other than those whose discharge is regulated under the CWA or that inject in Class I deep wells regulated under the SDWA or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal are prohibited from land disposal. *CWA-equivalent treatment* means biological treatment of organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies. Radioactive wastes mixed with K141-K145 and K147-K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

3. Between March 20, 1995 and September 19, 1996, the wastes included in LAC 33:V.2221.E.2 may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in LAC 33:V.2239.I.2.

4. The requirements of LAC 33:V.2221.E.1-3 do not apply if the following conditions are met:

a. the wastes meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A;

b. persons have been granted an exemption from a prohibition in accordance with a petition under LAC 33:V.2241, with respect to those wastes and units covered by the petition;

c. the wastes meet the applicable alternate treatment standards established in accordance with a petition granted under LAC 33:V.2231; and

d. persons have been granted an extension to the effective date of a prohibition in accordance with LAC 33:V.2239, with respect to those wastes covered by the extension.

5. To determine whether a hazardous waste identified in LAC 33:V.2221 exceeds the applicable treatment standards specified in LAC 33:V.2299.Appendix, Table 2, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable LAC 33:V.2299.Appendix, Table 2 levels, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.

F. Waste-Specific Prohibitions: Spent Aluminum Potliners and Reactive and Carbamate Wastes

1. Effective April 20, 1998, the wastes specified in LAC 33:V.4901.C as EPA Hazardous Waste Numbers K156-K159, K161, and in LAC 33:V.4901.E as EPA Hazardous Waste Numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

2. Effective April 20, 1998, the wastes identified in LAC 33:V.4903.D as D003 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA) or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA) or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. This prohibition does not apply to unexploded ordnance and other explosive devices, which have been the subject of an emergency response. Such D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal (see LAC 33:V.2223).

3. On September 21, 1998, the wastes specified in LAC 33:V.4901.C as EPA Hazardous Waste Number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

4. On April 20, 1998, radioactive wastes mixed with K088, K156-K159, K161, P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

5. Between July 8, 1996, and April 20, 1998, the wastes included in 40 CFR 268.39(a), (c), and (d) may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in LAC 33:V.2239.I.2.

6. The requirements of Paragraphs F.1-4 of this Section do not apply if:

a. the wastes meet the applicable treatment standards specified in this Chapter;

b. persons have been granted an exemption from a prohibition pursuant to a petition under LAC 33:V.2241, with respect to those wastes and units covered by the petition;

c. the wastes meet the applicable alternate treatment standards established pursuant to a petition granted under LAC 33:V.2231; or

d. persons have been granted an extension to the effective date of a prohibition pursuant to LAC 33:V.2239, with respect to these wastes covered by the extension.

7. To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in LAC 33:V.2223, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable treatment levels, the waste is prohibited from land disposal and all requirements of this Chapter are applicable, except as otherwise specified.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 17:658 (July 1991), LR 21:266 (March 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:667 (April 1998), LR 24:1725 (September 1998), LR 25:444 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:280 (February 2000).

## §2223. Applicability of Treatment Standards

A. A prohibited waste identified in the LAC 33:V.2299.Appendix, Table 2 may be land disposed only if it meets the requirements found in Table 2. For each waste, the table identifies one of the three types of treatment standard requirements:

1. all hazardous constituents in the waste or in the treatment residue must be at or below the values found in the table for that waste (*total waste standards*);

2. the hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table (*waste extract standards*); or

3. the waste must be treated using the technology specified in the table (*technology standard*), which are described in detail in LAC 33:V.2299.Appendix, Table 3, Technology Codes and Description of Technology-Based Standards.

B. For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004-D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the Test Method 1311, the Toxicity Characteristic Leaching Procedure as described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311 or Method 1310B, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the administrative authority under the procedures set forth in LAC 33:V.2227.

C. When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue must meet the lowest treatment standard for the constituent of concern.

D. Notwithstanding the prohibitions specified in Subsection A of this Section, treatment and disposal facilities may demonstrate (and certify in accordance with LAC 33:V.2247.C) compliance with the treatment standards for organic constituents specified by footnote in LAC 33:V.2299.Appendix, Table 2, Treatment Standards for Hazardous Wastes, provided the following conditions are satisfied:

1. the treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of LAC 33:V.Chapter 31 or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

2. the treatment or disposal facility has used the methods referenced in Paragraph D.1 of this Section to treat the organic constituents; and

3. the treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this Section by an order of magnitude.

E. For characteristic wastes (D001-D043) that are subject to treatment standards in LAC 33:V.2299.Appendix, Table 2, Treatment Standards for Hazardous Wastes, and are not managed in a wastewater treatment system that is regulated under the Clean Water Act (CWA), that is CWA-equivalent, or that is injected into a Class I nonhazardous deep injection well, all *underlying hazardous constituents* (as defined in LAC 33:V.2203) must meet Universal Treatment Standards, found in LAC 33:V.2299.Appendix, Table 7, prior to *land disposal* as defined in LAC 33:V.2203.

F. The treatment standards for F001-F005 nonwastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes that contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from Test Method 1311, the Toxicity Characteristic Leaching Procedure found in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110. If the waste contains any of these three constituents along with any of the other 25 constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required.

G. Between August 26, 1997, and April 20, 1999, the treatment standards for the wastes specified in LAC 33:V.4901.C as EPA Hazardous Waste Numbers K156-K161 and in LAC 33:V.4901.E-F as EPA Hazardous Waste Numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U404, and U409-U411 and soil contaminated with these wastes were satisfied by either meeting the constituent concentrations presented in LAC 33:V.2299.Appendix, Table 2, or by treating the waste by the following technologies: *combustion*, as defined by the technology code CMBST at LAC 33:V.2299.Appendix, Table 3, for nonwastewaters; and *biodegradation* as defined by the technology code BIODG, *carbon adsorption* as defined by the technology code CARBN, *chemical oxidation* as defined by the technology code CHOXD, or *combustion* as defined as technology code CMBST at LAC 33:V.2299.Appendix, Table 3, for wastewaters.

H. Prohibited D004-D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents that were previously treated by stabilization to the treatment standards in effect at that time and then put into storage, do not have to be retreated to meet treatment standards in this Section prior to land disposal.

I. Effective September 4, 1998, the treatment standards for the wastes specified in LAC 33:V.4901.D as EPA Hazardous Waste Numbers P185, P191, P192, P197, U364, U394, and U395 may be satisfied by either meeting the constituent concentrations presented in LAC 33:V.2299.Appendix, Table 2, Treatment Standards for Hazardous Wastes, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST in LAC 33:V.2299.Appendix, Table 3, for nonwastewaters; and biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST in LAC 33:V.2299.Appendix, Table 3, for wastewaters.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 21:266 (March 1995), LR 22:22 (January 1996), LR 22:819 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:668 (April 1998), LR 24:1726 (September 1998), LR 25:444 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:280 (February 2000), LR 30:1682 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1014 (June 2008).

## §2227. Treatment Standards Expressed as Specified Technologies

A. The wastes specified in LAC 33:V.2299.Appendix, Table 2, for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in LAC 33:V.2299.Appendix, Table 3, entitled "Technology Codes and Description of Technology-Based Standards."

B. Any person may submit an application to the Office of Environmental Services demonstrating that an alternative treatment method can achieve a measure of performance

equivalent to that achieved by methods specified in Subsections A, C, and D of this Section or specified in LAC 33:V.2299.Appendix, Table 8. The applicant must submit information demonstrating that his or her treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the administrative authority may approve the use of the alternative treatment method if he or she finds that the alternative treatment method provides a measure of performance equivalent to those achieved by methods specified in Subsections A, C, and D of this Section or specified in LAC 33:V.2299.Appendix, Table 8. Any approval must be stated in writing and may contain such provisions and conditions as the administrative authority deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

C. As an alternative to the otherwise applicable LAC 33:V.Chapter 22.Subchapter A treatment standards, lab packs are eligible for land disposal provided all of the following requirements are met:

1. the lab packs comply with the applicable provisions of LAC 33:V.2519 and 4511;

2. the lab packs do not contain any of the wastes listed in LAC 33:V.2299.Appendix, Table 6;

3. the lab packs are incinerated in accordance with the requirements of LAC 33:V.Chapter 31 and Chapter 43.Subchapter N; and

4. any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, or D011 are treated in compliance with the applicable treatment standards specified for such wastes in LAC 33:V.Chapter 22.Subchapter A.

D. Radioactive hazardous mixed wastes are subject to the treatment standards in LAC 33:V.2223. Where treatment standards are specified for radioactive mixed wastes in LAC 33:V.2299.Appendix, Table 2, those treatment standards will govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste (as designated by EPA waste code) applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in LAC 33:V.2230.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 21:266 (March 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:300 (February 1998), LR 25:445 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2476 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2457 (October 2005), LR 33:2107 (October 2007).

## §2230. Treatment Standards for Hazardous Debris

A. Treatment Standards. Hazardous debris must be treated prior to land disposal unless the administrative authority determines under LAC 33:V.109.*Hazardous Waste*.6.b that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard in LAC 33:V.2299.Appendix, Table 8 for the waste contaminating the debris.

1. Hazardous debris must be treated for each contaminant subject to treatment defined by LAC 33:V.2230.B using the technology or technologies identified in LAC 33:V.2299.Appendix, Table 8.

2. Hazardous debris that exhibits the characteristic of ignitablity, corrosivity, or reactivity identified under LAC 33:V.4903.B, C, and D, respectively, must be deactivated by treatment identified in LAC 33:V.2299.Appendix, Table 8.

3. The treatment standard of LAC 33:V.2299.Appendix, Table 8 must be achieved for each type of debris contained in a mixture of debris types. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

4. Debris that is contaminated with two or more contaminants subject to treatment identified under LAC 33:V.2230.B must be treated for each contaminant using one or more of the treatment technologies identified in LAC 33:V.2299.Appendix, Table 8. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

5. Hazardous debris that is also a waste PCB under 40 CFR Part 761 is subject to the requirements of 40 CFR Part 761 or the requirements of this Section, whichever is more stringent.

B. Hazardous debris must be treated for each "contaminant subject to treatment." The contaminants subject to treatment must be determined as follows:

1. the contaminants subject to treatment for debris that exhibit the Toxicity Characteristic (TC) described in LAC 33:V.4903.E are those extraction procedure (EP) constituents for which debris exhibit the TC toxicity characteristic;

2. the contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established under LAC 33:V.2299.Appendix, Table 2; and

3. hazardous debris that is reactive because of cyanide must be treated for cyanide.

C. Hazardous debris that has been treated using one of the specified extraction or destruction technologies in LAC 33:V.2299.Appendix, Table 8 and does not exhibit a characteristic of hazardous waste identified under LAC 33:V.4903 after treatment is not a hazardous waste and need not be managed in a Subtitle C facility. Hazardous debris contaminated with a listed waste that is treated by an

immobilization technology specified in LAC 33:V.2299.Appendix, Table 8 is a hazardous waste and must be managed in a Subtitle C facility.

D. Treatment Residues

1. General Requirements

a. Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means; and

b. residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by LAC 33:V.Chapter 22.Subchapter B for the waste contaminating the debris.

2. Residue from the deactivation of ignitable, corrosive, or reactive characteristic hazardous debris (other than cyanide-reactive) that is not contaminated with a contaminant subject to treatment defined by LAC 33:V.2230.B must be deactivated prior to land disposal and is not subject to the waste-specific treatment standard of LAC 33:V.2299.Appendix, Table 2.

3. Residue from the treatment of debris that is reactive because of cyanide must meet the treatment standards for D003 in LAC 33:V.2299.Appendix, Table 2.

4. Ignitable nonwastewater residue containing equal to or greater than 10 percent total organic carbon is subject to the technology-based standards for D001, ignitable liquids.

5. Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of LAC 33:V.2230.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 22:22 (January 1996), LR 23:565 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:445 (March 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1897 (September 2008).

## §2231. Variance from a Treatment Standard

A. Based on a petition filed by a generator or treater of hazardous waste, the EPA administrator and the administrative authority may approve a variance from an applicable treatment standard if:

1. it is not physically possible to treat the waste to the level specified in the treatment standard or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

2. it is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

a. treatment to the specified level or by the specified method is technically inappropriate (e.g., resulting in combustion of large amounts of mildly contaminated environmental media); or

b. for remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

B. Each petition must be submitted to the Office of Environmental Services for consideration in accordance with the procedures in LAC 33:V.105.H.

C. After receiving a petition for a variance from a treatment standard, the administrative authority may request any additional information or samples that he or she may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and regional offices.

1. Each petition must include the following statement signed by the petitioner or a duly authorized representative.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

2. Certification. Each petition for a variance must be certified by a Louisiana licensed professional engineer (PE).

D. The EPA administrator and/or the Office of Environmental Services will give public notice of the intent to approve or deny a petition and will provide the person requesting the variance and the public, through a newspaper notice in the official state journal and the local newspaper in the affected area, the cost of which will be charged to the person requesting the variance, the opportunity to submit written comments on the request and the conditions of the variance, allowing a 30-day comment period. The notices referred to in this Section will be provided in the local newspaper in three separate issues; however, the 30-day comment or notice period shall begin with the notice in the official state journal. The administrative authority will also, in response to a request or at his or her own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the variance request. The administrative authority will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments.) The final decision on a variance from a treatment standard will also be published.

E. A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards must comply with the waste analysis

requirements for prohibited wastes under LAC 33:V.2245 and 2247.

F. During the petition review process, the applicant is required to comply with all prohibitions on land disposal under this Chapter, unless a petition for a variance has been approved by the EPA, and the administrative authority grants an emergency variance. If EPA has approved the variance, the land disposal of the waste may continue for up to one year under an emergency variance issued by the administrative authority until the administrative authority makes a decision on the petition for variance. In no case shall an emergency variance extend beyond one year after the date of issuance. After the administrative authority issues a decision on the variance, the waste may be land disposed only in accordance with the provisions of the variance.

G. Based on a petition filed by a generator or treater of hazardous waste, the administrative authority may approve a site-specific variance from an applicable treatment standard if:

1. it is not physically possible to treat the waste to the level specified in the treatment standard or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

2. it is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

a. treatment to the specified level or by the specified method is technically inappropriate (e.g., resulting in combustion of large amounts of mildly contaminated environmental media where the treatment standard is not based on combustion of such media); or

b. for remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation;

3. for contaminated soil only, treatment to the level or by the method specified in the soil treatment standard would result in concentrations of hazardous constituents that are below (i.e., lower than) the concentrations necessary to minimize short and long term threats to human health and the environment. Treatment variances approved under this Subsection must:

a. at a minimum, impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario:

i. for carcinogens, achieve constituent concentrations that result in the total excess risk to an individual exposed over a lifetime generally falling within a range from $10^{-4}$ to $10^{-6}$; and

ii. for constituents with noncarcinogenic effects, achieve constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime;

b. not consider post-land-disposal controls;

4. for contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (i.e., lower than) natural background concentrations at the site where the contaminated soil will be land disposed;

5. public notice and a reasonable opportunity for public comment must be provided before granting or denying a petition.

H. Each application for a site-specific variance from a treatment standard must include the information in LAC 33:V.105.H.2.

I. After receiving an application for a site-specific variance from a treatment standard, the administrative authority or his delegated representative may request any additional information or samples which may be required to evaluate the application.

J. A generator, treatment facility, or disposal facility that is managing a waste covered by a site-specific variance from a treatment standard must comply with the waste analysis requirements for restricted wastes found under LAC 33:V.2245 and 2247.

K. During the application review process the applicant for a site-specific variance must comply with all restrictions on land disposal under LAC 33:V.2231 once the effective date for the waste has been reached.

L. The facilities listed in LAC 33:V.2299.Appendix, Table 10 are excluded from the treatment standard under LAC 33:V.2299.Appendix, Table 2 and are subject to the constituent concentrations.

M. For all variances the petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, the department may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal in accordance with LAC 33:V.Chapter 41.Subchapter C.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 21:266 (March 1995), LR 21:1334 (December 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:445 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2476 (November 2000), LR 27:1015 (July 2001), amended by

the Office of the Secretary, Legal Affairs Division, LR 31:2458 (October 2005), LR 33:2108 (October 2007).

## §2233. Universal Treatment Standards

A. LAC 33:V.2299.Appendix, Table 7 identifies the hazardous constituents, along with the nonwastewater and wastewater treatment standard levels that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for *underlying hazardous constituents* as defined in LAC 33:V.2203.A, these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in LAC 33:V.2299.Appendix, Table 7.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 22:22 (January 1996).

## §2236. Alternative Land Disposal Restriction (LDR) Treatment Standards for Contaminated Soil

A. Applicability. You must comply with LDRs prior to placing soil that exhibits a characteristic of hazardous waste, or exhibited a characteristic of hazardous waste at the time it was generated, into a land disposal unit. The following chart describes whether you must comply with LDRs prior to placing soil contaminated by listed hazardous waste into a land disposal unit.

| If LDRs | And If LDRs | And If | Then You |
|---|---|---|---|
| applied to the listed waste when it contaminated the soil* | apply to the listed waste now | …… | must comply with LDRs |
| did not apply to the listed waste when it contaminated the soil* | apply to the listed waste now | the soil is determined to contain the listed waste when the soil is first generated | must comply with LDRs |
| did not apply to the listed waste when it contaminated the soil* | apply to the listed waste now | the soil is determined not to contain the listed waste when the soil is first generated | need not comply with LDRs |
| did not apply to the listed waste when it contaminated the soil* | do not apply to the listed waste now | …….. | need not comply with LDRs |
| *To determine the date any given listed hazardous waste contaminated any given volume of soil, use the last date any given listed hazardous waste was placed into any given land disposal unit or, in the case of an accidental spill, the date of the spill. | | | |

B. Prior to land disposal, contaminated soil identified by Subsection A of this Section as needing to comply with LDRs must be treated according to the applicable treatment standards specified in Subsection C of this Section or according to the universal treatment standards specified in LAC 33:V.2233 applicable to the contaminating listed hazardous waste and/or the applicable characteristic of hazardous waste if the soil is characteristic. The treatment standards specified in Subsection C of this Section and the universal treatment standards may be modified through a treatment variance approved in accordance with LAC 33:V.2233.

C. Treatment Standards for Contaminated Soils. Prior to land disposal, contaminated soil identified by Subsection A of this Section as needing to comply with LDRs must be treated according to all the standards specified in this Subsection or according to the universal treatment standards specified in LAC 33:V.2233.

1. All Soils. Prior to land disposal, all constituents subject to treatment must be treated as follows.

a. For nonmetals except carbon disulfide, cyclohexanone, and methanol, treatment must achieve 90 percent reduction in total constituent concentrations, except as provided by Subparagraph C.1.c of this Section.

b. For metals and carbon disulfide, cyclohexanone, and methanol, treatment must achieve 90 percent reduction in constituent concentrations as measured in leachate from the treated media (tested according to the toxicity characteristic leaching procedure, TCLP) or 90 percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by Subparagraph C.1.c of this Section.

c. When treatment of any constituent subject to treatment to a 90 percent reduction standard would result in a concentration less than 10 times the universal treatment standard for that constituent, treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required. Universal treatment standards are identified in LAC 33:V.2299.Appendix, Table 7.

2. Soils That Exhibit the Characteristic of Ignitability, Corrosivity, or Reactivity. In addition to the treatment required by Paragraph C.1 of this Section, prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity, or reactivity must be treated to eliminate these characteristics.

3. Soils That Contain Nonanalyzable Constituents. In addition to the treatment requirements of Paragraphs C.1 and 2 of this Section, prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

a. for soil that also contains only analyzable and nonanalyzable organic constituents, treatment of the analyzable organic constituents to the levels specified in Paragraphs C.1 and 2 of this Section; or

b. for soil that contains only nonanalyzable constituents, treatment by the method(s) specified in LAC 33:V.2227 for the waste contained in the soil.

D. Constituents Subject to Treatment. When applying the soil treatment standards in Subsection C of this Section, constituents subject to treatment are any constituents listed

in LAC 33:V.2299.Appendix, Table 7 (Universal Treatment Standards) that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium, and zinc, and that are present at concentrations greater than 10 times the universal treatment standard. PCBs are not a constituent subject to treatment in any given volume of soil that exhibits the toxicity characteristic solely because of the presence of metals.

E. Management of Treatment Residuals. Treatment residuals from treating contaminated soil identified by Subsection A of this Section as needing to comply with LDRs must be managed as follows:

1. soil residuals are subject to the treatment standards of this Section; and

2. nonsoil residuals are subject to:

a. for soils contaminated by listed hazardous waste, the RCRA Subtitle C standards applicable to the listed hazardous waste; and

b. for soils that exhibit a characteristic of hazardous waste, if the nonsoil residual also exhibits a characteristic of hazardous waste, the treatment standards applicable to the characteristic hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, LR 25:446 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:281 (February 2000), LR 27:294 (March 2001), LR 28:1001 (May 2002).

## §2237. Exemption for Surface Impoundments Treating Hazardous Waste

A. Wastes that are otherwise prohibited from land disposal under this Chapter may be treated in a surface impoundment or series of impoundments provided that:

1. treatment of such wastes must occur in the exempt impoundment;

2. the following conditions must be met:

a. Sampling and Testing. For wastes with treatment standards and/or prohibition levels in LAC 33:V.Chapter 22.Subchapter A or RCRA Section 3004(d), the residues from the treatment must be analyzed, as specified in LAC 33:V.2245, 2247, or 2213.F and G to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under LAC 33:V.1519 or 4313, must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples;

b. Removal

i. the following treatment residues (including any liquid wastes) must be removed at least once every year:

(a). residues which do not meet the treatment standards promulgated under LAC 33:V.Chapter 22.Subchapter A;

(b). residues which do not meet the prohibition levels established under Subchapter A of this Chapter or imposed by statute (where no treatment standards have been established);

(c). residues which are from the treatment of wastes prohibited from land disposal under Subchapter A of this Chapter (where no treatment standards have been established and no prohibition levels apply); or

(d). residues from the management of listed wastes which are not delisted by EPA or by the administrative authority;

ii. if the volume of liquid flowing through the impoundment or series of impoundments in a one-year period is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement;

iii. Reserved;

iv. the administrative authority may require removal of treatment residues more frequently than once per year;

c. Subsequent Management. Treatment residues may not be placed in any other surface impoundment for subsequent management;

d. Recordkeeping. Sampling and testing and recordkeeping provisions of LAC 33:V.1519 and 4313 apply;

e. Certification. Each waste analysis plan must be certified by a Louisiana licensed professional engineer (PE);

3. the impoundment must meet the applicable design requirements of LAC 33:V.Chapter 29 or 43, although the unit may not be new, expanded, or a replacement, and be in compliance with applicable groundwater monitoring requirements of LAC 33:V.Chapter 33 or 43 unless:

a. the impoundment is exempted in accordance with LAC 33:V.2903.J or K or 4462.C or D; or

b. the owner or operator has applied for and the administrative authority, after notice and opportunity to comment, has granted a waiver of the design requirements on the basis that the surface impoundment:

i. has at least one liner (and there is no evidence that such liner is leaking) and one compacted clay or other department-approved liner;

ii. is located more than 1/4 mile from an underground source of drinking water; and

iii. is in compliance with generally applicable groundwater monitoring requirements for facilities with permits;

c. the owner or operator has applied for and the administrative authority, after notice and an opportunity to

comment, has granted a modification to the design requirements on the basis of a demonstration that the surface impoundment is located, designed, and operated so as to ensure that no hazardous constituents will migrate into groundwater or surface water at any time;

4. the owner or operator must submit to the Office of Environmental Services a written certification that the requirements of Paragraph A.3 of this Section have been met and a copy of the waste analysis plan required under Paragraph A.2 of this Section. The following certification is required.

> "I certify under penalty of law that the requirements of LAC 33:V.2237.A.3 have been met for all surface impoundments being used to treat prohibited wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

B. Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under this Section.

C. Surface Impoundment Exemptions

1. This Subsection defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment.

2. Wastes which are newly identified or listed under LAC 33:V.2221 after November 8, 1984, and stored in a surface impoundment that is newly subject to Subtitle C of RCRA as a result of the additional identification or listing may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of LAC 33:V.Chapter 43.Subchapter E within 12 months after promulgation of the listing or characteristic.

3. Wastes which are newly listed or identified under LAC 33:V.2221 after November 8, 1984 and treated in a surface impoundment that is newly subject to Subtitle C of RCRA as a result of the additional listing or identification may continue to be treated in that surface impoundment, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of LAC 33:Chapter 43.Subchapter E within 12 months after promulgation of the listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after 48 months from promulgation of the addition listing or characteristic, it must then be in compliance with LAC 33:V.2237.A and B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 17:658 (July 1991), LR 21:266 (March 1995), LR 21:1334 (December 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1727 (September 1998), LR 25:447 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2476 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2458 (October 2005), LR 33:2108 (October 2007).

## §2239. Procedures for Case-by-Case Extensions of an Effective Date

A. Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application to the Office of Environmental Services for an extension of the effective date of any applicable prohibition established under this Chapter. The applicant must provide the following, and in each case the burden of proof will be on the applicant:

1. written evidence of a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage his or her waste in accordance with the effective date of the applicable prohibitions established under these regulations;

2. written evidence of a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (e.g., recycling), or disposal capacity that meets the treatment standards specified in LAC 33:V.Chapter 22.Subchapter A or, where treatment standards have not been specified, evidence that such treatment, recovery, or disposal capacity is protective of human health and the environment;

3. written evidence that due to circumstances beyond the applicant's control, such alternative capacity cannot reasonably be made available by the applicable effective date. This demonstration may include a showing that the technical and practical difficulties associated with providing the alternative capacity will result in the capacity not being available by the applicable effective date;

4. written evidence that the capacity that will be provided by the applicant will be sufficient to manage the entire quantity of the waste that is the subject of the application;

5. a detailed schedule for obtaining required operating and construction permits and an outline of how and when alternative capacity will be available;

6. written evidence of arrangements for adequate capacity to manage the subject waste during an extension and documentation of the locations of all sites at which the waste will be managed;

7. documentation to demonstrate that any waste managed in a surface impoundment or landfill during the extension period will meet the requirements of LAC 33:V.2239.I.2; and

8. documentation that he or she has a program or plan in effect to reduce the volume and toxicity of the waste he or she generates and that he or she has sought out the best available technology to reduce the toxicity, corrosiveness, virulent, or infectious character, or volume of the waste and that the waste cannot be further reduced through production

modifications, nor can the waste or specific constituents of the waste be reclaimed or reused. The plan shall include:

a. a schedule of implementation and anticipated reductions in quantity and toxicity;

b. a list of technical process reductions considered and those rejected and the reasons for the rejections; and

c. an analysis of the impact of the reduction program or plan on all operations of the facility affecting the environment, including air and water discharges.

B. An authorized representative signing an application described under Subsection A of this Section shall make the following certification.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

C. After receiving an application for an extension, the administrative authority may request any additional information that he or she deems necessary to evaluate the application. Failure to segregate waste streams shall not constitute justification for a case-by-case extension for those wastes which are separable and treatable in an available facility.

D. Pending a decision on the application for an extension, the applicant is required to comply with all prohibitions on land disposal under this Chapter, except as may be allowed in LAC 33:V.2233.

E. An extension will apply only to the waste generated at the individual facility covered by the application; it will not apply to prohibited waste from any other facility.

F. On the basis of the information referred to in Subsection A of this Section, after notice and opportunity for public comment, and after consultation with appropriate state agencies in all affected states, the administrative authority may grant an extension of up to one year from the effective date of the prohibition. The administrative authority may renew this extension for up to one additional year at the applicant's request if the demonstration required in Subsection A of this Section can still be made. In no event will an extension extend beyond 24 months from the applicable effective date specified in this Subchapter. The length of any extension authorized will be determined by the administrative authority based on the time required to construct or obtain the type of capacity the applicant needs, as described in the completion schedule discussed in Paragraph A.5 of this Section. The administrative authority will give public notice of the intent to approve or deny a petition or for an extension and will provide an opportunity for public comment as provided in LAC 33:V.2243. The final decision on a petition or extension will be published in the official state journal.

G. Any person granted an extension under this Section must immediately notify the Office of Environmental Services as soon as he or she has knowledge of any change in the conditions certified in the application.

H. Any person granted an extension under this Section shall submit written progress reports at intervals designated by the Office of Environmental Services, which may not exceed six months. Such reports must describe the overall progress made toward constructing or otherwise providing alternative treatment, recovery, or disposal capacity; must identify any event that may cause or has caused a delay in the development of the capacity, and must summarize the steps taken to mitigate the delay. The administrative authority can revoke the extension at any time if the applicant does not make a good-faith effort to meet the schedule for completion, if the department denies or revokes any required permit, if conditions certified in the application change, or for any violation of the Louisiana Environmental Quality Act or regulations promulgated thereto.

I. Whenever the administrative authority establishes an extension to an effective date under this Section, the following will apply during the period that such extension is in effect.

1. The storage prohibitions under LAC 33:V.2205.A are waived.

2. Such hazardous waste may be disposed of in a landfill or surface impoundment only if the unit is in compliance with the technical requirements of the following provisions, regardless of whether such unit is existing, new, or a replacement or lateral expansion.

a. The landfill, if in interim status, is in compliance with the requirements of groundwater interim status standards LAC 33:V.4447-4461 and LAC 33:V.4495-4511 of these regulations.

b. The landfill, if permitted, is in compliance with the requirements of LAC 33:V.Chapter 33 and LAC 33:V.2503.C-E.

c. The surface impoundment, if in interim status, is in compliance with the requirements of LAC 33:V.4447-4461.

d. The surface impoundment, if permitted, is in compliance with the requirements of LAC 33:V.Chapters 29 and 33.

e. The surface impoundment, if newly subject to RCRA Section 3005(j)(1) due to promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of LAC 33:V.Chapter 43.Subchapter E within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of LAC 33:V.4462.A, C, and D within 48 months after the promulgation of additional listings or characteristics of hazardous waste; and if a national capacity variance is granted during the period the variance is in effect, the surface impoundment, if newly subject to RCRA Section

3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of LAC 33:V.Chapter 43.Subchapter E within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of LAC 33:V.4462.A, C, and D within 48 months after the promulgation of additional listings or characteristics of hazardous waste.

f. The landfill, if disposing of containerized liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm but less than 500 ppm, is also in compliance with the requirements of 40 CFR 761.75 and LAC 33:V.Subpart 1.

J. Pending a decision on the application for an extension, the applicant is required to comply with all prohibitions on land disposal under this Chapter once the effective date has been reached.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1727 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2477 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2458 (October 2005), LR 33:2108 (October 2007).

## §2241. Exemptions to Allow Land Disposal of a Prohibited Waste Except by Deep Well Injection

A. Any person seeking an exemption to allow land disposal except by deep well injection of a prohibited hazardous waste in a particular unit or units must submit a petition to the Office of Environmental Services that meets the following requirements.

1. The petition must show that no economically or environmentally reasonable alternative to land disposal is available, and that where feasible the waste has undergone treatment by being stabilized, solidified, or encapsulated, or through approved land treatment technique. No exemption shall be granted to a generator for the land disposal of a waste stream if the waste stream can reasonably be eliminated or significantly reduced through waste reduction.

2. The petition must demonstrate, to a reasonable degree of certainty, that no hazardous constituents will migrate from the disposal unit for as long as the wastes remain hazardous. Migration prohibited by this Section includes migration into the air, land, or water. For the purpose of this Section, *no migration* means the waste is permanently confined within a department approved hazardous waste containment system.

B. Reserved.

C. The showing referred to in LAC 33:V.2241.A.1 must meet the following criteria.

1. The petitioner must show that he or she has made a good-faith effort, using economically and technically feasible and environmentally sound methods, to provide for use, reuse, reclamation, or other recycling of the waste other than for a use constituting disposal.

2. For each waste stream the petitioner must show that he or she has a program or plan in effect to reduce the volume and toxicity of the waste he or she generates and that he or she has sought out the best available technology to reduce the toxicity, corrosiveness, virulent or infectious character, and volume of the waste and that the waste cannot be further reduced through production modifications, nor can the waste or specific constituents of the waste be reclaimed or reused. The plan shall include:

a. a schedule of implementation and anticipated reductions in quantity and toxicity;

b. a list of technical process reductions considered and those rejected and the reasons for the rejections; and

c. an analysis of the impact of the reduction program or plan on all operations of the facility affecting the environment, including air and water discharges.

3. The petitioner must sign and present to the administrative authority the following certification.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this waste-reduction plan and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

4. The petitioner must submit a report describing in detail the efforts undertaken since 1984 to reduce the volume and toxicity of waste generated. The report shall provide data indicating the change in volume and toxicity of waste actually achieved during each year in comparison to previous years, to the extent that such information is available. The report shall also document for each hazardous waste stream proposed for disposal in a land disposal unit a waste reduction analysis (WRA) showing that the petitioner has considered the economic and technical feasibility of alternative disposal methods in the following order: reduction, recycling, treatment, and disposal. The WRA must include:

a. an analysis of alternatives considered;

b. the costs of alternatives considered;

c. an assessment of the impact on other operations of the facility affecting the environment, including impacts on air and water discharges; and

d. a description of the availability of alternate capacity for use of alternative technologies.

D. The demonstration submitted by the petitioner referred to in LAC 33:V.2241.A.2 must include the following components:

1. an identification of the specific waste and specific unit for which the demonstration will be made;

2. a waste analysis to describe fully the chemical and physical characteristics of the subject waste;

3. a comprehensive characterization of the disposal unit site, including an analysis of background air, soil, and water quality;

4. a monitoring plan which will detect migration from the disposal unit at the earliest practicable time; and

5. sufficient information to assure the administrative authority that the owner or operator of a land disposal unit receiving prohibited waste(s) will comply with other applicable federal, state, and local laws.

E. The demonstration referred to in LAC 33:V.2241.A.2 must meet the following criteria.

1. All waste and environmental sampling, test, and analytical data must be accurate and reproducible to the extent that state-of-the-art techniques allow.

2. The administrative authority must approve all sampling, testing, and estimation techniques for chemical and physical properties of the waste and all environmental parameters.

3. Simulation models must be calibrated for the specific waste and site conditions, and verified for accuracy by comparison with actual measurements.

4. A quality assurance and quality control plan that addresses all aspects of the demonstration must be approved by the administrative authority.

5. An analysis must be performed to identify and quantify any aspects of the demonstration that contribute to uncertainty. This analysis must include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts, or hurricanes or other natural phenomena.

F. Each petition referred to in LAC 33:V.2241.A must include the following.

1. A monitoring plan must be submitted that describes the monitoring program installed at and/or around the unit to verify continued compliance with the conditions of the exemption. The plan must provide information on the monitoring of the unit and/or the environment around the unit, including the following specific information:

a. the media monitored in cases where monitoring of the environment around the unit is required;

b. the type of monitoring conducted at the unit in cases where monitoring of the unit is required;

c. the location of the monitoring stations;

d. the monitoring interval (frequency of monitoring at each station);

e. the specific hazardous constituents to be monitored;

f. the implementation schedule for the monitoring program;

g. the equipment used at the monitoring station;

h. the sampling and analytical techniques employed;

i. the data recording/reporting procedures; and

j. the specific criteria and steps to be used to determine if hazardous constituents have migrated.

2. Where applicable, the administrative authority will specify as part of his or her approval of the petition the length of time that the monitoring program described in Paragraph F.1 of this Section must be in place before prohibited waste is received at the unit.

3. The monitoring data collected according to the monitoring plan specified under Paragraph F.1 of this Section must be sent to the administrative authority according to a format and schedule specified and approved in the monitoring plan.

4. A copy of the monitoring data collected under the monitoring plan specified under Paragraph F.1 of this Section must be kept on-site at the facility in the operating record.

5. The monitoring program specified under Paragraph F.1 of this Section shall meet the following criteria.

a. All sampling, testing, and analytical methods must be approved by the administrative authority and must provide accurate and reproducible data.

b. All estimation and modeling techniques must be approved by the administrative authority.

c. A quality assurance and quality control plan addressing all aspects of the monitoring program must be provided to and approved by the administrative authority.

G. Each petition must be submitted to the Office of Environmental Services.

H. After a petition has been approved, the owner or operator must report any changes in conditions at the unit and/or the environment around the unit that depart from the conditions described in the exemption and that affect the potential for migration of hazardous constituents from the units as follows.

1. If the owner or operator plans to make changes to the unit design, construction, or operation, such changes must be proposed in writing, and the owner or operator shall submit a demonstration to the Office of Environmental Services at least 30 days before making the changes. The administrative authority will determine whether the proposed changes invalidate the terms of the petition and will determine the appropriate response. Any changes must be approved by the administrative authority prior to being made.

2. If the owner or operator discovers that a condition at the site that was modeled or predicted in the petition does

not occur as predicted, this change must be reported, in writing, to the Office of Environmental Services within 10 days of discovery of the change. The administrative authority will determine whether the reported change from the terms of the petition requires further action, which may include termination of waste acceptance and revocation of the petition or petition modifications, or other responses.

I. If the owner or operator determines that hazardous constituent(s) are migrating from the unit, the owner or operator must immediately suspend receipt of prohibited wastes at the unit and notify the Office of Environmental Compliance within 24 hours and in writing within 10 days of the determination that a release has occurred. Following receipt of the notification, the administrative authority will determine within 60 days of receiving notification whether the owner or operator can continue to receive prohibited wastes in the unit and whether the exemption is to be revoked. The administrative authority shall also determine whether further examination of any migration is warranted under applicable provisions of LAC 33:V.Chapter 33 or 43.

J. Each petition must include the following statement signed by the petitioner or a duly authorized representative and must be submitted to the Office of Environmental Services.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

K. After receiving a petition, the administrative authority may request any additional information that may be reasonably required to evaluate the demonstration.

L. A petition submitted in accordance with this Section must apply to land disposal of the specific prohibited waste at the individual disposal unit described in the showing and demonstration and will not apply to any other prohibited waste at that disposal unit or to that specific prohibited waste at any other disposal unit.

M. The administrative authority will give public notice of the intent to approve or deny a petition and will provide an opportunity for public comment in accordance with LAC 33:V.Chapter 7.Subchapter C and LAC 33:V.2243. Notice will also be given when a final decision on a petition is issued.

N. The term of an exemption granted under this Section shall be no longer than the term of the final operating permit if the disposal unit is operating under a final operating permit, or up to a maximum of five years from the date of approval if the unit is operating under interim status. In either case, the term of the exemption granted shall expire upon the termination, revocation, or denial of a final operating permit or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached. The exemption must be reviewed at least once every three years.

O. During the petition review process, the applicant is required to comply with all prohibitions on land disposal under this Chapter, unless a petition for an exemption has been approved by the EPA, and the administrative authority grants an emergency variance. If EPA has approved the exemption, the land disposal of the waste may continue for up to one year under an emergency variance issued by the administrative authority until the administrative authority makes a decision on the petition for exemption. In no case shall an emergency variance extend beyond one year after the date of issuance. After the administrative authority issues a decision on the exemption, the waste may be land disposed only in accordance with the provisions of the exemption.

P. The petition granted by the administrative authority does not relieve the petitioner from compliance with all other applicable regulations.

Q. Liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm are not eligible for an exemption under this Section.

R. As a condition of the exemption, the petitioner must submit a report to the Office of Environmental Services by March 1 of each calendar year during the term of the exemption that describes in detail the efforts undertaken during the preceding calendar year to reduce the volume and toxicity of the waste generated. The report shall provide data indicating the change in volume and toxicity of waste actually achieved during the year in comparison to previous years.

S. Whenever the administrative authority determines that the basis for approval of a petition may no longer be valid, he or she shall require a new demonstration in accordance with this Section.

T. Termination of an Approved Petition

1. The administrative authority may terminate an exemption granted under this Section for the following causes:

a. noncompliance by the petitioner with any condition of the exemption;

b. the petitioner's failure in the petition or during the review and approval to disclose fully all relevant facts, or the petitioner's misrepresentation of any relevant facts at any time; or

c. a determination that new information shows that the basis for approval of the petition is no longer valid.

2. The administrative authority shall terminate an exemption granted under this Section for the following cause: the petitioner's willful withholding during the review and approval of the petition of facts directly and materially relevant to the administrative authority's decision on the petition.

3. The administrative authority shall follow the procedures in LAC 33:V.323 in terminating any exemption under this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:220 (March 1990), LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1727 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2477 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2458 (October 2005), LR 33:2109 (October 2007).

## §2243. Administrative Procedures for Exemptions under LAC 33:V.2241 and 2271, No-Alternative Determinations under LAC 33:V.2273, and Case-by-Case Extensions of an Effective Date under LAC 33:V.2239

A. Before making a final decision on the exemption, determination, or extension request, the department will provide the person requesting the exemption, determination, or extension and the public, through a newspaper notice in the official state journal and the local newspaper in the affected area, the cost of which will be charged to the person requesting the exemption, determination, or extension, the opportunity to submit written comments on the request on the conditions of the exemption, determination, or extension, allowing a 45-day comment period. The notices referred to in this Section will be provided in the local newspaper in three separate issues; however, the comment or notice period shall begin with the notice in the official state journal. The administrative authority will also, in response to a request or at his or her own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the exemption, determination, or extension request. The administrative authority will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments.)

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:1057 (December 1990), LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1800 (October 1999), LR 26:2478 (November 2000).

## §2245. Generators' Waste Analysis, Recordkeeping, and Notice Requirements

A. Requirements for Generators. A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in LAC 33:V.2223, 2230, or 2236. This determination can be made concurrently with the hazardous waste determination required in LAC 33:V.1103 in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using Test Method 1311 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110, depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. Alternatively, the generator must send the waste to a RCRA-permitted hazardous waste treatment facility, where the waste treatment facility must comply with the requirements of LAC 33:V.1519 and 2247.A. In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed, and some soils are contaminated by such hazardous wastes. These treatment standards are also found in LAC 33:V.2223, and are described in detail in LAC 33:V.2299.Appendix, Table 3. These wastes, and soils contaminated with such wastes, do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste, or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of LAC 33:V.2246 in addition to any applicable requirements in this Section.

B. If the waste or contaminated soil does not meet the treatment standards, or if the generator chooses not to make the determination of whether his waste must be treated, with the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste and place a copy in the file. The notice must include the information in column "LAC 33:V.2245.B" of the Generator Paperwork Requirements Table in Subsection D of this Section. Alternatively, if the generator chooses not to make the determination of whether the waste must be treated, the notification must include the EPA hazardous waste numbers and manifest number of the first shipment and must state, "This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility must make the determination." No further notification is necessary until such time as the waste or facility changes, in which case a new notification must be sent and a copy placed in the generator's file.

1. For contaminated soil, the following certification statement should be included, signed by an authorized representative.

> "I certify under penalty of law that I personally have examined this contaminated soil and it [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and requires treatment to meet the soil treatment standards as provided by LAC 33:V.2236.C."

C. If the waste or contaminated soil meets the treatment standard at the original point of generation:

1. with the initial shipment of waste to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each treatment, storage, or disposal facility receiving the waste and place a copy in the

file. The notice must include the information indicated in column "LAC 33:V.2245.C" of the Generator Paperwork Requirements Table in Subsection D of this Section and the following certification statement, signed by an authorized representative:

> "I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in LAC 33:V.2223-2233. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

2. for contaminated soil, with the initial shipment of wastes to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each facility receiving the waste and place a copy in the file. The notice must include the information in Subsection D of this Section of the Generator Paperwork Requirements Table;

3. if the waste changes, the generator must send a new notice and certification to the receiving facility, and place a copy in their files. Generators of hazardous debris excluded from the definition of *hazardous waste* under LAC 33:V.109.*Hazardous Waste*.6 are not subject to these requirements.

D. For reporting, tracking, and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed, there are certain exemptions from the requirement that hazardous wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to, case-by-case extensions under LAC 33:V.2239, disposal in a no-migration unit under LAC 33:V.2241, or a national capacity variance or case-by-case capacity variance under LAC 33:V.2209-2221. If a generator's waste is so exempt, then with the initial shipment of waste, the generator must send a one-time written notice to each land disposal facility receiving the waste. The notice must include the information indicated in column "LAC 33:V.2245.D" of the Generator Paperwork Requirements Table in this Subsection. If the waste changes, the generator must send a new notice to the receiving facility and place a copy in their files.

| Generator Paperwork Requirements Table | | | | |
|---|---|---|---|---|
| | LAC 33:V. | | | |
| **Required Information** | **2245.B** | **2245.C** | **2245.D** | **2245.I** |
| EPA Hazardous Waste Numbers and Manifest Numbers of first shipment. | X | X | X | X |
| Statement: This waste is not prohibited from land disposal. | | | X | |
| The waste is subject to the LDRs. The constituents of concern for F001-F005 and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice. | X | X | | |
| The notice must include the applicable wastewater/ nonwastewater category (see LAC 33:V.2203.A) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide). | X | X | | |
| Waste analysis data (when available). | X | X | X | |
| Date the waste is subject to the prohibition. | | | X | |
| For hazardous debris, when treating with the alternative treatment technologies provided by LAC 33:V.2230: the contaminants subject to treatment, as described in LAC 33:V.2230; and an indication that these contaminants are being treated to comply with LAC 33:V.2230. | | | X | |
| For contaminated soil subject to LDRs as provided in LAC 33:V.2236.A, the constituents subject to treatment as described in LAC 33:V.2236.D, and the following statement: This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by LAC 33:V.2236.C or the universal treatment standards. | X | X | | |
| A certification is needed (see applicable Section for exact wording). | | X | | X |

E. If a generator is managing and treating a prohibited waste or contaminated soil in tanks, containers, or containment buildings regulated under LAC 33:V.1109.E to meet applicable LDR treatment standards found in LAC 33:V.2223, the generator must develop and follow a written waste analysis plan that describes the procedures the generator will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of LAC 33:V.2299.Appendix, Table 8, however, are not subject to these waste analysis requirements.) The plan must be kept on-site in the generator's records, and the following requirements must be met.

1. The waste analysis plan must be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of this Chapter, including the selected testing frequency.

2. Such plan must be filed with the Office of Environmental Services, a minimum of 30 days prior to the treatment activity, with delivery verified.

3. Wastes shipped off-site in accordance with this Section must comply with the notification requirements of Subsection C of this Section.

F. If a generator determines that the waste or contaminated soil is prohibited solely on the basis of his or her knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines whether the waste is prohibited on the basis of tests of this waste or an extract developed using the Test Method 1311 described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110, all waste analysis data must be retained on-site in the generator's files.

G. If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or exempted from regulation under LAC 33:V.Chapter 1 or 41 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified in LAC 33:V.105.D.1.b, or that are CWA-equivalent, or are managed in an underground injection well regulated by the Solid Disposal Waste Act, SDWA), the generator must place a one-time notice stating such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from the regulation under LAC 33:V.Subpart 1, and the disposition of the waste, in the facility's on-site file.

H. Generators must retain on-site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced in accordance with this Section for at least three years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the administrative authority. The requirements of this Paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under LAC 33:V.Chapter 1 or 41, or exempted from regulation under LAC 33:V.Subpart 1, subsequent to the point of generation.

I. If a generator is managing a lab pack that contains hazardous wastes and wishes to use the alternative treatment standard for lab packs found at LAC 33:V.2227.C.

1. With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column "LAC 33:V.2245.I" in the Generator Paperwork Requirements Table of Subsection D of this Section and the following certification. The certification that must be signed by an authorized representative and must be placed in the generator's files, must say the following.

> "I certify under penalty of law that I personally have examined and am familiar with the waste, and that the lab pack contains only wastes that have not been excluded under LAC 33:V.2299.Appendix, Table 6, and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at LAC 33:V.2227.C. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

2. No further notification is necessary until such time that the wastes in the lab pack change or the receiving facility changes, in which case a new notice and certification must be sent and a copy placed in the generator's file.

3. If the lab pack contains characteristic hazardous wastes (D001-D043), *underlying hazardous constituents* (as defined in LAC 33:V.2203) need not be determined.

4. The generator must also comply with the requirements in Subsections F and G of this Section.

J. Certification. Each waste minimization plan must be certified by a Louisiana registered professional engineer (PE).

K. All large quantity generators shall develop and retain a waste minimization plan on-site. The plan shall be submitted to the administrative authority within 30 days of receipt of a request by the administrative authority. The plan shall include ongoing and proposed waste minimization projects and tentative beginning dates for proposed projects.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 16:1057 (December 1990), LR 17:658 (July 1991), LR 21:266, 267 (March 1995), LR 21:1334 (December 1995), LR 22:22 (January 1996), LR 22:820 (September 1996), LR 22:1130 (November 1996), LR 23:565 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:669 (April 1998), LR 24:1728 (September 1998), LR 25:447 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning

Division, LR 26:281 (February 2000), LR 26:2478 (November 2000), LR 27:295 (March 2001), LR 27:711 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2459 (October 2005), LR 33:2109 (October 2007), LR 34:996 (June 2008).

## §2246. Special Rules Regarding Wastes That Exhibit a Characteristic

A. The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under this Chapter. This determination may be made concurrently with the hazardous waste determination required in LAC 33:V.1103. For purposes of this Chapter, the waste will carry the waste code for any applicable listing under LAC 33:V.4901. In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (LAC 33:V.4903), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in Subsection B of this Section. If the generator determines that his waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, or POLYM of LAC 33:V.2299.Appendix, Table 3), the generator must determine the *underlying hazardous constituents* (as defined in LAC 33:V.2203.A), in the characteristic waste.

B. Where a prohibited waste is both listed under LAC 33:V.4901 and exhibits a characteristic under LAC 33:V.4903, the treatment standard for the waste code listed in LAC 33:V.4901 will operate in lieu of the standard for the waste code under LAC 33:V.4903, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

C. In addition to any applicable standards determined from the initial point of generation, no prohibited waste that exhibits a characteristic under LAC 33:V.4903 may be land disposed unless the waste complies with the treatment standards under LAC 33:V.2299.Appendix, Table 2.

D. Wastes that exhibit a characteristic are also subject to the requirements of LAC 33:V.2245, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generator's or treater's on-site files. The notification and certification must be updated if the process or operation generating the waste changes and/or if the solid waste disposal facility receiving the waste changes.

1. The notification must include the following information:

a. name and address of the RCRA Subtitle D facility receiving the waste shipment; and

b. a description of the waste as initially generated, including the applicable EPA Hazardous Waste Number(s), treatability group(s), and *underlying hazardous constituents* (as defined in LAC 33:V.2203), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

2. The certification must be signed by an authorized representative and must state the language found in LAC 33:V.2247.C.

3. If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification found in LAC 33:V.2247.C.4 applies.

E. Generators or treaters who first claim that hazardous debris is excluded from the definition of *hazardous waste* under LAC 33:V.109.*Hazardous Waste*.6 (i.e., debris treated by an extraction or destruction technology provided by LAC 33:V.2299.Appendix, Table 8, and debris that the administrative authority has determined does not contain hazardous waste) are subject to the following notification and certification requirements.

1. A one-time notification, including the following information, must be submitted to the Office of Environmental Services:

a. the name and address of the RCRA Subtitle D facility receiving the treated debris;

b. a description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Number(s); and

c. for debris excluded under LAC 33:V.109.*Hazardous Waste*.6, the technology from LAC 33:V.2299.Appendix, Table 8, used to treat the debris.

2. The notification must be updated if the debris is shipped to a different facility and, for debris excluded under LAC 33:V.109.*Hazardous Waste*.6, if a different type of debris is treated or if a different technology is used to treat the debris.

3. For debris excluded under LAC 33:V.109.*Hazardous Waste*.6, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of LAC 33:V.2299.Appendix, Table 8 as follows:

a. records must be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;

b. records must be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and

c. for each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following.

"I certify under penalty of law that the debris has been treated in accordance with the requirements of LAC 33:V.2299.Appendix, Table 8. I am aware that there are

significant penalties for making a false certification, including the possibility of fine and imprisonment."

F. Generators and treaters who first receive from the administrative authority a determination that a given contaminated soil subject to LDRs as provided in LAC 33:V.2236.A no longer contains a listed hazardous waste and generators and treaters who first determine that a contaminated soil subject to LDRs as provided in LAC 33:V.2236.A no longer exhibits a characteristic of hazardous waste must:

1. prepare a one-time only documentation of these determinations including all supporting information; and

2. maintain that information in the facility files and other records for a minimum of three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:1057 (December 1990), amended LR 17:658 (July 1991), LR 21:266 (March 1995), LR 22:22 (January 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:669 (April 1998), LR 24:1730 (September 1998), LR 25:449 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:281 (February 2000), LR 26:2478 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2459 (October 2005), LR 33:2109 (October 2007), LR 34:997 (June 2008), LR 34:1897 (September 2008).

## §2247. Owners or Operators of Treatment or Disposal Facilities: Testing, Waste Minimization, Recordkeeping and Notice Requirements

A. Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans, as required by LAC 33:V.1519 (for permitted TSDs) or 4313 (for interim status facilities). Such testing must be performed as provided in Paragraphs A.1-2 of this Section.

1. For wastes or contaminated soil with treatment standards expressed in the waste extract (Toxicity Characteristic Leaching Procedure, TCLP), the owner or operator of the treatment facility must test an extract of the treatment residues, using Test Method 1311 (the TCLP described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110) to assure that the treatment residues extract meets the applicable treatment standards.

2. For wastes or contaminated soil with treatment standards expressed as concentrations in the waste, the owner or operator of the treatment facility must test the treatment residues (not an extract of such residues) to ensure that they meet the applicable treatment standards.

B. A one-time notice must be sent with the initial shipment of waste or contaminated soil to the land disposal facility. A copy of the notice must be placed in the treatment facility's file.

1. No further notification is necessary until such time that the waste or receiving facility changes, in which case a new notice must be sent and a copy placed in the treatment facility's file.

2. The one-time notice must include these requirements:

a. EPA Hazardous Waste Numbers and Manifest Numbers of the first shipment;

b. the waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice;

c. the notice must include the applicable wastewater/nonwastewater category (see LAC 33:V.2203.A) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide);

d. waste analysis data (when available);

e. for contaminated soil subject to LDRs as provided in LAC 33:V.2236.A, the constituents subject to treatment as described in LAC 33:V.2236.D and the following statement:

"This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by LAC 33:V.2236.C."; and

f. a certification statement is needed (see applicable Section for exact wording).

C. The treatment facility must submit a one-time certification signed by an authorized representative with the initial shipment of waste or treatment residue of a restricted waste to the land disposal facility. The certification must state:

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in LAC 33:V.2223 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

A certification is also necessary for contaminated soil and it must state:

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in LAC 33:V.2236 without impermissible dilution of the prohibited wastes. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

1. A copy of the certification must be placed in the treatment facility's on-site files. If the waste or treatment

residue changes, or the receiving facility changes, a new certification must be sent to the receiving facility, and a copy placed in the file.

2. Debris excluded from the definition of hazardous waste under LAC 33:V.109.*Hazardous Waste*.6 (i.e., debris treated by an extraction or destruction technology provided by LAC 33:V.2299.Appendix, Table 8, and debris that the administrative authority has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of LAC 33:V.2246.E rather than the certification requirements of this Subsection.

3. For wastes with organic constituents having treatment standards expressed as concentration levels, if compliance with the treatment standards is based in whole or in part on the analytical detection limit alternative specified in LAC 33:V.2223, the certification, signed by an authorized representative, must state the following.

> "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with LAC 33:V.Chapter 31 or Chapter 43.Subchapter N, or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and combustion units as specified in LAC 33:V.2299.Appendix, Table 3. I have been unable to detect the nonwastewater organic constituents despite having used best good-faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fines and imprisonment."

4. For characteristic wastes that are subject to the treatment standards in LAC 33:V.2223 (other than those expressed as a required method of treatment), or LAC 33:V.2236 that contain *underlying hazardous constituents* as defined in LAC 33:V.2203; if these wastes are treated on-site to remove the hazardous characteristic, and are then sent off-site for treatment of underlying hazardous constituents, the certification must state the following.

> "I certify under penalty of law that the waste has been treated in accordance with the requirements of LAC 33:V.2223 or 2236 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

5. For characteristic wastes that contain *underlying hazardous constituents* as defined LAC 33:V.2203 that are treated on-site to remove the hazardous characteristic and to treat underlying hazardous constituents to levels in LAC 33:V.2233 Universal Treatment Standards, the certification must state the following.

> "I certify under penalty of law that the waste has been treated in accordance with the requirements of LAC 33:V.2223 to remove the hazardous characteristic and that *underlying hazardous constituents*, as defined in LAC 33:V.2203 have been treated on-site to meet the LAC 33:V.2233 Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

D. If the waste or treatment residue will be further managed at a different treatment or storage or disposal facility, the treatment, storage, or disposal facility sending the waste or treatment residue off-site must comply with the notice and certification requirements applicable to generators in LAC 33:V.2245.B and C.

E. Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions in LAC 33:V.4139.B-D regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) must, for the initial shipment of waste, prepare a one-time certification described in Subsection C of this Section and a one-time notice that includes the information listed in Subsection B of this Section (except the manifest number). The certification and notification must be placed in the facility's on-site files. If the waste or the receiving facility changes, a new certification and notification must be prepared and placed in the on-site files. In addition, the recycling facility must also keep records of the name and location of each entity receiving the hazardous waste-derived product.

F. Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal in accordance with LAC 33:V.4139.A.2-4, the owner or operator of any land disposal facility disposing of any waste subject to prohibitions under this Chapter must do the following:

1. he must have copies of the notice and certification specified in either Subsection B, C, D, or E of this Section; and

2. he must test the waste or an extract of the waste or treatment residue developed using Test Method 1311 (the Toxicity Characteristic Leaching Procedure, described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110) to ensure that the wastes or treatment residues comply with the applicable treatment standards set forth in LAC 33:V.2223-2233. Such testing must be performed according to the frequency specified in the facility's waste analysis plan, as required by LAC 33:V.1519 or 4313.

G. All treatment, storage, and disposal facilities shall develop and retain a waste minimization plan on site. The plan shall be submitted to the administrative authority within 30 days of receipt of request. The plan shall include ongoing and proposed waste minimization projects and tentative beginning dates for proposed projects.

H. Certification. Each waste minimization plan must be certified by a Louisiana registered professional engineer (PE).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended

LR16:1057 (December 1990), LR 17:658 (July 1991), LR 21:266, 267 (March 1995), LR 21:1334 (December 1995), LR 22:22 (January 1996), LR 22:820 (September 1996), LR 23:566 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:670 (April 1998), LR 24:1730 (September 1998), LR 25:449 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:282 (February 2000), LR 26:2478 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2459 (October 2005), LR 32:607 (April 2006), LR 33:2110 (October 2007), LR 34:997 (June 2008), LR 34:1897 (September 2008).

# Subchapter B. Hazardous Waste Injection Restrictions

## §2249. Purpose, Scope, and Applicability

A. This Subchapter identifies hazardous wastes that are prohibited from disposal into Class I hazardous waste injection wells and defines those circumstances under which a waste, otherwise prohibited from injection, may be injected.

B. The requirements of LAC 33:V.Chapter 22.Subchapter B apply to owners or operators of Class I hazardous waste injection wells used to inject hazardous waste.

C. Wastes otherwise prohibited from injection may continue to be injected:

1. if an extension from the effective date of a prohibition has been granted in accordance with LAC 33:V.2253 with respect to such wastes; or

2. if an approval has been granted in response to a petition filed under LAC 33:V.2271, or a determination has been made under LAC 33:V.2273, to allow injection of prohibited wastes with respect to those wastes and wells covered by the petition; or

3. if the waste is generated by a conditionally exempt small quantity generator, as defined in LAC 33:V.108.

D. Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under LAC 33:V.Chapter 22.Subchapter B are not prohibited from land disposal if the wastes:

1. are disposed into a nonhazardous injection well, defined under LAC 43:XVII.203.C, and do not exhibit any prohibited characteristic of hazardous waste specified in LAC 33:V.Chapter 49 at the point of injection at the well head; or

2. do not exhibit any prohibited characteristics of hazardous waste specified in LAC 33:V.4903 at the point of injection at the well head and are disposed into a hazardous injection well, defined under LAC 43:XVII.203.C, that receives only nonprohibited hazardous wastes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1800 (October 1999), LR 27:712 (May 2001).

## §2251. Dilution Prohibited as a Substitute for Treatment

A. The prohibition of LAC 33:V.2207 shall apply to owners or operators of Class I hazardous waste injection wells.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996).

## §2253. Procedures for Case-by-Case Extensions to an Effective Date

A. The owner or operator of a Class I hazardous waste injection well may submit an application to the Office of Environmental Services for an extension of the effective date of any applicable prohibition established under LAC 33:V.Chapter 22.Subchapter A according to the procedures of LAC 33:V.2239.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2479 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2460 (October 2005), LR 33:2110 (October 2007).

## §2255. Waste Analysis

A. Generators of hazardous wastes that are disposed into Class I injection wells, under LAC 33:V.2271, must comply with the applicable requirements of LAC 33:V.2245. Owners or operators of Class I hazardous waste injection wells must comply with the applicable requirements of LAC 33:V.2247.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1800 (October 1999).

## §2257. Waste-Specific Prohibitions—Solvent Wastes

A. Effective August 8, 1988, the spent solvent wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers F001, F002, F003, F004, and F005 are prohibited from underground injection unless the solvent waste is a solvent-water mixture or solvent-containing sludge containing less than 1 percent total F001-F005 solvent constituents listed in LAC 33:V.2257, Table A.

B. Effective August 8, 1990, all spent F001-F005 solvent wastes containing less than 1 percent total F001-F005 solvent constituents listed in LAC 33:V.2257, Table A are prohibited from injection.

C. Effective July 20, 1991, all spent F002 and F005 wastes containing solvent constituents listed in

LAC 33:V.2257, Table B are prohibited from underground injection.

D. The requirements of LAC 33:V.2257.A-C do not apply if:

1. the wastes meet or are treated to meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A; or

2. an approval has been granted in response to a petition under LAC 33:V.2271, or a determination made under LAC:V.2273; or

3. during the period of extension of the applicable effective date, if an extension has been granted under LAC 33:V.2253.

| Table A | |
|---|---|
| Acetone | Methylene chloride |
| N-Butyl alcohol | Methylene chloride (from the pharmaceutical industry) |
| Carbon disulfide | Methyl ethyl ketone |
| Carbon tetrachloride | Methyl isobutyl ketone |
| Chlorobenzene | Nitrobenzene |
| Cresols and Cresylic acid | Pyridine |
| Cyclohexanone | Tetrachloroethylene |
| 1,2-Dichlorobenzene | Toluene |
| Ethyl acetate | 1, 1, 1-Trichloroethane |
| Ethyl benzene | 1, 2, 2-Trichloro-1, 2, 2-trifluoroethane |
| Ethyl Ether | Trichloroethylene |
| Isobutanol | Trichloroflurometh ane |
| Methanol | Xylene |

| Table B | |
|---|---|
| Benzene | 2-Nitropropane |
| 2-Ethoxyethanol | 1, 1, 2-Trichloroethane |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1800 (October 1999).

## §2259. Waste-Specific Prohibitions—Dioxin-Containing Wastes

A. Effective August 8, 1988, the dioxin-containing wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, F027, and F028 are prohibited from underground injection.

B. The requirements of LAC 33:V.2259.A do not apply if:

1. the wastes meet or are treated to meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A;

2. an approval has been granted in response to a petition under LAC 33:V.2271, or a determination made under LAC 33:V.2273; or

3. during the period of extension of the applicable effective date, if an extension has been granted under LAC 33:V.2253.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1801 (October 1999).

## §2261. Waste-Specific Prohibitions—California List Wastes

A. Effective August 8, 1988, liquid hazardous wastes listed in LAC 33:V.2261.B containing polychlorinated biphenyls at concentrations greater than or equal to 50 ppm or halogenated organic compounds at concentrations greater than or equal to 10,000 mg/kg are prohibited from underground injection.

B. Effective August 8, 1990, the following hazardous wastes are prohibited from underground injection:

1. liquid hazardous wastes, including free liquids associated with any solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/L; and

2. liquid hazardous wastes, including free liquids associated with any solid or sludge, containing the following metals (or elements) or compounds of these metals (or elements) at concentrations greater than or equal to those specified below:

| | |
|---|---|
| Arsenic and/or compounds (as As) | 500 mg/L |
| Cadmium and/or compounds (as Cd) | 100 mg/L |
| Chromium (VI) and/or compounds (as Cr VI) | 500 mg/L |
| Lead and/or compounds (as Pb) | 500 mg/L |
| Mercury and/or compounds (as Hg) | 20 mg/L |
| Nickel and/or compounds (as Ni) | 134 mg/L |
| Selenium and/or compounds (as Se) | 100 mg/L |
| Thallium and/or compounds (as Tl) | 130 mg/L |

3. liquid hazardous waste having a pH less than or equal to 2.0; and

4. hazardous wastes containing halogenated organic compounds in total concentration less than 10,000 mg/kg but greater than or equal to 1,000 mg/kg.

C. The requirements of LAC 33:V.2261.A and B do not apply if:

1. the wastes meet or are treated to meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A;

2. an approval has been granted in response to a petition under LAC 33:V.2271, or a determination made under LAC 33:V.2273; or

3. during the period of extension of the applicable effective date, if an extension has been granted under LAC 33:V.2253.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1801 (October 1999).

## §2263. Waste-Specific Prohibitions—First Third Wastes

A. Effective January 1, 1991, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers F006, F008, F009, F019, K001, K004, K008, K015, K016 (at concentrations greater than or equal to 1 percent), K017, K018, K019, K020, K021 (nonwastewaters generated by the process described in the waste listing description and disposed of after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes), K021 (wastewaters), K022, K024, K030, K031, K035, K036 (nonwastewaters generated by the process described in the waste listing description and disposed of after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes), K037, K044, K045, nonexplosive K046 (nonwastewaters), K046 (reactive nonwastewaters and all wastewaters), K047, K048, K049, K050, K051, K052, K060 (nonwastewaters generated by the process described in the waste listing description and disposed of after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes), K060 (wastewaters), K061, non-$CaSO_4$ K069 (nonwastewaters generated by the process described in the waste listing description and disposed of after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes), K069 ($CaSO_4$ nonwastewaters and all wastewaters), K071, K073, K083, K084, K085, K086, K087, K099, K101 (high arsenic nonwastewaters), K102 (high arsenic nonwastewaters), K103, K106, P001, P004, P005, P010, P011, P012, P015, P016, P018, P020, P030, P036, P037, P039, P041, P048, P050, P058, P059, P063, P068, P069, P070, P071, P081, P082, P084, P087, P089, P092, P094, P097, P102, P105, P108, P110, P115, P120, P122, P123, U007, U009, U010, U012, U016, U018, U019, U022, U029, U031, U036, U037, U041, U043, U044, U046, U050, U051, U053, U061, U063, U064, U066, U067, U074, U077, U078, U086, U089, U103, U105, U108, U115, U122, U124, U129, U130, U133, U134, U137, U151, U154, U155, U157, U158, U159, U171, U177, U180, U185, U188, U192, U200, U209, U210, U211, U219, U220, U221, U223, U226, U227, U228, U237, U238, U248, and U249 are prohibited from underground injection.

B. Effective August 8, 1990, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers K062 and K104 are prohibited from underground injection.

C. Effective June 7, 1991, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers K016 (at concentrations less than 1 percent) are prohibited from underground injection.

D. Effective June 8, 1991, the waste specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Number F007 and the wastes specified in LAC 33:V.Chapter 49 as K011 (nonwastewaters) and K013 (nonwastewaters) are prohibited from underground injection.

E. Effective May 8, 1992, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers K011 (wastewaters), K013(wastewaters), and K014 are prohibited from underground injection.

F. The requirements of LAC 33:V.2263.A-E do not apply if:

1. the wastes meet or are treated to meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A;

2. an approval has been granted in response to a petition under LAC 33:V.2271, or a determination made under LAC 33:V. 2273; or

3. during the period of extension of the applicable effective date, if an extension has been granted under LAC 33:V.2253.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1801 (October 1999).

## §2265. Waste-Specific Prohibitions—Second Third Wastes

A. Effective January 1, 1991, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers F010, F011, F012, F024, K009 (nonwastewaters), K010, K025 (nonwastewaters generated by the process described in the waste listing description and disposed of after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes), K025 (wastewaters), K027, K028, K029 (nonwastewaters), K038, K039, K040, K041, K042, K043, K095, K096, K097, K098, K105, K113, K114, K115, K116, P002, P003, P007, P008, P014, P026, P027, P029, P040, P043, P044, P049, P054, P057, P060, P062, P066, P067, P072, P074, P085, P098, P104, P106, P107, P111, P112, P113, P114, U002, U003, U005, U008, U011, U014, U015, U020, U021, U023, U025, U026, U028, U032, U035, U047, U049, U057, U058, U059, U060, U062, U070, U073, U080, U083, U092, U093, U094, U095, U097, U098, U099, U101, U106, U107, U109, U110, U111, U114, U116, U119, U127, U128, U131, U135, U138, U140, U142, U143, U144, U146, U147, U149, U150, U161, U162, U163, U164, U165, U168, U169, U170, U172, U173, U174, U176, U178, U179, U189, U193, U196, U203, U205, U206, U208, U213, U214, U215, U216, U217, U218, U235, U239, and U244 are prohibited from underground injection.

B. Effective June 8, 1991, the waste specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Number K009 (wastewaters) is prohibited from underground injection.

C. The requirements of LAC 33:V.2265.A and B do not apply if:

1. the wastes meet or are treated to meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A;

2. an approval has been granted in response to a petition under LAC 33:V.2271, or a determination made under LAC 33:V.2273; or

3. during the period of extension of the applicable effective date, if an extension has been granted under LAC 33:V.2253.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1801 (October 1999).

## §2267. Waste-Specific Prohibitions—Third Third Wastes

A. Effective January 1, 1991, the wastes specified in LAC 33:V.Chapter 49 as F039 (wastewaters), K002, K003, K005, K006, K007, K026, K032, K033, K034, K036 (wastewaters), K093, K094, K100 (wastewaters), K100 (generated by the process described in the waste listing description and disposed of after August 17, 1989, and not generated in the course of treating wastewater forms of these wastes), P006, P009, P013, P017, P022, P023, P024, P028, P031, P033, P034, P038 (wastewaters), P042, P045, P046, P047, P051, P056, P064, P065 (wastewaters), P073, P075, P076, P077, P078, P088, P093, P095, P096, P099, P101, P103, P116, P118, P119, U001, U004, U006, U017, U024, U027, U030, U033, U034, U038, U039, U042, U045, U048, U052, U055, U056, U068, U071, U072, U075, U076, U079, U081, U082, U084, U085, U087, U088, U090, U091, U096, U102, U112, U113, U117, U118, U120, U121, U123, U125, U126, U132, U136, U141, U145, U148, U152, U153, U156, U160, U166, U167, U181, U182, U183, U184, U186, U187, U190, U191, U194, U197, U201, U202, U204, U207, U222, U225, U234, U236, U240, U243, U246, and U247 and the following wastes identified as hazardous based on a characteristic alone designated as D001, D004 (wastewaters), D005, D006, D008 (except for lead materials stored before secondary smelting), D009 (wastewaters), D010, D011, D012, D013, D014, D015, D016, and D017 and newly listed F025 are prohibited from underground injection.

B. Effective January 1, 1991, mixed radioactive/hazardous wastes specified in LAC 33:V.2215, 2217, or 2219 that are radioactive and hazardous wastes are prohibited from underground injection. This effective date does not apply to the wastes listed in LAC 33:V.2261 that were prohibited from underground injection on August 8, 1990.

C. Effective May 8, 1992, the wastes specified in LAC 33:V.Chapter 49 as EPA Hazardous Waste Numbers F039 (nonwastewaters), P038 (nonwastewaters), P065 (nonwastewaters), and the wastes identified as hazardous based on a characteristic alone, designated as D002 (wastewaters and nonwastewaters), D003 (wastewaters and nonwastewaters), D004 (nonwastewaters), D007 (wastewaters and nonwastewaters), D008 (lead materials stored before secondary smelting), and D009 (nonwastewaters) are prohibited from underground injection. These effective dates do not apply to the wastes listed in LAC 33:V.2261 that were prohibited from underground injection on August 8, 1990.

D. The requirements of LAC 33:V.2267.A-C do not apply if:

1. the wastes meet or are treated to meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A;

2. an approval has been granted in response to a petition under LAC 33:V.2271, or a determination made under LAC 33:V.2273; or

3. during the period of extension of the applicable effective date, if an extension has been granted under LAC 33:V.2253.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1801 (October 1999).

## §2269. Waste-Specific Prohibitions—Newly Listed Wastes

A. Effective September 20, 1995, the wastes specified as EPA Hazardous Waste Numbers F037, F038, K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132, K136, K141, K142, K143, K144, K145, K147, K148, K149, K150, K151, U328, U353, and U359 are prohibited from underground injection.

B. Effective September 19, 1995, the wastes specified as D001 (High TOC Subcategory as specified at LAC 33:V.2299.Appendix, Table 2) and in LAC 33:V.4903.E as EPA Hazardous Waste Numbers D012, D013, D014, D015, D016 and D017 are prohibited from underground injection.

C. The requirements of LAC 33:V.2269.A do not apply if:

1. the wastes meet or are treated to meet the applicable treatment standards specified in LAC 33:V.Chapter 22.Subchapter A;

2. an exemption or an approval has been granted in response to a petition under LAC 33:V.2271, or a determination made under LAC 33:V.2273; or

3. during the period of extension of the applicable effective date, if an extension has been granted under LAC 33:V.2253.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1801 (October 1999).

## §2271. Exemptions to Allow Land Disposal of a Prohibited Waste by Deep Well Injections

A. Any person seeking an exemption to allow land disposal by deep well injection of a prohibited hazardous waste in a particular injection well or wells must submit a petition to the Office of Environmental Services that does the following.

1. The petition must show that no other economically and environmentally reasonable alternative to disposal into an injection well is available. No exemption shall be granted to a generator for the land disposal of a waste stream if the waste stream can reasonably be eliminated or significantly reduced through waste reduction.

2. The petition must demonstrate to a reasonable degree of certainty that the waste shall be permanently confined as required by R.S. 30:2193(A) and 2193(E)(2)(d) and for the purposes of this Section, *permanent confinement* means that there will be no migration of hazardous constituents from the injection zone for as long as the wastes remain hazardous. Migration prohibited by this Section includes migration into the air, land or waters of the state where a discharge is not permitted.

B. A petition submitted pursuant to this Section must apply to land disposal of the specific prohibited waste into a specific injection well or wells described in the showing and demonstration and will not apply to any other prohibited waste at that injection well or wells or to that specific prohibited waste at any other injection well.

C. To comply with Paragraph A.1 of this Section, the petitioner must show the following.

1. The petitioner must show that he or she has made a good-faith effort, using economically and technically feasible and environmentally sound methods, to provide for use, reuse, reclamation, or other recycling of waste in a manner other than for a use constituting disposal.

2. For each waste stream, the petitioner must show that he or she has a program or plan in effect to reduce the volume and toxicity of the waste he or she generates and that he or she has sought out the best technology available to reduce the toxicity, corrosiveness, virulent, or infectious character, or volume of the waste and that the waste cannot be further reduced through production modifications, nor can the waste or specific constituents of the waste be reclaimed or reused. The plan shall include:

a. a schedule of implementation and anticipated reductions in quantity and toxicity;

b. a list of technical process reductions considered and those rejected and the reasons for the rejections;

c. an analysis of the impact of the reduction program or plan on all operations of the facility affecting the environment, including air and water discharges; and

d. each waste reduction program or plan must be certified by a Louisiana licensed professional engineer (PE).

3. The petitioner must sign and present to the administrative authority the following certification.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this waste reduction plan and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

4. The petitioner must submit a report describing in detail the efforts undertaken since 1984 to reduce the volume and toxicity of waste generated. The report shall provide data indicating the change in volume and toxicity of waste actually achieved during each year in comparison to previous years, to the extent that such information is available. The report shall also document, for each hazardous waste stream proposed for disposal in a land disposal unit, a Waste Reduction Analysis (WRA) showing that the petitioner has considered the economic and technical feasibility of alternative disposal methods in the following order: reduction, recycling, treatment, and disposal. The WRA must include:

a. an analysis of alternatives considered;

b. the costs of alternatives considered;

c. an assessment of the impact on other environmental programs of the facility, including impacts on air and water discharges; and

d. a description of the availability of alternate capacity for use of alternative technologies.

D. The demonstration required in LAC 33:V.2271.A.2 must include sufficient information to assure the administrative authority of the following.

1. The hydrogeological and geochemical conditions at the sites and the physiochemical nature of the waste stream(s) are such that one of the following reliable predictions can be made.

a. Fluid movement conditions are such that the injected fluids will not migrate within 10,000 years, either:

i. vertically upward out of the injection zone; or

ii. laterally within the injection zone, to a point of discharge or interface with an underground source of drinking water (USDW).

b. If the injected fluids do migrate out of the injection zone or to a point of discharge or interface with a USDW within 10,000 years, the fluid will no longer be hazardous because of attenuation, transformation, or immobilization of hazardous constituents within the injection zone by hydrolysis, chemical interactions, or other means.

2. Any migration due to diffusion shall be accounted for in the demonstration required under Subparagraph D.1.a of this Section.

3. For each well the petitioner has done the following.

a. The petitioner has demonstrated that the injection well's area of review includes at least the 2-mile radius around the bore hole. The administrative authority may specify a larger area of review on the basis of the calculated cone of influence around the well.

b. Using a protocol acceptable to the administrative authority, the petitioner has located, identified, and ascertained the conditions of all wells within the injection well's area of review (as specified in Subparagraph D.2.a of this Section) that penetrate the injection zone or the confining zone.

c. The petitioner has submitted a corrective action plan that meets the substantive requirements of Subsection V of this Section; its implementation shall become a condition of petition approval.

d. The petitioner has submitted the results of pressure and radioactive tracer tests performed within one year prior to submission of the petition that may demonstrate the mechanical integrity of the well's long string casing, injection tube, annular seal, and bottom hole cement. In cases where the petition has not been approved or denied within one year after the initial demonstration of mechanical integrity, the administrative authority may require the owner or operator to perform the tests again and submit the results of the new tests.

E. A demonstration under LAC 33:V.2271.D.1.a shall identify the strata within the injection zone which will confine fluid movement above the injection interval and include a showing that this strata is free of known transmissive faults or fractures and that there is a confining zone above the injection zone.

F. A demonstration under LAC 33:V.2271.D.1.b shall identify the strata within the injection zone where waste transformation will be accomplished and include a showing that this strata is free of known transmissive faults or fractures and that there is a confining zone above the injection zone.

G. A demonstration may include information that:

1. treatment methods, the implementation of which shall become a condition of approval, will be used to reduce the toxicity or mobility of the wastes; or

2. a monitoring plan, the implementation of which shall become a condition of petition approval, will be used to enhance confidence in one or more aspects of the demonstration.

H. Any person who has been granted an exemption pursuant to this Section may submit a petition to the Office of Environmental Services for reissuance of the exemption to include an additional prohibited waste or wastes or to modify any conditions placed on the exemption by the administrative authority. The administrative authority may reissue the exemption if the petitioner complies with the requirements of Subsections A-F of this Section.

I. Any person who has been granted an exemption pursuant to this Section may submit a petition to the Office of Environmental Services to modify an exemption to include an additional nonprohibited hazardous waste or wastes. The administrative authority may grant the modification if he or she determines, to a reasonable degree of certainty, that the additional waste or wastes will behave hydraulically and chemically in a manner similar to previously included wastes and that it will not interfere with the containment capability of the injection zone.

J. Information submitted in support of the exemption petition must meet the following criteria.

1. All waste analysis and any new testing performed by the petitioner should be accurate and reproducible and performed in accordance with quality assurance standards.

2. Estimation techniques shall be appropriate, and EPA-certified test protocols shall be used when available and appropriate.

3. Predictive models shall have been verified and validated; shall be appropriate for the specific site, waste streams, and injection conditions of the operation; and shall be calibrated for existing sites where sufficient data are available.

4. An approved quality assurance and quality control plan shall address all aspects of the demonstration.

5. Reasonably conservative values shall be used whenever values taken from the literature or estimated on the basis of known information are used instead of site-specific measurements.

6. An analysis shall be performed to identify and assess aspects of the demonstration that contribute significantly to uncertainty. The petitioner shall conduct a sensitivity analysis to determine the extent to which significant uncertainty may affect the demonstration. The demonstration shall then be based on conservative assumptions identified in the analysis.

K. Any petitioner under LAC 33:V.2271.D.1.a shall provide sufficient site-specific information to support the demonstration, such as:

1. thickness, porosity, permeability, and extent of the various strata in the injection zone;

2. thickness, porosity, permeability, extent, and continuity of the confining zone;

3. hydraulic gradient in the injection zone;

4. hydrostatic pressure in the injection zone; and

5. geochemical conditions of the site.

L. In addition to the information in LAC 33:V.2271.K, any petitioner under LAC 33:V.2271.D.1.b shall provide sufficient waste-specific information to ensure reasonably reliable predictions about the waste transformation. The petitioner shall provide the information necessary to support the demonstration, such as:

1. a description of the chemical processes or other means that will lead to waste transformation; and

2. results of laboratory experiments verifying the waste transformation.

M. Any petition submitted to the administrative authority pursuant to this Section shall include the following components:

1. an identification of the specific waste or wastes and the specific injection well or wells for which the demonstration will be made;

2. a waste analysis to describe fully the chemical and physical characteristics of the subject wastes;

3. such additional information as is required by the administrative authority to support the petition under this Section; and

4. this statement signed by the petitioner or a duly authorized representative:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted for this petition and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

N. Ambient Monitoring

1. Based on a site-specific assessment of the potential for fluid movement from the well or injection zone, and on the potential value of monitoring wells to detect such movement, the administrative authority shall require the owner or operator to develop a monitoring program. At a minimum, the administrative authority shall require annual monitoring of the pressure build-up in the injection zone, including, at a minimum, a shutdown of the well for a time sufficient to conduct a valid observation of the pressure fall off curve.

2. The owner or operator shall include all of the following requirements in his or her monitoring program.

a. Continuous monitoring for pressure changes in the first aquifer overlying the confining zone shall be addressed. The owner or operator shall, on a quarterly basis, sample the aquifer and analyze for constituents specified by the administrative authority.

b. The use of indirect, geophysical techniques shall be required to determine the position of the waste front, the water quality in a formation designated by the administrative authority, or to provide other site-specific data.

c. Periodic monitoring of the groundwater quality in the first aquifer overlying the injection zone shall be required.

d. Periodic monitoring of the groundwater quality in the lowermost USDW shall be required.

e. Additional monitoring may be necessary to determine whether fluids are moving into or between USDWs.

3. The administrative authority may exempt the owner or operator from any requirements in Paragraph N.2 of this Section which he or she deems to be unnecessary or not feasible, or which pose undue risks.

O. The administrative authority may require seismicity monitoring when he or she has reason to believe that the injection activity could cause seismic disturbances.

P. The administrative authority shall provide public notice and an opportunity for public comment in accordance with the procedures in LAC 33:V.Chapter 7.Subchapter C, and LAC 33:V.2243, of the intent to approve or deny a petition. The administrative authority shall provide public notice of the final decision on a petition.

Q. If an exemption is granted it will apply only to the underground injection of the specific prohibited waste or wastes identified in the petition into a Class I hazardous waste injection well or wells specifically identified in the petition unless the exemption is modified or reissued pursuant to LAC 33:V.2271.H or I.

R. Whenever the administrative authority determines that the basis for approval of a petition may no longer be valid, he or she shall require a new demonstration in accordance with this Section.

S. Termination of an Approved Petition

1. The administrative authority may terminate an exemption granted under this Section for the following causes:

a. noncompliance by the petitioners with any condition of the exemption;

b. the petitioner's failure in the petition or during the review and approval to disclose fully all relevant facts, or the petitioner's misrepresentation of any relevant facts at any time; or

c. a determination that new information shows that the basis for approval of the petition is no longer valid;

d. should a petition be terminated pursuant to this Section for the reason that it has been determined that a technologically and economically feasible alternative to underground injection exists, the administrative authority may provide for a compliance schedule authorizing continued injection for the amount of time reasonably necessary to construct and/or implement such alternative.

2. The administrative authority shall terminate an exemption granted under this Section for the following causes:

a. the petitioner's willful withholding during the review and approval of the petition of facts directly and materially relevant to the administrative authority's decision on the petition;

b. a determination that there has been migration from the injection zone or the well that is not in accordance with the terms of the exemption, except that the administrative authority may at his or her discretion decide not to terminate where:

i. the migration resulted from a mechanical failure of the well that can be corrected promptly through a repair to the injection well itself or from an undetected well or conduit that can be plugged promptly; and

ii. the requirements of LAC 33:V.2271.V are satisfied.

3. The administrative authority shall follow the procedures in LAC 33:V.323 in terminating any exemption under this Section.

T. Whenever the owner or operator obtains evidence that injected wastes may have been released into an unauthorized zone, he or she must do the following.

1. The owner or operator shall immediately cease injection of waste fluids, and:

a. notify the Office of Environmental Compliance in the manner provided in LAC 33:I.3923 within 24 hours of obtaining such evidence;

b. take all necessary steps to identify and characterize the extent of any release;

c. comply with any remediation plan specified by the administrative authority;

d. implement any remediation plan approved by the administrative authority; and

e. where such release is into a USDW currently serving as a water supply, place a notice in a newspaper of general circulation.

2. The administrative authority may allow the operator to resume injection prior to completing cleanup action if the owner or operator demonstrates that the injection operation will not endanger strata containing waters of the state where a discharge is not permitted.

U. Term of the Exemption

1. The term of an exemption granted under this Section shall be a maximum of five years from the date of approval.

2. The administrative authority may re-issue an exemption every five years after the initial petition approval, based on the submittal and review of all demonstrations stipulated in LAC 33:V.2271.C and Z.

3. At least once every 10 years, the administrative authority will require re-issuance of the exemptions based on a full technical review of each petition. The department will coordinate the timing of the review with the Department of Natural Resources (DNR) so that the petition review will coincide with DNR's UIC re-permitting review process.

4. The term of the exemption granted shall expire under the following conditions:

a. upon the revocation or denial of a Department of Natural Resources final permit; or

b. upon the termination of an EPA exemption; or

c. when the volume limit of waste to be land disposed during the term of petition is reached.

5. The permittee shall submit a request to the Office of Environmental Services for reissuance of the exemption at least 180 days prior to the end of the term. If the applicant submits a timely and technically complete application, and the administrative authority, through no fault of the applicant, fails to act on the application for reissuance on or before the expiration date of the existing exemption, the permittee may, with the written approval of the administrative authority, continue to operate under the terms and conditions of the existing exemption which shall remain in effect until final action on the application is taken by the administrative authority.

V. Corrective Action for Wells in the Area of Review

1. The petitioner shall submit a plan to the Office of Environmental Assessment outlining the protocol used to:

a. identify all wells penetrating the confining zone or injection zone within the area of review; and

b. determine whether wells are adequately completed or plugged.

2. The petitioner shall identify the location of all wells within the area of review that penetrate the injection zone or the confining zone and shall submit the following information to the administrative authority:

a. a tabulation of all wells within the area of review that penetrate the injection zone or the confining zone; and

b. a description of each well or type of well and any records of its plugging or completion.

3. For wells that the administrative authority determines are improperly plugged, completed, or abandoned, or for which plugging or completion information is unavailable, the applicant shall also submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluids into strata containing waters of the state where a discharge is not permitted. Where the plan is adequate, the administrative authority shall incorporate it into the exemption as a condition. Where the administrative authority's review indicates that the petitioner's plan is inadequate (based at a minimum on the factors in Paragraph 5 of this Subsection), the administrative authority shall:

a. require the applicant to revise the plan;

b. prescribe a plan for corrective action as a condition of the exemption; or

c. deny the exemption.

4. Requirements

a. For existing hazardous waste injection wells, any exemption issued requiring corrective action other than pressure limitations shall include a compliance schedule

requiring any corrective action accepted or prescribed under Paragraph V.3 of this Section. Any such compliance schedule shall provide for compliance no later than two years after issuance of the exemption and shall require observance of appropriate pressure limitations under Subparagraph V.4.c of this Section until all other corrective action measures have been implemented.

b. For new hazardous waste injection wells, no owner or operator may begin injection until all corrective actions required under this Section have been taken.

c. The administrative authority may require pressure limitations in lieu of plugging. If pressure limitations are used in lieu of plugging, the administrative authority shall require as a condition of the exemption that injection pressure be so limited that pressure in the injection zone at the site of any improperly completed or abandoned well within the area of review would not be sufficient to drive fluids into strata containing waters of the state where a discharge is not permitted.

5. In determining the adequacy of corrective action proposed by the applicant under Subsection V of this Section and in determining the additional steps needed to prevent fluid movement into strata containing waters of the state where a discharge is not permitted, the administrative authority shall consider the following criteria and factors:

a. nature and volume of injected fluid;

b. nature of native fluids or by-products of injection;

c. geology;

d. hydrology;

e. history of the injection operations;

f. completion and plugging procedures in effect at the time the well was closed;

g. closure procedures in effect at the time the well was closed;

h. hydraulic connections with USDWs;

i. reliability of the procedures used to identify abandoned wells; and

j. any other factors which might affect the movement of fluids into strata containing waters of the state where a discharge is not permitted.

W. Emergency Variance

1. During the petition review process, the applicant is required to comply with all prohibitions on land disposal under this Chapter, unless a petition for an exemption has been approved by the EPA, and the administrative authority grants an emergency variance. If EPA has approved the exemption, the land disposal of the waste may continue for up to one year under an emergency variance issued by the administrative authority until the administrative authority makes a decision on the petition for exemption. The administrative authority may extend an emergency variance beyond one year; however, such approval is solely based on the agency's inability to review the petition during the first one-year variance. The administrative authority shall either grant or deny the petition within the extended emergency variance period, no later than June 1, 1995, for petitions submitted prior to June 1, 1992. After the administrative authority issues a decision on the exemption, the waste may be land disposed only in accordance with the provision of the exemption.

2. If the exemption decision is vacated and/or remanded by a court on judicial review, the emergency variance shall be automatically reinstated and shall remain in effect until final action on the remand is taken by the administrative authority and any subsequent appeal process has been completed.

X. The petition granted by the administrative authority does not relieve the petitioner from compliance with all other applicable regulations.

Y. Liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm are not eligible for an exemption under this Section.

Z. As a condition of the exemption, the petitioner must submit a report to the Office of Environmental Services by March 1 of each calendar year during the term of the exemption, describing in detail the efforts undertaken during the preceding calendar year to reduce the volume and toxicity of the waste generated. The report shall provide data indicating the change in volume and toxicity of waste actually achieved during the year in comparison to previous years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:22 (January 1996), amended LR 23:299 (March 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2479 (November 2000), LR 30:1674 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2460 (October 2005), LR 33:2110 (October 2007).

## §2273. Petition for Determinations Concerning No Alternatives to Land Disposal of a Prohibited Waste by Deep Well Injection

A. To the extent that the administrative authority has previously determined, through the issuance of an exemption under LAC 33:V.2271 or otherwise under LAC 33:V.Chapter 22, that no economically and environmentally reasonable alternatives to injection exist to the land disposal of a particular hazardous waste by injection well(s), such determination shall satisfy the requirement of and be deemed the determination by the administrative authority for purposes of R.S. 30:2193(G)(3). A formal petition in accordance with Subsection C of this Section may, but need not, be filed by the owner or operator of the injection well. The land disposal of the hazardous waste subject to the exemption shall be deemed to be excluded from the requirements of R.S. 30:2193(A-F), LAC 33:V.2205-2271,

and any conditions of such exemption. The provisions set forth in Subsections D-L of this Section shall be applicable to such determination.

B. This Section is intended to provide the requirements to implement the exclusion provision set forth in R.S. 30:2193(G)(1)-(3). The implementation of this exclusion requires a determination from the administrative authority that there are no economically reasonable and environmentally sound alternatives to the land disposal of a hazardous waste by injection well. The requirements of R.S. 30:2193(A-F) and LAC 33:V.2205-2271 shall not apply to the land disposal of a hazardous waste by injection well excluded under R.S. 30:2193(G)(1)-(3).

C. Any person seeking a determination of no alternatives must submit a petition to the Office of Environmental Services that does the following:

1. the petition must show that such land disposal has been exempted by the United States Environmental Protection Agency (EPA) from land disposal prohibitions contained in the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.;

2. the petition must show that a permit has been issued for such injection well or wells by the Louisiana Department of Natural Resources, Office of Conservation, in accordance with Title 30. Subtitle I. Chapter 1 of the Louisiana Revised Statutes of 1950 and the Safe Drinking Water Act, 42 U.S.C. 300(f) et seq.;

3. the petition must show that for the injected hazardous waste there are no economically reasonable and environmentally sound alternatives to disposal into an injection well. The petition submitted in accordance with this Subsection must include:

a. an analysis of alternatives considered for technical feasibility;

b. an analysis of technically feasible alternatives, if any, showing whether any are economically reasonable;

c. an assessment of the impact of those economically reasonable alternatives considered, if any, on other environmental programs and permits of the facility, including impacts on air and water discharges; and

d. where applicable and appropriate, a description of the available capacity of economically reasonable and environmentally sound alternative technologies; and

4. the petition must include:

a. a waste characterization that describes the chemical and physical characteristics of the wastes being or to be injected;

b. a copy of the decision by the EPA exempting the land disposal from the prohibitions contained in the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., if issued;

c. a copy of the permit issued for such injection well or wells by the Louisiana Department of Natural Resources, Office of Conservation, in accordance with Title 30. Subtitle I. Chapter 1 of the Louisiana Revised Statutes of 1950 and the Safe Drinking Water Act, 42 U.S.C. 300(f), et seq., if issued;

d. such additional information as is required by the administrative authority to support the petition under this Section; and

e. this statement signed by a duly authorized representative:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted for this petition and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

D. Following a determination under this Section, the owner or operator of the injection well must submit a report to the administrative authority, by March 1 of each calendar year during the term of the determination, describing in detail the efforts undertaken during the preceding calendar year to identify any economically reasonable and environmentally sound alternatives to disposal into an injection well for any hazardous waste injected on site.

E. Except as otherwise provided in this Section, if a hazardous waste not subject to an existing determination is to be injected, a petition that addresses such hazardous waste must be submitted to the Office of Environmental Assessment and a determination of no alternatives be made prior to this waste being injected. The provisions contained in Subsection J of this Section, shall apply with respect to such hazardous waste.

1. If such hazardous waste is substantially similar in potential alternative technologies to a hazardous waste subject to an existing determination under this Section issued to the same owner or operator, a new petition is not necessary, and such hazardous waste shall be included within that determination upon the owner or operator providing notice to the administrative authority. The notice must include a brief showing that the alternatives determination for the existing hazardous waste is applicable to such hazardous waste.

2. If the administrative authority determines that the condition of Paragraph E.1 of this Section is not satisfied, the administrative authority shall require the owner or operator of the injection well to submit a petition under Subsection C of this Section that addresses such hazardous waste. In this circumstance such hazardous waste may be injected pending a final decision by the administrative authority on the petition.

F. If a new injection well(s) is to be used to inject a hazardous waste subject to an existing approved determination under this Section, a new petition is not necessary, provided the owner or operator submits a notice to the Office of Environmental Assessment. The notice shall include a copy of the EPA exemption approval for the new

well(s) and a copy of the permit issued by the Louisiana Department of Natural Resources, Office of Conservation for the new well(s).

G. The administrative authority shall provide public notice and an opportunity for public comment, in accordance with the procedures in LAC 33:V.2243, of the intent to approve or deny a petition for no-alternatives determination. The administrative authority shall provide public notice of the final decision on such a petition.

H. Whenever the administrative authority determines that the basis for a determination may no longer be valid, the administrative authority may require a new petition in accordance with this Section.

I. Termination of a No-Alternatives Determination

1. The administrative authority may terminate a determination granted under this Section for any of the following causes:

a. noncompliance by the facility with any condition of the determination;

b. the facility's failure in the petition or during the review and determination to disclose fully all relevant facts or the facility's misrepresentation of any relevant facts at any time;

c. a determination that new information shows the basis for a determination of the petition is no longer valid;

d. upon the denial or termination of a Louisiana Department of Natural Resources, Office of Conservation final permit; or

e. upon the denial or termination of an EPA exemption for injection.

2. Should a determination be terminated because an economically reasonable and environmentally sound alternative exists, the administrative authority shall issue a compliance schedule authorizing continued injection for the amount of time reasonably necessary to construct and/or implement such alternative.

3. If during the review and determination of the petition, the facility willfully withholds facts directly and materially relevant to the decision, the administrative authority may terminate the determination.

4. The administrative authority shall follow the procedures in LAC 33:V.323 in terminating any determination under this Section.

J. If a petition has been submitted in accordance with this Section and the EPA and the Louisiana Department of Natural Resources, Office of Conservation have approved the land disposal of prohibited waste by injection well, the land disposal of the waste by injection well may continue until the administrative authority makes a decision on the petition.

K. If a no-alternatives determination is vacated and/or remanded, the land disposal of the waste by injection well may continue until final action on the remand is taken by the administrative authority and all subsequent administrative and/or judicial appeal processes have been completed.

L. Term of the No-Alternatives Determination

1. The term of a determination granted under this Section shall be a maximum of 10 years from the date of the determination.

2. The petitioner shall submit a petition to the Office of Environmental Services for reissuance of a determination at least 180 days prior to the end of the term. If the petitioner submits a timely and technically complete petition and the administrative authority, through no fault of the petitioner, fails to act on the petition for reissuance on or before the expiration date of the existing determination, the petitioner may, with the written approval of the administrative authority, continue to operate under the terms and conditions of the existing determination, which shall remain in effect until final action on the petition is taken by the administrative authority and all subsequent administrative and/or judicial appeal processes have been completed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 25:1801 (October 1999), amended LR 26:2479 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2460 (October 2005), LR 33:2110 (October 2007).

## §2299. Appendix—Tables 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| D001[9] | Ignitable Characteristic Wastes, except for the LAC 33:V.4903.B.1 High TOC Subcategory. | NA | NA | DEACT and meet LAC 33:V.2233 standards[8]; RORGS; or CMBST | DEACT and meet LAC 33:V.2233 standards[8]; RORGS; or CMBST |
| | High TOC Ignitable Characteristic Liquids Subcategory based on LAC 33:V. 4903.B.1 - Greater than or equal to 10 percent total organic carbon.<br>[NOTE: This subcategory consists of nonwastewaters only.] | NA | NA | NA | RORGS; CMBST; or POLYM |
| D002[9] | Corrosive Characteristic Wastes | NA | NA | DEACT and meet LAC 33:V.2233 standards[8] | DEACT and meet LAC 33:V.2233 standards[8] |
| D002 | Radioactive high level wastes generated during the reprocessing of fuel rods.<br>[NOTE: This subcategory consists of nonwastewaters only.] | Corrosivity (pH) | NA | NA | HLVIT |
| D004 | | Arsenic | 7440-38-2 | NA | HLVIT |
| D005 | | Barium | 7440-39-3 | NA | HLVIT |
| D006 | | Cadmium | 7440-43-9 | NA | HLVIT |
| D007 | | Chromium (Total) | 7440-47-3 | NA | HLVIT |
| D008 | | Lead | 7439-92-1 | NA | HLVIT |
| D009 | | Mercury | 7439-97-6 | NA | HLVIT |
| D010 | | Selenium | 7782-49-2 | NA | HLVIT |
| D011 | | Silver | 7440-22-4 | NA | HLVIT |
| D003[9] | Reactive Sulfides Subcategory based on LAC 33:V.4903.D.5. | NA | NA | DEACT | DEACT |
| | Explosives Subcategory based on LAC 33:V.4903.D.6, 7, and 8. | NA | NA | DEACT and meet LAC 33:V.2233 standards[8] | DEACT and meet LAC 33:V.2233 standards[8] |
| | Unexploded ordnance and other explosive devices that have been the subject of emergency response. | NA | NA | DEACT | DEACT |
| | Other Reactives Subcategory based on LAC 33:V.4903.D.1. | NA | NA | DEACT and meet LAC 33:V.2233 standards[8] | DEACT and meet LAC 33:V.2233 standards[8] |
| | Water Reactive Subcategory based on LAC 33:V.4903.D.2., 3, and 4.<br>[NOTE: This subcategory consists of nonwastewaters only.] | NA | NA | NA | DEACT and meet LAC 33:V.2233 standards[8] |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Regulated Hazardous Constituent** | | **Wastewaters** | **Non-Wastewaters** |
| | | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| | Reactive Cyanides Subcategory based on LAC 33:V.4903.D.5. | Cyanides (Total)[7] | 57-12-5 | Reserved | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| D004[9] | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the toxicity characteristic leaching procedure (TCLP) in SW846. | Arsenic | 7440-38-2 | 1.4 and meet LAC 33:V.2233 standards[8] | 5.0 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| D005[9] | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the toxicity characteristic leaching procedure (TCLP) in SW846. | Barium | 7440-39-3 | 1.2 and meet LAC 33:V.2233 standards[8] | 21 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| D006[9] | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the toxicity characteristic leaching procedure (TCLP) in SW846 | Cadmium | 7440-43-9 | 0.69 and meet LAC 33:V.2233 standards[8] | 0.11 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| | Cadmium-Containing Batteries Subcategory<br>[NOTE: This subcategory consists of nonwastewaters only.] | Cadmium | 7440-43-9 | NA | RTHRM |
| | Radioactively contaminated cadmium-containing batteries<br>[NOTE: This subcategory consists of nonwastewaters only.] | Cadmium | 7440-43-9 | NA | Macroencapsulation, in accordance with LAC 33:V.2230 |
| D007[9] | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the toxicity characteristic leaching procedure (TCLP) in SW846. | Chromium (Total) | 7440-47-3 | 2.77 and meet LAC 33:V.2233 standards[8] | 0.60 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| D008[9] | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the toxicity characteristic leaching procedure (TCLP) in SW846. | Lead | 7439-92-1 | 0.69 and meet LAC 33:V.2233 standards[8] | 0.75 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| | Lead Acid Batteries Subcategory<br>[NOTE: This standard only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of LAC 33:V.Chapter 22 or exempted under other LAC 33:V.Subpart 1 regulations (see LAC 33:V.4145). This subcategory consists of nonwastewaters only.] | Lead | 7439-92-1 | NA | RLEAD |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | Radioactive Lead Solids Subcategory<br>[NOTE: These lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash.]<br>[NOTE: This subcategory consists of nonwastewaters only.] | Lead | 7439-92-1 | NA | MACRO |
| D009[9] | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues<br>(High Mercury-Organic Subcategory) | Mercury | 7439-97-6 | NA | IMERC; or RMERC |
| | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC<br>(High Mercury-Inorganic Subcategory) | Mercury | 7439-97-6 | NA | RMERC |
| | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain less than 260 mg/kg total mercury and that are residues from RMERC only<br>(Low Mercury Subcategory) | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| | All other nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain less than 260 mg/kg total mercury and that are not residues from RMERC<br>(Low Mercury Subcategory) | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP and meet LAC 33:V.2233 standards[8] |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Regulated Hazardous Constituent** | | **Wastewaters** | **Non-Wastewaters** |
| | | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| | All D009 wastewaters | Mercury | 7439-97-6 | 0.15 and meet LAC 33:V.2233 standards[8] | NA |
| | Elemental mercury contaminated with radioactive materials<br>[NOTE: This subcategory consists of nonwastewaters only.] | Mercury | 7439-97-6 | NA | AMLGM |
| | Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory<br>[NOTE: This subcategory consists of nonwastewaters only.] | Mercury | 7439-97-6 | NA | IMERC |
| | Radioactively contaminated mercury-containing batteries<br>[NOTE: This subcategory consists of nonwastewaters only.] | Mercury | 7439-97-6 | NA | Macroencapsulation, in accordance with LAC 33:V.2230 |
| D010[9] | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the toxicity characteristic leaching procedure (TCLP) in SW846 | Selenium | 7782-49-2 | 0.82 and meet LAC 33:V.2233 standards[8] | 5.7 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| D011[9] | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the toxicity characteristic leaching procedure (TCLP) in SW846 | Silver | 7440-22-4 | 0.43 and meet LAC 33:V.2233 standards[8] | 0.14 mg/L TCLP and meet LAC 33:V.2233 standards[8] |
| | Radioactively contaminated silver-containing batteries<br>[NOTE: This subcategory consists of nonwastewaters only.] | Silver | 7440-22-4 | NA | Macroencapsulation, in accordance with LAC 33:V.2230 |
| D012[9] | Wastes that are TC for Endrin based on the TCLP in SW846 Method 1311. | Endrin | 72-20-8 | BIODG; or CMBST | 0.13 and meet LAC 33:V.2233 standards[8] |
| | | Endrin aldehyde | 7421-93-4 | BIODG; or CMBST | 0.13 and meet LAC 33:V.2233 standards[8] |
| D013[9] | Wastes that are TC for Lindane based on the TCLP in SW846 Method 1311. | alpha-BHC | 319-84-6 | CARBN; or CMBST | 0.066 and meet LAC 33:V.2233 standards[8] |
| | | beta-BHC | 319-85-7 | CARBN; or CMBST | 0.066 and meet LAC 33:V.2233 standards[8] |
| | | delta-BHC | 319-86-8 | CARBN; or CMBST | 0.066 and meet LAC 33:V.2233 standards[8] |
| | | gamma-BHC (Lindane) | 58-89-9 | CARBN; or CMBST | 0.066 and meet LAC 33:V.2233 standards[8] |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| D014[9] | Wastes that are TC for Methoxychlor based on the TCLP in SW846 Method 1311. | Methoxychlor | 72-43-5 | WETOX; or CMBST | 0.18 and meet LAC 33:V.2233 standards[8] |
| D015[9] | Wastes that are TC for Toxaphene based on the TCLP in SW846 Method 1311. | Toxaphene | 8001-35-2 | BIODG; or CMBST | 2.6 and meet LAC 33:V.2233 standards[8] |
| D016[9] | Wastes that are TC for 2,4-D (2,4-Dichlorophenoxyacetic acid) based on the TCLP in SW846 Method 1311. | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | CHOXD, BIODG, or CMBST | 10 and meet LAC 33:V.2233 standards[8] |
| D017[9] | Wastes that are TC for 2,4,5-TP (Silvex) based on the TCLP in SW846 Method 1311. | 2,4,5-TP (Silvex) | 93-72-1 | CHOXD or CMBST | 7.9 and meet LAC 33:V.2233 standards[8] |
| D018[9] | Wastes that are TC for Benzene based on the TCLP in SW846 Method 1311 and that are managed in non-CWA/non-CWA equivalent/non-Class I SDWA systems only. | Benzene | 71-43-2 | 0.14 and meet LAC 33:V.2233 standards[8] | 10 and meet LAC 33:V.2233 standards[8] |
| D019[9] | Wastes that are TC for Carbon tetrachloride based on the TCLP in SW846 Method 1311. | Carbon tetrachloride | 56-23-5 | 0.057 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| D020[9] | Wastes that are TC for Chlordane based on the TCLP in SW846 Method 1311. | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 and meet LAC 33:V.2233 standards[8] | 0.26 and meet LAC 33:V.2233 standards[8] |
| D021[9] | Wastes that are TC for Chlorobenzene based on the TCLP in SW846 Method 1311. | Chlorobenzene | 108-90-7 | 0.057 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| D022[9] | Wastes that are TC for Chloroform based on the TCLP in SW846 Method 1311. | Chloroform | 67-66-3 | 0.046 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| D023[9] | Wastes that are TC for o-Cresol based on the TCLP in SW846 Method 1311. | o-Cresol | 95-48-7 | 0.11 and meet LAC 33:V.2233 standards[8] | 5.6 and meet LAC 33:V.2233 standards[8] |
| D024[9] | Wastes that are TC for m-Cresol based on the TCLP in SW846 Method 1311. | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 and meet LAC 33:V.2233 standards[8] | 5.6 and meet LAC 33:V.2233 standards[8] |
| D025[9] | Wastes that are TC for p-Cresol based on the TCLP in SW846 Method 1311. | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 and meet LAC 33:V.2233 standards[8] | 5.6 and meet LAC 33:V.2233 standards[8] |
| D026[9] | Wastes that are TC for Cresols (Total) based on the TCLP in SW846 Method 1311. | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 and meet LAC 33:V.2233 standards[8] | 11.2 and meet LAC 33:V.2233 standards[8] |
| D027[9] | Wastes that are TC for p-Dichlorobenzene based on the TCLP in SW846 Method 1311. | p-Dichlorobenzene (1,4-Dichlorobenzene) | 106-46-7 | 0.090 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Regulated Hazardous Constituent** | | **Wastewaters** | **Non-Wastewaters** |
| | | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| D028[9] | Wastes that are TC for 1,2-Dichloroethane based on the TCLP in SW846 Method 1311. | 1,2-Dichloroethane | 107-06-2 | 0.21 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| D029[9] | Wastes that are TC for 1,1-Dichloroethylene based on the TCLP in SW846 Method 1311. | 1,1-Dichloroethylene | 75-35-4 | 0.025 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| D030[9] | Wastes that are TC for 2,4-Dinitrotoluene based on the TCLP in SW846 Method 1311. | 2,4-Dinitrotoluene | 121-14-2 | 0.32 and meet LAC 33:V.2233 standards[8] | 140 and meet LAC 33:V.2233 standards[8] |
| D031[9] | Wastes that are TC for Heptachlor based on the TCLP in SW846 Method 1311. | Heptachlor | 76-44-8 | 0.0012 and meet LAC 33:V.2233 standards[8] | 0.066 and meet LAC 33:V.2233 standards[8] |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 and meet LAC 33:V.2233 standards[8] | 0.066 and meet LAC 33:V.2233 standards[8] |
| D032[9] | Wastes that are TC for Hexachlorobenzene based on the TCLP in SW846 Method 1311. | Hexachlorobenzene | 118-74-1 | 0.055 and meet LAC 33:V.2233 standards[8] | 10 and meet LAC 33:V.2233 standards[8] |
| D033[9] | Wastes that are TC for Hexachlorobutadiene based on the TCLP in SW846 Method 1311. | Hexachlorobutadiene | 87-68-3 | 0.055 and meet LAC 33:V.2233 standards[8] | 5.6 and meet LAC 33:V.2233 standards[8] |
| D034[9] | Wastes that are TC for Hexachloroethane based on the TCLP in SW846 Method 1311. | Hexachloroethane | 67-72-1 | 0.055 and meet LAC 33:V.2233 standards[8] | 30 and meet LAC 33:V.2233 standards[8] |
| D035[9] | Wastes that are TC for Methyl ethyl ketone based on the TCLP in SW846 Method 1311. | Methyl ethyl ketone | 78-93-3 | 0.28 and meet LAC 33:V.2233 standards[8] | 36 and meet LAC 33:V.2233 standards[8] |
| D036[9] | Wastes that are TC for Nitrobenzene based on the TCLP in SW846 Method 1311. | Nitrobenzene | 98-95-3 | 0.068 and meet LAC 33:V.2233 standards[8] | 14 and meet LAC 33:V.2233 standards[8] |
| D037[9] | Wastes that are TC for Pentachlorophenol based on the TCLP in SW846 Method 1311. | Pentachlorophenol | 87-86-5 | 0.089 and meet LAC 33:V.2233 standards[8] | 7.4 and meet LAC 33:V.2233 standards[8] |
| D038[9] | Wastes that are TC for Pyridine based on the TCLP in SW846 Method 1311. | Pyridine | 110-86-1 | 0.014 and meet LAC 33:V.2233 standards[8] | 16 and meet LAC 33:V.2233 standards[8] |
| D039[9] | Wastes that are TC for Tetrachloroethylene based on the TCLP in SW846 Method 1311. | Tetrachloroethylene | 127-18-4 | 0.056 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| D040[9] | Wastes that are TC for Trichloroethylene based on the TCLP in SW846 Method 1311. | Trichloroethylene | 79-01-6 | 0.054 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| D041[9] | Wastes that are TC for 2,4,5-Trichlorophenol based on the TCLP in SW846 Method 1311. | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 and meet LAC 33:V.2233 standards[8] | 7.4 and meet LAC 33:V.2233 standards[8] |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| D042[9] | Wastes that are TC for 2,4,6-Trichlorophenol based on the TCLP in SW846 Method 1311. | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 and meet LAC 33:V.2233 standards[8] | 7.4 and meet LAC 33:V.2233 standards[8] |
| D043[9] | Wastes that are TC for Vinyl chloride based on the TCLP in SW846 Method 1311. | Vinyl chloride | 75-01-4 | 0.27 and meet LAC 33:V.2233 standards[8] | 6.0 and meet LAC 33:V.2233 standards[8] |
| F001 F002 F003 F004 F005 | F001, F002, F003, F004 and/or F005 solvent wastes that contain any combination of one or more of the following spent solvents: acetone, benzene, n-butyl alcohol, carbon disulfide, carbon tetrachloride, chlorinated fluorocarbons, chlorobenzene, o-cresol, m-cresol, p-cresol, cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nitrobenzene, 2-nitropropane, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro- 1,2,2-trifluoroethane, trichloroethylene, trichloromonofluoromethane, and/or xylenes (except as specifically noted in other subcategories). See further details of these listings in LAC 33:V.4901.B, Table 1. | Acetone | 67-64-1 | 0.28 | 160 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol | 106-44-5 | 0.77 | 5.6 |
| | | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Ethyl ether | 60-29-7 | 0.12 | 160 |
| | | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | F003 and/or F005 solvent wastes that contain any combination of one or more of the following three solvents as the only listed F001-5 solvents: carbon disulfide, cyclohexanone, and/or methanol (see LAC 33:V.2223.F.) | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/L TCLP |
| | | Cyclohexanone | 108-94-1 | 0.36 | 0.75 mg/L TCLP |
| | | Methanol | 67-56-1 | 5.6 | 0.75 mg/L TCLP |
| | F005 solvent waste containing 2-Nitropropane as the only listed F001-5 solvent. | 2-Nitropropane | 79-46-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | F005 solvent waste containing 2-Ethoxyethanol as the only listed F001-5 solvent. | 2-Ethoxyethanol | 110-80-5 | BIODG; or CMBST | CMBST |
| F006 | Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F007 | Spent cyanide plating bath solutions from electroplating operations. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| | | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F010 | Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process. | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | NA |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F012 | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F019 | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | when such phosphating is an exclusive conversion coating process. | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| F020 F021 F022 F023 F026 | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use ( as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of intermediates used to produce its derivatives (i.e., F021); (3) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F022) and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenols, excluding wastes from equipment used only for the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F023); (2) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F026). | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| F024 | Process wastes, including but not limited to, distillation residues, heavy ends tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not | All F024 wastes | NA | CMBST | CMBST[11] |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | 0.28 |
| | | 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in LAC 33:V.4901.C or LAC 33:V.4901.B, Table 1.) | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| F025 | Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (F025 - Light Ends Subcategory) | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| | Spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (F025 – Spent Filters/Aids and Desiccants Subcategory) | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| F027 | Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.) | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| F028 | Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Wastes Nos. F020, F021, F023, F026, and F027. | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| F032 | Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with LAC 33:V.4901.B.3 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | 2-4 Dimethylphenol | 105-67-9 | 0.036 | 14 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Hexachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST[11] | 0.001, or CMBST[11] |
| | | Hexachlorodibenzofurans | NA | 0.000063, or CMBST[11] | 0.001, or CMBST[11] |
| | | Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST[11] | 0.001, or CMBST[11] |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Pentachlorodibenzofurans | NA | 0.000035, or CMBST[11] | 0.001, or CMBST[11] |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Tetrachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST[11] | 0.001, or CMBST[11] |
| | | Tetrachlorodibenzofurans | NA | 0.000063, or CMBST[11] | 0.001, or CMBST[11] |
| | | 2,3,4,6- Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | 2,4,6- Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| F034 | Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| F035 | Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| F037 | Petroleum refinery primary oil/water/solids separation sludge. Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from noncontact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in LAC 33:V.4901.B.2.b. (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under LAC 33:V.105.D.1.l, if those residuals are to be disposed. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under LAC 33:V.105.D.1.l, if those residuals are to be disposed. | Acenaphthene | 83-32-9 | 0.059 | NA |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| F038 | Petroleum refinery secondary | Benzene | 71-43-2 | 0.14 | 10 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | (emulsified) oil/water/solids separation sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air floatation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in storm water units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in LAC 33:V.4901.B.2.b. (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological units) and F037, K048, and K051 are not included in this listing. | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m- and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| F039 | Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under LAC 33:V.Subchapter A. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.) | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetonitrile | 75-05-8 | 5.6 | NA |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| | | Acrolein | 107-02-8 | 0.29 | NA |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Aldrin | 309-00-2 | 0.021 | 0.066 |
| | | 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | o-Anisidine (2-methoxyaniline) | 90-04-0 | 0.010 | 0.66 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Aramite | 140-57-8 | 0.36 | NA |
| | | alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| | | beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| | | delta-BHC | 319-86-8 | 0.023 | 0.066 |
| | | gamma-BHC | 58-89-9 | 0.0017 | 0.066 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Bromodichloromethane | 75-27-4 | 0.35 | 15 |
| | | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Butyl benzyl phthalate | 85-68-7 | 0.017 | 28 |
| | | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chlorobenzilate | 510-15-6 | 0.10 | NA |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | NA |
| | | Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| | | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| | | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| | | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| | | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | p-Cresidine | 120-71-8 | 0.010 | 0.66 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| | | Dibromomethane | 74-95-3 | 0.11 | 15 |
| | | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| | | p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| | | o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| | | p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Dibenz(a,e)pyrene | 192-65-4 | 0.061 | NA |
| | | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| | | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| | | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| | | Dieldrin | 60-57-1 | 0.017 | 0.13 |
| | | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| | | 2,4-Dimethylaniline | 95-68-1 | 0.010 | 0.66 |
| | | 2-4-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| | | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| | | 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| | | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| | | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| | | 1,4-Dioxane | 123-91-1 | 12 | 170 |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | NA |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | NA |
| | | 1,2-Diphenylhydrazine | 122-66-7 | 0.087 | NA |
| | | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| | | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| | | Endrin | 72-20-8 | 0.0028 | 0.13 |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Ethyl ether | 60-29-7 | 0.12 | 160 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| | | Ethylene oxide | 75-21-8 | 0.12 | NA |
| | | Famphur | 52-85-7 | 0.017 | 15 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| | | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD) | 35822-46-9 | 0.000035 | 0.0025 |
| | | 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) | 67562-39-4 | 0.000035 | 0.0025 |
| | | 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF) | 55673-89-7 | 0.000035 | 0.0025 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| | | Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Iodomethane | 74-88-4 | 0.19 | 65 |
| | | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| | | Isodrin | 465-73-6 | 0.021 | 0.066 |
| | | Isosafrole | 120-58-1 | 0.081 | 2.6 |
| | | Kepone | 143-50-8 | 0.0011 | 0.13 |
| | | Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| | | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| | | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | 4,4-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| | | Methyl methansulfonate | 66-27-3 | 0.018 | NA |
| | | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| | | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| | | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| | | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| | | N-Nitrosodimethylamine | 62-75-9 | 0.40 | NA |
| | | N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |
| | | N-Nitrosomethylethylamine | 10595-95-6 | 0.40 | 2.3 |
| | | N-Nitrosomorpholine | 59-89-2 | 0.40 | 2.3 |
| | | N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| | | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) | 3268-87-9 | 0.000063 | 0.005 |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 | 0.005 |
| | | Parathion | 56-38-2 | 0.014 | 4.6 |
| | | Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Phenacetin | 62-44-2 | 0.081 | 16 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | 1,3-Phenylenediamine | 108-45-2 | 0.010 | 0.66 |
| | | Phorate | 298-02-2 | 0.021 | 4.6 |
| | | Phthalic anhydride | 85-44-9 | 0.055 | NA |
| | | Pronamide | 23950-58-5 | 0.093 | 1.5 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Safrole | 94-59-7 | 0.081 | 22 |
| | | Silvex (2,4,5-TP) | 93-72-1 | 0.72 | 7.9 |
| | | 2,4,5-T | 93-76-5 | 0.72 | 7.9 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| | | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| | | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| | | tris(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | NA |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Barium | 7440-39-3 | 1.2 | 21 mg/L TCLP |
| | | Beryllium | 7440-41-7 | 0.82 | NA |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | NA |
| | | Fluoride | 16964-48-8 | 35 | NA |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| | | Sulfide | 8496-25-8 | 14 | NA |
| | | Thallium | 7440-28-0 | 1.4 | NA |
| | | Vanadium | 7440-62-2 | 4.3 | NA |
| K001 | Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous). | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated). | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K008 | Oven residue from the production of chrome oxide green pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K009 | Distillation bottoms from the production of acetaldehyde from ethylene. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| K010 | Distillation side cuts from the production of acetaldehyde from ethylene. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| K011 | Bottom stream from the wastewater stripper in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K013 | Bottom stream from the acetonitrile column in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 1.8 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K014 | Bottoms from the acetonitrile purification column in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K015 | Still bottoms from the distillation of benzyl chloride. | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzal chloride | 98-87-3 | 0.055 | 6.0 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| K016 | Heavy ends or distillation residues from the production of carbon tetrachloride. | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K017 | Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| K018 | Heavy ends from the fractionation column in ethyl chloride production. | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | NA |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K019 | Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production. | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | NA |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | NA |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K020 | Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K021 | Aqueous spent antimony catalyst waste from fluoromethanes production. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| K022 | Distillation bottom tars from the production of phenol/acetone from cumene. | Toluene | 108-88-3 | 0.080 | 10 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| K023 | Distillation light ends from the production of phthalic anhydride from naphthalene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K024 | Distillation bottoms from the production of phthalic anhydride from naphthalene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K025 | Distillation bottoms from the production of nitrobenzene by the nitration of benzene. | NA | NA | LLEXT fb SSTRP fb CARBN; or CMBST | CMBST |
| K026 | Stripping still tails from the production of methyl ethyl pyridines. | NA | NA | CMBST | CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K027 | Centrifuge and distillation residues from toluene diisocyanate production. | NA | NA | CARBN; or CMBST | CMBST |
| K028 | Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| K029 | Waste from the product steam stripper in the production of 1,1,1-trichloroethane. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| K030 | Column bodies or heavy ends from the combined production of trichloroethylene and perchloroethylene. | o-Dichlorobenzene | 95-50-1 | 0.088 | NA |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | NA |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Hexachloropropylene | 1888-71-7 | NA | 30 |
| | | Pentachlorobenzene | 608-93-5 | NA | 10 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K031 | By-product salts generated in the production of MSMA and cacodylic acid. | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| K032 | Wastewater treatment sludge from the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | Chlordane (alpha and gamma isomers) | 57 -74-9 | 0.0033 | 0.26 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| K033 | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K034 | Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K035 | Wastewater treatment sludges generated in the production of creosote. | Acenaphthene | 83-32-9 | NA | 3.4 |
| | | Anthracene | 120-12-7 | NA | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Dibenz(a,h)anthracene | 53-70-3 | NA | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Fluorene | 86-73-7 | NA | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | NA | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| K036 | Still bottoms from toluene reclamation distillation in the production of disulfoton. | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| K037 | Wastewater treatment sludges from the production of disulfoton. | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K038 | Wastewater from the washing and stripping of phorate production. | Phorate | 298-02-2 | 0.021 | 4.6 |
| K039 | Filter cake from the filtration of diethylphosphorodithioc acid in the production of phorate. | NA | NA | CARBN; or CMBST | CMBST |
| K040 | Wastewater treatment sludge from the production of phorate. | Phorate | 298-02-2 | 0.021 | 4.6 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K041 | Wastewater treatment sludge from the production of toxaphene. | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| K042 | Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T. | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K043 | 2,6-Dichlorophenol waste from the production of 2,4-D. | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| | | 2,6-Dichlorophenol | 187-65-0 | 0.044 | 14 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| K044 | Wastewater treatment sludges from the manufacturing and processing of explosives. | NA | NA | DEACT | DEACT |
| K045 | Spent carbon from the treatment of wastewater containing explosives. | NA | NA | DEACT | DEACT |
| K046 | Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds. | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K047 | Pink/red water from TNT operations. | NA | NA | DEACT | DEACT |
| K048 | Dissolved air flotation (DAF) float from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Regulated Hazardous Constituent** | | **Wastewaters** | **Non-Wastewaters** |
| | | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-33 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K049 | Slop oil emulsion solids from the petroleum refining industry. | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-. and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K050 | Heat exchanger bundle cleaning sludge | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | from the petroleum refining industry. | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K051 | API separator sludge from the petroleum refining industry. | Acenaphthene | 83-32-9 | 0.059 | NA |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 105-67-9 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K052 | Tank bottoms (leaded) from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K060 | Ammonia still lime sludge from coking operations. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces. | Antimony | 7440-36-0 | NA | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | NA | 5.0 mg/L TCLP |
| | | Barium | 7440-39-3 | NA | 21 mg/L TCLP |
| | | Beryllium | 7440-41-7 | NA | 1.22 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Selenium | 7782-49-2 | NA | 5.7 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| | | Thallium | 7440-28-0 | NA | 0.20 mg/L TCLP |
| | | Zinc | 7440-66-6 | NA | 4.3 mg/L TCLP |
| K062 | Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332). | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | NA |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K069 | Emission control dust/sludge from secondary lead smelting. - Calcium Sulfate (Low Lead) Subcategory | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | Emission control dust/sludge from secondary lead smelting. - Non-Calcium Sulfate (High Lead) Subcategory | NA | NA | NA | RLEAD |
| K071 | K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used) nonwastewaters that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used) nonwastewaters that are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All K071 wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| K073 | Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K083 | Distillation bottoms from aniline production. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| K084 | Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| K085 | Distillation or fractionation column bottoms from the production of chlorobenzenes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K086 | Solvent wastes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Butylbenzyl phthalate | 85-68-7 | 0.017 | 28 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| | | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K087 | Decanter tank tar sludge from coking operations. | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K088 | Spent potliners from primary aluminum reduction. | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzo(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 26.1 |
| | | Barium | 7440-39-3 | 1.2 | 21 mg/L TCLP |
| | | Beryllium | 7440-41-7 | 0.82 | 1.22 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| | | Cyanide (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanide (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Fluoride | 16984-48-8 | 35 | NA |
| K093 | Distillation light ends from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K094 | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K095 | Distillation bottoms from the production of 1,1,1-trichloroethane. | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K096 | Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K097 | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K098 | Untreated process wastewater from the production of toxaphene. | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| K099 | Untreated wastewater from the production of 2,4-dichlorophenoxyacetic acid (2,4-D). | 2,4-Dichlorophenoxyacetic acid | 94-75-7 | 0.72 | 10 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K101 | Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | o-Nitroaniline | 88-74-4 | 0.27 | 14 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K102 | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K103 | Process residues from aniline extraction from the production of aniline. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K104 | Combined wastewater streams generated from nitrobenzene/aniline production. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| K105 | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| K106 | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260 mg/kg total mercury that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All K106 wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| K107 | Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K108 | Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K109 | Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K110 | Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K111 | Product washwaters from the production of dinitrotoluene via nitration of toluene | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| K112 | Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K113 | Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; or CMBST | CMBST |
| K114 | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; or CMBST | CMBST |
| K115 | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | NA | NA | CARBN; or CMBST | CMBST |
| K116 | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. | NA | NA | CARBN; or CMBST | CMBST |
| K117 | Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K118 | Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K123 | Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| K124 | Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K125 | Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K126 | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K131 | Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K132 | Spent absorbent and wastewater separator solids from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K136 | Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K141 | Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations). | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-2-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene] | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene] | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K142 | Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene] | 205-99-2 | 0.11 | 6.8 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene] | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K143 | Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene] | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene] | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| K144 | Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene] | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene] | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| K145 | Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| K147 | Tar storage tank residues from coal tar refining. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| | | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| | | Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene] | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene] | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K148 | Residues from coal tar distillation, including, but not limited to, still bottoms. | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene] | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene] | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K149 | Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillations of benzyl chloride.) | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K150 | Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,1,2,2- Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | functional groups. | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K151 | Wastewater treatment sludges, excluding neutralization and biological sludges generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K156 | Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes.[10] | Acetonitrile | 75-05-8 | 5.6 | 1.8 |
| | | Acetophenone | 98-86-2 | 0.010 | 9.7 |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbaryl | 63-25-2 | 0.006 | 0.14 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Methomyl | 16752-77-5 | 0.028 | 0.14 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Triethylamine | 121-44-8 | 0.081 | 1.5 |
| K157 | Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | of carbamates and carbamoyl oximes. | Methomyl | 16752-77-5 | 0.028 | 0.14 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | o-Phenylenediamine | 95-54-5 | 0.056 | 5.6 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Triethylamine | 121-44-8 | 0.081 | 1.5 |
| K158 | Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K159 | Organics from the treatment of thiocarbamate wastes.[10] | Benzene | 71-43-2 | 0.14 | 10 |
| | | Butylate | 2008-41-5 | 0.042 | 1.4 |
| | | EPTC (Eptam) | 759-94-4 | 0.042 | 1.4 |
| | | Molinate | 2212-67-1 | 0.042 | 1.4 |
| | | Pebulate | 1114-71-2 | 0.042 | 1.4 |
| | | Vernolate | 1929-77-7 | 0.042 | 1.4 |
| K161 | Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust, and floor sweepings from the production of dithiocarbamate acids and their salts. | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/L TCLP |
| | | Dithiocarbamates (total) | NA | 0.028 | 28 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| K169 | Crude oil tank sediment from petroleum refining operations. | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Ethyl Benzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 81-05-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| K170 | Clarified slurry oil sediment from petroleum refining operations. | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a, h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Indeno (1, 2, 3, -cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 81-05-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| K171 | Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors(this listing does not include inert support media). | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Ethyl Benzene | 100-14-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 81-05-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| | | Arsenic | 7740-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Vanadium | 7440-62-2 | 4.3 | 1.6 mg/L TCLP |
| | | Reactive Sulfides | NA | DEACT | DEACT |
| K172 | Spent hydrorefining catalyst from petroleum refining operations, including | Benzene | 71-43-2 | 0.14 | 10 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | guard beds used to desulfurize feed to other catalytic reactors (this listing does not include inert support media). | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| | | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Vanadium | 7440-62-2 | 4.3 | 1.6 mg/L TCLP |
| | | Reactive Sulfides | NA | DEACT | DEACT |
| K174 | Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer. | 1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin (1,2,3,4,6,7,8-HpCDD) | 35822-46-9 | 0.000035 or CMBST | 0.0025 or CMBST[11] |
| | | 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) | 67562-39-4 | 0.000035 or CMBST[11] | 0.0025 or CMBST[11] |
| | | 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF) | 55673-89-7 | 0.000035 or CMBST[11] | 0.0025 or CMBST[11] |
| | | HxCDDs (All Hexachlorodibenzo-*p*-dioxins) | 34465-46-8 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | HxCDFs (All Hexachlorodibenzofurans) | 55684-94-1 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzo-*p*-dioxin (OCDD) | 3268-87-9 | 0.000063 or CMBST[11] | 0.005 or CMBST[11] |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 or CMBST[11] | 0.005 or CMBST[11] |
| | | PeCDDs (All Pentachlorodibenzo-*p*-dioxins) | 36088-22-9 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | PeCDFs (All Pentachlorodibenzofurans) | 30402-15-4 | 0.000035 or CMBST[11] | 0.001 or CMBST[11] |
| | | TCDDs (All Tetrachlorodibenzo-*p*-dioxins) | 41903-57-5 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | TCDFs (All Tetrachlorodibenzofurans) | 55722-27-5 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| K175 | Wastewater treatment sludge from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process. | Arsenic | 7440-36-0 | 1.4 | 5.0 mg/L TCLP |
| | | Mercury[12] | 7438-97-6 | NA | 0.025 mg/L TCLP |
| | | pH[12] | | NA | pH≤6.0 |
| | All K175 wastewaters | Mercury | 7438-97-6 | 0.15 | NA |
| K176 | Baghouse filters from the production of | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide). | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| K177 | Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide). | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K178 | Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process. | 1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin (1,2,3,4,6,7,8-HpCDD) | 35822-39-4 | 0.000035 or CMBST[11] | 0.0025 or CMBST[11] |
| | | 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3, 4,6,7,8-HpCDF) | 67562-39-4 | 0.000035 or CMBST[11] | 0.0025 or CMBST[11] |
| | | 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3, 4,7,8,9-HpCDF) | 55673-89-7 | 0.000035 or CMBST[11] | 0.0025 or CMBST[11] |
| | | HxCDDs (All Hexachlorodibenzo-*p*-dioxins) | 34465-46-8 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | HxCDFs (All Hexachlorodibenzofurans) | 55684-94-1 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzo-*p*-dioxin (OCDD) | 3268-87-9 | 0.000063 or CMBST[11] | 0.005 or CMBST[11] |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 or CMBST[11] | 0.005 or CMBST[11] |
| | | PeCDDs (All Pentachlorodibenzo-*p*-dioxins) | 36088-22-9 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | PeCDFs (All Pentachlorodibenzofurans) | 30402-15-4 | 0.000035 or CMBST[11] | 0.001 or CMBST[11] |
| | | TCDDs (All tetrachlorodibenzo-*p*-dioxins) | 41903-57-5 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | TCDFs (All tetrachlorodibenzofurans) | 55722-27-5 | 0.000063 or CMBST[11] | 0.001 or CMBST[11] |
| | | Thallium | 7440-28-0 | 1.4 | 0.20 mg/L TCLP |
| K181 | Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in LAC | Aniline | 62-53-3 | 0.81 | 14 |
| | | o-Anisidine (2-methoxyaniline) | 90-04-0 | 0.010 | 0.66 |
| | | 4-Chloroaniline | 106-47-8 | 0.46 | 16 |
| | | p-Cresidine | 120-71-8 | 0.010 | 0.66 |
| | | 2,4-Dimethylaniline (2,4-xylidine) | 95-68-1 | 0.010 | 0.66 |
| | | 1,2-Phenylenediamine | 95-54-5 | CMBST; or | CMBST; or |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | 33:V.4901.C.2 that are equal to or greater than the corresponding LAC 33:V.4901.C.2 levels, as determined on a calendar year basis. | | | CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CHOXD fb (BIODG or CARBN); or BIODG fb CARBN |
| | | 1,3-Phenylenediamine | 108-45-2 | 0.010 | 0.66 |
| P001 | Warfarin, and salts, when present at concentrations greater than 0.3 percent | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P002 | 1-Acetyl-2-thiourea | 1-Acetyl-2-thiourea | 591-08-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P003 | Acrolein | Acrolein | 107-02-8 | 0.29 | CMBST |
| P004 | Aldrin | Aldrin | 309-00-2 | 0.021 | 0.066 |
| P005 | Allyl alcohol | Allyl alcohol | 107-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P006 | Aluminum phosphide | Aluminum phosphide | 20859-73-8 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P007 | 5-Aminomethyl 3-isoxazolol | 5-Aminomethyl 3-isoxazolol | 2763-96-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P008 | 4-Aminopyridine | 4-Aminopyridine | 504-24-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P009 | Ammonium picrate | Ammonium picrate | 131-74-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P010 | Arsenic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P011 | Arsenic pentoxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P012 | Arsenic trioxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P013 | Barium cyanide | Barium | 7440-39-3 | NA | 21 mg/L TCLP |
| | | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P014 | Thiophenol (Benzene thiol) | Thiophenol (Benzene thiol) | 108-98-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P015 | Beryllium powder | Beryllium | 7440-41-7 | RMETL; or RTHRM | RMETL; or RTHRM |
| P016 | Dichloromethyl ether (Bis(chloromethyl)ether) | Dichloromethyl ether | 542-88-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P017 | Bromoacetone | Bromoacetone | 598-31-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P018 | Brucine | Brucine | 357-57-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P020 | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| P021 | Calcium cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P022 | Carbon disulfide | Carbon disulfide | 75-15-0 | 3.8 | CMBST |
| | | Carbon disulfide; alternate[6] standard for nonwastewaters only | 75-15-0 | NA | 4.8 mg/L TCLP |
| P023 | Chloroacetaldehyde | Chloroacetaldehyde | 107-20-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P024 | p-Chloroaniline | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| P026 | 1-(o-Chlorophenyl)thiourea | 1-(o-Chlorophenyl)thiourea | 5344-82-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P027 | 3-Chloropropionitrile | 3-Chloropropionitrile | 542-76-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P028 | Benzyl chloride | Benzyl chloride | 100-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P029 | Copper cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P030 | Cyanides (soluble salts and complexes) | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P031 | Cyanogen | Cyanogen | 460-19-5 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| P033 | Cyanogen chloride | Cyanogen chloride | 506-77-4 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| P034 | 2-Cyclohexyl-4,6-dinitrophenol | 2-Cyclohexyl-4,6-dinitrophenol | 131-89-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P036 | Dichlorophenylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P037 | Dieldrin | Dieldrin | 60-57-1 | 0.017 | 0.13 |
| P038 | Diethylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P039 | Disulfoton | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| P040 | O,O-Diethyl O-pyrazinyl phosphorothioate | O,O-Diethyl O-pyrazinyl phosphorothioate | 297-97-2 | CARBN; or CMBST | CMBST |
| P041 | Diethyl-p-nitrophenyl phosphate | Diethyl-p-nitrophenyl phosphate | 311-45-5 | CARBN; or CMBST | CMBST |
| P042 | Epinephrine | Epinephrine | 51-43-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P043 | Diisopropylfluorophosphate (DFP) | Diisopropylfluorophosphate (DFP) | 55-91-4 | CARBN; or CMBST | CMBST |
| P044 | Dimethoate | Dimethoate | 60-51-5 | CARBN; or CMBST | CMBST |
| P045 | Thiofanox | Thiofanox | 39196-18-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P046 | alpha, alpha-Dimethylphenethylamine | alpha, alpha-Dimethylphenethylamine | 122-09-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P047 | 4,6-Dinitro-o-cresol | 4,6-Dinitro-o-cresol | 543-52-1 | 0.28 | 160 |
| | 4,6-Dinitro-o-cresol salts | NA | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P048 | 2,4-Dinitrophenol | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| P049 | Dithiobiuret | Dithiobiuret | 541-53-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P050 | Endosulfan | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| P051 | Endrin | Endrin | 72-20-8 | 0.0028 | 0.13 |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| P054 | Aziridine | Aziridine | 151-56-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P056 | Fluorine | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | ADGAS fb NEUTR |
| P057 | Fluoroacetamide | Fluoroacetamide | 640-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P058 | Fluoroacetic acid, sodium salt | Fluoroacetic acid, sodium salt | 62-74-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P059 | Heptachlor | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| P060 | Isodrin | Isodrin | 465-73-6 | 0.021 | 0.066 |
| P062 | Hexaethyl tetraphosphate | Hexaethyl tetraphosphate | 757-58-4 | CARBN; or CMBST | CMBST |
| P063 | Hydrogen cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P064 | Isocyanic acid, ethyl ester | Isocyanic acid, ethyl ester | 624-83-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P065 | Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC |
| | Mercury fulminate nonwastewaters that are either incinerator residues or are residues from RMERC; and contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All mercury fulminate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| P066 | Methomyl | Methomyl | 16752-77-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P067 | 2-Methyl-aziridine | 2-Methyl-aziridine | 75-55-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P068 | Methyl hydrazine | Methyl hydrazine | 60-34-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED, or CMBST |
| P069 | 2-Methyllactonitrile | 2-Methyllactonitrile | 75-86-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P070 | Aldicarb | Aldicarb | 116-06-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P071 | Methyl parathion | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| P072 | 1-Naphthyl-2-thiourea | 1-Naphthyl-2-thiourea | 86-88-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P073 | Nickel carbonyl | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| P074 | Nickel cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| P075 | Nicotine and salts | Nicotine and salts | 54-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P076 | Nitric oxide | Nitric oxide | 10102-43-9 | ADGAS | ADGAS |
| P077 | p-Nitroaniline | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| P078 | Nitrogen dioxide | Nitrogen dioxide | 10102-44-0 | ADGAS | ADGAS |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| | | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| P081 | Nitroglycerin | Nitroglycerin | 55-63-0 | CHOXD; CHRED; CARBN; BIODG or CMBST | CHOXD; CHRED; or CMBST |
| P082 | N-Nitrosodimethylamine | N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| P084 | N-Nitrosomethylvinylamine | N-Nitrosomethylvinylamine | 4549-40-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P085 | Octamethylpyrophosphoramide | Octamethylpyrophosphoramide | 152-16-9 | CARBN; or CMBST | CMBST |
| P087 | Osmium tetroxide | Osmium tetroxide | 20816-12-0 | RMETL; or RTHRM | RMETL; or RTHRM |
| P088 | Endothall | Endothall | 145-73-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P089 | Parathion | Parathion | 56-38-2 | 0.014 | 4.6 |
| P092 | Phenyl mercuric acetate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC; or RMERC |
| | Phenyl mercuric acetate nonwastewaters that are either incinerator residues or are residues from RMERC; and still contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All phenyl mercuric acetate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| P093 | Phenylthiouea | Phenylthiouea | 103-85-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P094 | Phorate | Phorate | 298-02-2 | 0.021 | 4.6 |
| P095 | Phosgene | Phosgene | 75-44-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| P096 | Phosphine | Phosphine | 7803-51-2 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P097 | Famphur | Famphur | 52-85-7 | 0.017 | 15 |
| P098 | Potassium cyanide. | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P099 | Potassium silver cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| P101 | Ethyl cyanide (Propanenitrile) | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |
| P102 | Propargyl alcohol | Propargyl alcohol | 107-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P103 | Selenourea | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| P104 | Silver cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| P105 | Sodium azide | Sodium azide | 26628-22-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P106 | Sodium cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P108 | Strychnine and salts | Strychnine and salts | 57-24-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P109 | Tetraethyldithiopyrophosphate | Tetraethyldithiopyrophosphate | 3689-24-5 | CARBN; or CMBST | CMBST |
| P110 | Tetraethyl lead | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| P111 | Tetraethylpyrophosphate | Tetraethylpyrophosphate | 107-49-3 | CARBN; or CMBST | CMBST |
| P112 | Tetranitromethane | Tetranitromethane | 509-14-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P113 | Thallic oxide | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| P114 | Thallium selenite | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| P115 | Thallium (I) sulfate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| P116 | Thiosemicarbazide | Thiosemicarbazide | 79-19-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P118 | Trichloromethanethiol | Trichloromethanethiol | 75-70-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P119 | Ammonium vanadate | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P120 | Vanadium pentoxide | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P121 | Zinc cyanide | Cyanides (Total)[7] | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable)[7] | 57-12-5 | 0.86 | 30 |
| P122 | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10 percent | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P123 | Toxaphene | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| P127 | Carbofuran | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| P128 | Mexacarbate | Mexacarbate | 315-18-4 | 0.056 | 1.4 |
| P185 | Tirpate [10] | Tirpate | 26419-73-8 | 0.056 | 0.28 |
| P188 | Physostigmine salicylate | Physostigmine salicylate | 57-64-7 | 0.056 | 1.4 |
| P189 | Carbosulfan | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| P190 | Metolcarb | Metolcarb | 1129-41-5 | 0.056 | 1.4 |
| P191 | Dimetilan [10] | Dimetilan | 644-64-4 | 0.056 | 1.4 |
| P192 | Isolan [10] | Isolan | 119-38-0 | 0.056 | 1.4 |
| P194 | Oxamyl | Oxamyl | 23135-22-0 | 0.056 | 0.28 |
| P196 | Manganese dimethyldithiocarbamate | Dithiocarbamates (total) | NA | 0.028 | 28 |
| P197 | Formparanate [10] | Formparanate | 17702-57-7 | 0.056 | 1.4 |
| P198 | Formetanate hydrochloride | Formetanate hydrochloride | 23422-53-9 | 0.056 | 1.4 |
| P199 | Methiocarb | Methiocarb | 2032-65-7 | 0.056 | 1.4 |
| P201 | Promecarb | Promecarb | 2631-37-0 | 0.056 | 1.4 |
| P202 | m-Cumenyl methylcarbamate | m-Cumenyl methylcarbamate | 64-00-6 | 0.056 | 1.4 |
| P203 | Aldicarb sulfone | Aldicarb sulfone | 1646-88-4 | 0.056 | 0.28 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| P204 | Physostigmine | Physostigmine | 57-47-6 | 0.056 | 1.4 |
| P205 | Ziram | Dithiocarbamates (total) | NA | 0.028 | 28 |
| U001 | Acetaldehyde | Acetaldehyde | 75-07-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U002 | Acetone | Acetone | 67-64-1 | 0.28 | 160 |
| U003 | Acetonitrile | Acetonitrile | 75-05-8 | 5.6 | CMBST |
| | | Acetonitrile; alternate[6] standard for nonwastewaters only | 75-05-8 | NA | 38 |
| U004 | Acetophenone | Acetophenone | 98-86-2 | 0.010 | 9.7 |
| U005 | 2-Acetylaminofluorene | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| U006 | Acetyl chloride | Acetyl Chloride | 75-36-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U007 | Acrylamide | Acrylamide | 79-06-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U008 | Acrylic acid | Acrylic acid | 79-10-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U009 | Acrylonitrile | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| U010 | Mitomycin C | Mitomycin C | 50-07-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U011 | Amitrole | Amitrole | 61-82-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U012 | Aniline | Aniline | 62-53-3 | 0.81 | 14 |
| U014 | Auramine | Auramine | 492-80-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U015 | Azaserine | Azaserine | 115-02-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U016 | Benz(c)acridine | Benz(c)acridine | 225-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U017 | Benzal chloride | Benzal chloride | 98-87-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U018 | Benz(a)anthracene | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| U019 | Benzene | Benzene | 71-43-2 | 0.14 | 10 |
| U020 | Benzenesulfonyl chloride | Benzenesulfonyl chloride | 98-09-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U021 | Benzidine | Benzidine | 92-87-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U022 | Benzo(a)pyrene | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| U023 | Benzotrichloride | Benzotrichloride | 98-07-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U024 | bis(2-Chloroethoxy)methane | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| U025 | bis(2-Chloroethyl)ether | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| U026 | Chlornaphazine | Chlornaphazine | 494-03-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U027 | bis(2-Chloroisopropyl)ether | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| U028 | bis(2-Ethylhexyl)phthalate | bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.28 | 28 |
| U029 | Methyl bromide (Bromomethane) | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| U030 | 4-Bromophenyl phenyl ether | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| U031 | n-Butyl alcohol | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| U032 | Calcium chromate | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| U033 | Carbon oxyfluoride | Carbon oxyfluoride | 353-50-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U034 | Trichloroacetaldehyde (Chloral) | Trichloroacetaldehyde (Chloral) | 75-87-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U035 | Chlorambucil | Chlorambucil | 305-03-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U036 | Chlordane | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| U037 | Chlorobenzene | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| U038 | Chlorobenzilate | Chlorobenzilate | 510-15-6 | 0.10 | CMBST |
| U039 | p-Chloro-m-cresol | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| U041 | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | 106-89-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U042 | 2-Chloroethyl vinyl ether | 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | CMBST |
| U043 | Vinyl chloride | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| U044 | Chloroform | Chloroform | 67-66-3 | 0.046 | 6.0 |
| U045 | Chloromethane (Methyl chloride) | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| U046 | Chloromethyl methyl ether | Chloromethyl methyl ether | 107-30-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U047 | 2-Chloronaphthalene | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| U048 | 2-Chlorophenol | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| U049 | 4-Chloro-o-toluidine hydrochloride | 4-Chloro-o-toluidine hydrochloride | 3165-93-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U050 | Chrysene | Chrysene | 218-01-9 | 0.059 | 3.4 |
| U051 | Creosote | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U052 | Cresols (Cresylic acid) | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 |
| U053 | Crotonaldehyde | Crotonaldehyde | 4170-30-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U055 | Cumene | Cumene | 98-82-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U056 | Cyclohexane | Cyclohexane | 110-82-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U057 | Cyclohexanone | Cyclohexanone | 108-94-1 | 0.36 | CMBST |
| | | Cyclohexanone; alternate[6] standard for nonwastewaters only | 108-94-1 | NA | 0.75 mg/L TCLP |
| U058 | Cyclophosphamide | Cyclophosphamide | 50-18-0 | CARBN; or CMBST | CMBST |
| U059 | Daunomycin | Daunomycin | 20830-81-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U060 | DDD | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| U061 | DDT | o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| | | p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| | | p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| U062 | Diallate | Diallate | 2303-16-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U063 | Dibenz(a,h)anthracene | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| U064 | Dibenz(a,i)pyrene | Dibenz(a,i)pyrene | 189-55-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U066 | 1,2-Dibromo-3-chloropropane | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| U067 | Ethylene dibromide (1,2-Dibromoethane) | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| U068 | Dibromomethane | Dibromomethane | 74-95-3 | 0.11 | 15 |
| U069 | Di-n-butyl phthalate | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| U070 | o-Dichlorobenzene | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| U071 | m-Dichlorobenzene | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| U072 | p-Dichlorobenzene | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| U073 | 3,3'-Dichlorobenzidine | 3,3'-Dichlorobenzidine | 91-94-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U074 | 1,4-Dichloro-2-butene | cis-1,4-Dichloro-2-butene | 1476-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | trans-1,4-Dichloro-2-butene | 764-41-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U075 | Dichlorodifluoromethane | Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| U076 | 1,1-Dichloroethane | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| U077 | 1,2-Dichloroethane | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| U078 | 1,1-Dichloroethylene | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| U079 | 1,2-Dichloroethylene | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| U080 | Methylene chloride | Methylene chloride | 75-09-2 | 0.089 | 30 |
| U081 | 2,4-Dichlorophenol | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| U082 | 2,6-Dichlorophenol | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| U083 | 1,2-Dichloropropane | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U084 | 1,3-Dichloropropylene | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| U085 | 1,2:3,4-Diepoxybutane | 1,2:3,4-Diepoxybutane | 1464-53-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U086 | N,N'-Diethylhydrazine | N,N'-Diethylhydrazine | 1615-80-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U087 | O,O-Diethyl S-methyldithiophosphate | O,O-Diethyl S-methyldithiophosphate | 3288-58-2 | CARBN; or CMBST | CMBST |
| U088 | Diethyl phthalate | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| U089 | Diethyl stilbestrol | Diethyl stilbestrol | 56-53-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U090 | Dihydrosafrole | Dihydrosafrole | 94-58-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U091 | 3,3'-Dimethoxybenzidine | 3,3'-Dimethoxybenzidine | 119-90-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U092 | Dimethylamine | Dimethylamine | 124-40-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U093 | p-Dimethylaminoazobenzene | p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | CMBST |
| U094 | 7,12-Dimethylbenz(a)anthracene | 7,12-Dimethylbenz(a)anthracene | 57-97-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U095 | 3,3'-Dimethylbenzidine | 3,3'-Dimethylbenzidine | 119-93-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U096 | alpha, alpha-Dimethyl benzyl hydroperoxide | alpha, alpha-Dimethyl benzyl hydroperoxide | 80-15-9 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U097 | Dimethylcarbamoyl chloride | Dimethylcarbamoyl chloride | 79-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U098 | 1,1-Dimethylhydrazine | 1,1-Dimethylhydrazine | 57-14-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U099 | 1,2-Dimethylhydrazine | 1,2-Dimethylhydrazine | 540-73-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U101 | 2,4-Dimethylphenol | 2,4-Dimethylphenol | 105-67-9 | 0.036 | 14 |
| U102 | Dimethyl phthalate | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| U103 | Dimethyl sulfate | Dimethyl sulfate | 77-78-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U105 | 2,4-Dinitrotoluene | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| U106 | 2,6-Dinitrotoluene | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| U107 | Di-n-octyl phthalate | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| U108 | 1,4-Dioxane | 1,4-Dioxane | 123-91-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | 1,4-Dioxane; alternate[6] standard for nonwastewaters only | 123-91-1 | 12.0 | 170 |
| U109 | 1,2-Diphenylhydrazine | 1,2-Diphenylhydrazine | 122-66-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| | | 1,2-Diphenylhydrazine; alternate[6] standard for wastewaters only | 122-66-7 | 0.087 | NA |
| U110 | Dipropylamine | Dipropylamine | 142-84-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U111 | Di-n-propylnitrosamine | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| U112 | Ethyl acetate | Ethyl acetate | 141-78-6 | 0.34 | 33 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Regulated Hazardous Constituent** | | **Wastewaters** | **Non-Wastewaters** |
| | | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| U113 | Ethyl acrylate | Ethyl acrylate | 140-88-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U114 | Ethylenebisdithiocarbamic acid salts and esters | Ethylenebisdithiocarbamic acid | 111-54-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U115 | Ethylene oxide | Ethylene oxide | 75-21-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; or CMBST |
| | | Ethylene oxide; alternate [6] standard for wastewaters only | 75-21-8 | 0.12 | NA |
| U116 | Ethylene thiourea | Ethylene thiourea | 96-45-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U117 | Ethyl ether | Ethyl ether | 60-29-7 | 0.12 | 160 |
| U118 | Ethyl methacrylate | Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| U119 | Ethyl methane sulfonate | Ethyl methane sulfonate | 62-50-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U120 | Fluoranthene | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| U121 | Trichloromonofluoromethane | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| U122 | Formaldehyde | Formaldehyde | 50-00-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U123 | Formic acid | Formic acid | 64-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U124 | Furan | Furan | 110-00-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U125 | Furfural | Furfural | 98-01-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U126 | Glycidylaldehyde | Glycidylaldehyde | 765-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U127 | Hexachlorobenzene | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| U128 | Hexachlorobutadiene | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| U129 | Lindane | alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| | | beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| | | delta-BHC | 319-86-8 | 0.023 | 0.066 |
| | | gamma-BHC (Lindane) | 58-89-9 | 0.0017 | 0.066 |
| U130 | Hexachlorocyclopentadiene | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| U131 | Hexachloroethane | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| U132 | Hexachlorophene | Hexachlorophene | 70-30-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U133 | Hydrazine | Hydrazine | 302-01-2 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U134 | Hydrogen fluoride | Fluoride (measured in wastewaters only) | 7664-39-3 | 35 | ADGAS fb NEUTR; or NEUTR |
| U135 | Hydrogen Sulfide | Hydrogen Sulfide | 7783-06-4 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U136 | Cacodylic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| U137 | Indeno(1,2,3-c,d)pyrene | Indeno(1,2,3-c,d)pyrene | 193-39-5 | 0.0055 | 3.4 |
| U138 | Iodomethane | Iodomethane | 74-88-4 | 0.19 | 65 |
| U140 | Isobutyl alcohol | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| U141 | Isosafrole | Isosafrole | 120-58-1 | 0.081 | 2.6 |
| U142 | Kepone | Kepone | 143-50-8 | 0.0011 | 0.13 |
| U143 | Lasiocarpine | Lasiocarpine | 303-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U144 | Lead acetate | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U145 | Lead phosphate | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U146 | Lead subacetate | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U147 | Maleic anhydride | Maleic anhydride | 108-31-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U148 | Maleic hydrazide | Maleic hydrazide | 123-33-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U149 | Malononitrile | Malononitrile | 109-77-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U150 | Melphalan | Melphalan | 148-82-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U151 | U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All U151 (mercury) wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| | Elemental Mercury Contaminated with Radioactive Materials | Mercury | 7439-97-6 | NA | AMLGM |
| U152 | Methacrylonitrile | Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| U153 | Methanethiol | Methanethiol | 74-93-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U154 | Methanol | Methanol | 67-56-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | Methanol; alternate[6] set of standards for both wastewaters and nonwastewaters | 67-56-1 | 5.6 | 0.75 mg/L TCLP |
| U155 | Methapyrilene | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| U156 | Methyl chlorocarbonate | Methyl chlorocarbonate | 79-22-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U157 | 3-Methylcholanthrene | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| U158 | 4,4'-Methylene bis(2-chloroaniline) | 4,4'-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| U159 | Methyl ethyl ketone | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| | | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| **Waste Code** | **Waste Description and Treatment/Regulatory Subcategory[1]** | **Common Name** | **CAS[2] Number** | **Concentration in mg/L[3]; or Technology Code[4]** | **Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4]** |
| U160 | Methyl ethyl ketone peroxide | Methyl ethyl ketone peroxide | 1338-23-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U161 | Methyl isobutyl ketone | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| U162 | Methyl methacrylate | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| U163 | N-Methyl N'-nitro N-nitrosoguanidine | N-Methyl N'-nitro N-nitrosoguanidine | 70-25-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U164 | Methylthiouracil | Methylthiouracil | 56-04-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U165 | Naphthalene | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| U166 | 1,4-Naphthoquinone | 1,4-Naphthoquinone | 130-15-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U167 | 1-Naphthlyamine | 1-Naphthlyamine | 134-32-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U168 | 2-Naphthlyamine | 2-Naphthlyamine | 91-59-8 | 0.52 | CMBST |
| U169 | Nitrobenzene | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| U170 | p-Nitrophenol | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| U171 | 2-Nitropropane | 2-Nitropropane | 79-46-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U172 | N-Nitrosodi-n-butylamine | N-Nitrosodi-n-butylamine | 924-16-3 | 0.40 | 17 |
| U173 | N-Nitrosodiethanolamine | N-Nitrosodiethanolamine | 1116-54-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U174 | N-Nitrosodiethylamine | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| U176 | N-Nitroso-N-ethylurea | N-Nitroso-N-ethylurea | 759-73-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U177 | N-Nitroso-N-methylurea | N-Nitroso-N-methylurea | 684-93-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U178 | N-Nitroso-N-methylurethane | N-Nitroso-N-methylurethane | 615-53-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U179 | N-Nitrosopiperidine | N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| U180 | N-Nitrosopyrrolidine | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| U181 | 5-Nitro-o-toluidine | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| U182 | Paraldehyde | Paraldehyde | 123-63-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U183 | Pentachlorobenzene | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| U184 | Pentachloroethane | Pentachloroethane | 76-01-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | Pentachloroethane; alternate[6] standards for both wastewaters and nonwastewaters | 76-01-7 | 0.055 | 6.0 |
| U185 | Pentachloronitrobenzene | Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| U186 | 1,3-Pentadiene | 1,3-Pentadiene | 504-60-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U187 | Phenacetin | Phenacetin | 62-44-2 | 0.081 | 16 |
| U188 | Phenol | Phenol | 108-95-2 | 0.039 | 6.2 |
| U189 | Phosphorus sulfide | Phosphorus sulfide | 1314-80-3 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U190 | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| U191 | 2-Picoline | 2-Picoline | 109-06-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U192 | Pronamide | Pronamide | 23950-58-5 | 0.093 | 1.5 |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U193 | 1,3-Propane sultone | 1,3-Propane sultone | 1120-71-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U194 | n-Propylamine | n-Propylamine | 107-10-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U196 | Pyridine | Pyridine | 110-86-1 | 0.014 | 16 |
| U197 | p-Benzoquinone | p-Benzoquinone | 106-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U200 | Reserpine | Reserpine | 50-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U201 | Resorcinol | Resorcinol | 108-46-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U202 | Saccharin and salts | Saccharin | 81-07-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U203 | Safrole | Safrole | 94-59-7 | 0.081 | 22 |
| U204 | Selenium dioxide | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| U205 | Selenium sulfide | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| U206 | Streptozotocin | Streptozotocin | 18883-66-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U207 | 1,2,4,5-Tetrachlorobenzene | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| U208 | 1,1,1,2-Tetrachloroethane | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| U209 | 1,1,2,2-Tetrachloroethane | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| U210 | Tetrachloroethylene | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| U211 | Carbon tetrachloride | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| U213 | Tetrahydrofuran | Tetrahydrofuran | 109-99-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U214 | Thallium (I) acetate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U215 | Thallium (I) carbonate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U216 | Thallium (I) chloride | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U217 | Thallium (I) nitrate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U218 | Thioacetamide | Thioacetamide | 62-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U219 | Thiourea | Thiourea | 62-56-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U220 | Toluene | Toluene | 108-88-3 | 0.080 | 10 |
| U221 | Toluenediamine | Toluenediamine | 25376-45-8 | CARBN; or CMBST | CMBST |
| U222 | o-Toluidine hydrochloride | o-Toluidine hydrochloride | 636-21-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U223 | Toluene diisocyanate | Toluene diisocyanate | 26471-62-5 | CARBN; or CMBST | CMBST |
| U225 | Bromoform (Tribromomethane) | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| U226 | 1,1,1-Trichloroethane | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| U227 | 1,1,2-Trichloroethane | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| U228 | Trichloroethylene | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| U234 | 1,3,5-Trinitrobenzene | 1,3,5-Trinitrobenzene | 99-35-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U235 | tris-(2,3-Dibromopropyl)-phosphate | tris-(2,3-Dibromopropyl)-phosphate | 126-72-7 | 0.11 | 0.10 |
| U236 | Trypan Blue | Trypan Blue | 72-57-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U237 | Uracil mustard | Uracil mustard | 66-75-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

**Table 2. Treatment Standards for Hazardous Wastes**

| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
|---|---|---|---|---|---|
| | | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U238 | Urethane (Ethyl carbamate) | Urethane (Ethyl carbamate) | 51-79-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U239 | Xylenes | Xylenes-mixed isomers<br>(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| U240 | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | 2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters | | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U243 | Hexachloropropylene | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| U244 | Thiram | Thiram | 137-26-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U246 | Cyanogen bromide | Cyanogen bromide | 506-68-3 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| U247 | Methoxychlor | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| U248 | Warfarin, and salts, when present at concentrations of 0.3 percent or less | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U249 | Zinc phosphide, $Zn_3P_2$, when present at concentrations of 10 percent or less | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U271 | Benomyl | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| U278 | Bendiocarb | Bendiocarb | 22781-23-8 | 0.056 | 1.4 |
| U279 | Carbaryl | Carbaryl | 63-25-2 | 0.006 | 0.14 |
| U280 | Barban | Barban | 101-27-9 | 0.056 | 1.4 |
| U328 | o-Toluidine | o-Toluidine | 95-53-4 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |
| U353 | p-Toluidine | p-Toluidine | 106-49-0 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |

| Table 2. Treatment Standards for Hazardous Wastes | | | | | |
|---|---|---|---|---|---|
| | | Regulated Hazardous Constituent | | Wastewaters | Non-Wastewaters |
| Waste Code | Waste Description and Treatment/Regulatory Subcategory[1] | Common Name | CAS[2] Number | Concentration in mg/L[3]; or Technology Code[4] | Concentration in mg/kg[5] unless noted as "mg/L TCLP" or Technology Code[4] |
| U359 | 2-Ethoxyethanol | 2-Ethoxyethanol | 110-80-5 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |
| U364 | Bendiocarb phenol [10] | Bendiocarb phenol | 22961-82-6 | 0.056 | 1.4 |
| U367 | Carbofuran phenol | Carbofuran phenol | 1563-38-8 | 0.056 | 1.4 |
| U372 | Carbendazim | Carbendazim | 10605-21-7 | 0.056 | 1.4 |
| U373 | Propham | Propham | 122-42-9 | 0.056 | 1.4 |
| U387 | Prosulfocarb | Prosulfocarb | 52888-80-9 | 0.042 | 1.4 |
| U389 | Triallate | Triallate | 2303-17-5 | 0.042 | 1.4 |
| U394 | A2213 [10] | A2213 | 30558-43-1 | 0.042 | 1.4 |
| U395 | Diethylene glycol, dicarbamate [10] | Diethylene glycol, dicarbamate | 5952-26-1 | 0.056 | 1.4 |
| U404 | Triethylamine | Triethylamine | 121-44-8 | 0.081 | 1.5 |
| U409 | Thiophanate-methyl | Thiophanate-methyl | 23564-05-8 | 0.056 | 1.4 |
| U410 | Thiodicarb | Thiodicarb | 59669-26-0 | 0.019 | 1.4 |
| U411 | Propoxur | Propoxur | 114-26-1 | 0.056 | 1.4 |

[1] The waste descriptions provided in this table do not replace waste descriptions in LAC 33:V.Chapter 49. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.

[2] CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.

[3] Concentration standards for wastewaters are expressed in mg/L and are based on analysis of composite samples.

[4] All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in LAC 33:V.2299.Appendix, Table 3. Technology Codes and Descriptions of Technology-Based Standards.

[5] Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of LAC 33:V.Chapter 31, LAC 33:V.Chapter 43.Subpart N, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in LAC 33:V.2223.E. All concentration standards for nonwastewaters are based on analysis of grab samples.

[6] Where an alternate treatment standard or set of alternate standards has been indicated, a facility may comply with this alternate standard, but only for the Treatment/Regulatory Subcategory or physical form (i.e., wastewater and/or nonwastewater) specified for that alternate standard.

[7] Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

[8] These wastes, when rendered nonhazardous and then subsequently managed in CWA or CWA-equivalent systems, are not subject to treatment standards. (See LAC 33:V.2201.G.4 and G.5.)

[9] These wastes, when rendered nonhazardous and then subsequently injected in a Class I SDWA well, are not subject to treatment standards. (See LAC 33:V.Chapter 22.Subchapter B.)

[10] The treatment standards for this waste may be satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at LAC 33:V.2299.Appendix, Table 3, for nonwastewaters; and biodegradation, as defined by the technology code BIODG, carbon adsorption, as defined by the technology code CARBN, chemical oxidation, as defined by the technology code CHOXD, or combustion, as defined as technology code CMBST at LAC 33:V.2299.Appendix, Table 3, for wastewaters.

[11] For these wastes, the definition of CMBST is limited to: (1) combustion units operating under LAC 33:V.Chapter 30, (2) combustion units permitted under LAC 33:V.Chapter 31, or (3) combustion units operating under LAC 33:V.Chapter 43.Subchapter N, which have obtained a determination of equivalent treatment under LAC 33:V.2227.B.

[12] Disposal of K175 wastes that have complied with all applicable LAC 33:V.2223 treatment standards must also be macroencapsulated in accordance with LAC 33:V.2299.Appendix, Table 8 unless the waste is placed in: (1) a RCRA Subtitle C monofill containing only K175 wastes that meet all applicable LAC 33:V.2223 treatment standards; or (2) a

dedicated RCRA Subtitle C landfill cell in which all other wastes being disposed are at a pH less than or equal to 6.0.

[NOTE: NA means Not Applicable.]

| Table 3<br>Technology Codes and Description of Technology-Based Standards | |
|---|---|
| **Technology Code** | **Description of Technology-Based Standard** |
| ADGAS | Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid)–venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container; and/or penetration through detonation. |
| AMLGM | Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air. |
| BIODG | Biodegradation of organics or nonmetallic inorganics (i.e., degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues). |
| CARBN | Carbon adsorption (granulated or powdered) of nonmetallic inorganics, organometallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (e.g. Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs. |
| CHOXD | Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations of reagents: (1) hypochlorite (e.g., bleach), (2) chlorine, (3) chlorine dioxide, (4) ozone or UV (ultraviolet) light assisted ozone, (5) peroxides, (6) persulfates, (7) perchlorates, (8) permanganates, and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination. |
| CHRED | Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) sulfur dioxide; (2) sodium, potassium, or alkali salts of sulfites, bisulfites, metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state. |
| CMBST | High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of LAC 33:V.Chapter 30 or 31 or 41, and 43.Subchapter N, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process. |
| DEACT | Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity. |
| FSUBS | Fuel substitution in units operated in accordance with applicable technical operating requirements. |
| HLVIT | Vitrification of high-level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission. |
| IMERC | Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of LAC 33:V.Chapter 31 and LAC 33:V.4513 through 4521. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories). |
| INCIN | Incineration in units operated in accordance with the technical operating requirements of LAC 33:V.Chapter 31 and LAC 33:V.4513–4521. |
| LLEXT | Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard. |
| MACRO | Macroencapsulation with surface coating materials such as polymeric organics (e.g., resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a *tank* or *container* according to LAC 33:V.109. |
| NEUTR | Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) acids, (2) bases, or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals. |
| NLDBR | No land disposal based on recycling. |
| POLYM | Formation of complex high-molecular weight solids through polymerization of monomers in high-TOC D001 nonwastewaters that are chemical components in the manufacture of plastics. |

**Table 3**
**Technology Codes and Description of Technology-Based Standards**

| Technology Code | Description of Technology-Based Standard |
|---|---|
| PRECP | Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, fluorides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium), (2) caustic (i.e., sodium and/or potassium hydroxides), (3) soda ash (i.e., sodium carbonate), (4) sodium sulfide, (5) ferric sulfate or ferric chloride, (6) alum, or (7) sodium sulfate. Additional flocculating, coagulation, or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use. |
| RBERY | Thermal recovery of Beryllium. |
| RCGAS | Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale, filtering/adsorption of impurities, remixing for direct reuse or resale, and use of the gas as a fuel source. |
| RCORR | Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) distillation (i.e., thermal concentration), (2) ion exchange, (3) resin or solid adsorption, (4) reverse osmosis, and/or (5) incineration for the recovery of acid.<br>[NOTE: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.] |
| RLEAD | Thermal recovery of lead in secondary lead smelters. |
| RMERC | Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) must be subject to one or more of the following: (1) a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury, (2) a Best Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit, or (3) a state permit that establishes emission limitations (within meaning of Section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories). |
| RMETL | Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) ion exchange, (2) resin or solid (i.e., zeolites) adsorption, (3) reverse osmosis, (4) chelation/solvent extraction, (5) freeze crystallization, (6) ultrafiltration, and/or (7) simple precipitation (i.e., crystallization).<br>[NOTE: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.] |
| RORGS | Recovery of organics utilizing one or more of the following technologies: (1) distillation, (2) thin film evaporation, (3) steam stripping, (4) carbon adsorption, (5) critical fluid extraction, (6) liquid-liquid extraction, (7) precipitation/crystallization (including freeze crystallization), or (8) chemical phase separation techniques (i.e., addition of acids, bases, demulsifiers, or similar chemicals).<br>[NOTE: This does not preclude the use of other physical phase separation techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.] |
| RTHRM | Thermal recovery of metals or inorganics from nonwastewaters in units defined in LAC 33:V.109 under the definition of *industrial furnaces*. |
| RZINC | Resmelting for the purpose of recovery of zinc in high- temperature metal recovery units. |
| STABL | Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement, or (2) lime/pozzolans (e.g., fly ash and cement kiln dust)—this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metals or inorganics. |
| SSTRP | Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as temperature and pressure ranges, have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit such as the number of separation stages and the internal column design. This results in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse, and an extracted wastewater that must undergo further treatment as specified in the standard. |
| WETOX | Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). |
| WTRRX | Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction. |

Note 1: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in Table 2 by indicating the five-letter technology code that must be applied first, then the designation "fb" (an abbreviation for "followed by"), then the five-letter technology code for the technology that must be applied next, and so on.

Note 2: When two or more technologies (or treatment trains) are specified as alternative treatment standards, the five-letter technology codes (or the treatment trains) are separated by a semicolon (;) with the last technology preceded by the word "or." This indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard.

| Table 4<br>Best Demonstrated Available Technology Land Disposal Prohibitions References<br>"Best Demonstrated Available Technology (BDAT) Background Document" August 8, 1988. | |
|---|---|
| **EPA for the Following Wastes** | **Document Number** |
| F001-F005 | EPA/530-SW-88-031R |
| F006 | EPA/530-SW-88-031L |
| K001 | EPA/530-SW-88-031O |
| K015 | EPA/530-SW-88-031A |
| K016, K018-K020, K030 | EPA/530-SW-031B |
| K022 | EPA/530-SW-88-031Q |
| K024 | EPA/530-SW-88-031H |
| K037 | EPA/530-SW-88-031I |
| K046 | EPA/530-SW-88-031J |
| K048-K052 | EPA/530-SW-88-031C |
| K061 | EPA/530-SW-88-031D |
| K062 | EPA/530-SW-88-031E |
| K071 | EPA/530-SW-88-031F |
| K086 | EPA/530-SW-88-031N |
| K087 | EPA/530-SW-88-031M |
| K101, K102 | EPA/530-SW-88-031K |
| K103, K104 | EPA/530-SW-88-031G |

*Guidance Document for Applicable and Demonstrated Technologies for First Third Waste Codes*, EPA/530-SW-88-031P, August 8, 1988.

*Alternative Waste Management Technology Cost Estimates for the First Third Land Disposal Restrictions*, August 1988.

*Background Document for First Third Wastes to Support 40 CFR 268 Land Disposal Restrictions Final Rule, First Third Waste Volumes, Characteristics, and Required and Available Treatment Capacity*, EPA/530-SW-88-049, August 8, 1988.

*Comment Response Background Document for the First Third Proposed Land Disposal Restriction Rule*, August 8, 1988.

*Response to Capacity Related Comments Submitted on the First Third Proposed Land Disposal Restrictions Rule*, August 8, 1988.

*Response to BDAT Related Comments Submitted on the First Third Proposed Land Disposal Restrictions Rule*, Vol. I-III, August 8, 1988.

| Table 5<br>Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit[1]<br>According to LAC 33:V.2207.C.1 | |
|---|---|
| **Waste Code** | **Waste Description** |
| D004 | Toxicity Characteristic for Arsenic |
| D005 | Toxicity Characteristic for Barium |
| D006 | Toxicity Characteristic for Cadmium |
| D007 | Toxicity Characteristic for Chromium |
| D008 | Toxicity Characteristic for Lead |
| D009 | Toxicity Characteristic for Mercury |
| D010 | Toxicity Characteristic for Selenium |
| D011 | Toxicity Characteristic for Silver |
| F006 | Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum |
| F007 | Spent cyanide plating bath solutions from electroplating operations |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process |
| F010 | Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process |

| Table 5<br>Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit[1]<br>According to LAC 33:V.2207.C.1 | |
|---|---|
| **Waste Code** | **Waste Description** |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations |
| F012 | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process |
| F019 | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments |
| K005 | Wastewater treatment sludge from the production of chrome green pigments |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated) |
| K007 | Wastewater treatment sludge from the production of iron blue pigments |
| K008 | Oven residue from the production of chrome oxide green pigments |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces |
| K069 | Emission control dust/sludge from secondary lead smelting |
| K071 | Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting |
| K106 | Sludges from the mercury cell processes for making chlorine |
| P010 | Arsenic acid $H_3AsO_4$ |
| P011 | Arsenic oxide $As_2O_5$ |
| P012 | Arsenic trioxide |
| P013 | Barium cyanide |
| P015 | Beryllium |
| P029 | Copper cyanide Cu(CN) |
| P074 | Nickel cyanide $Ni(CN)_2$ |
| P087 | Osmium tetroxide |
| P099 | Potassium silver cyanide |
| P104 | Silver cyanide |
| P113 | Thallic oxide |
| P114 | Thallium (I) selenite |
| P115 | Thallium (I) sulfate |
| P119 | Amonium vanadate |
| P120 | Vanadium oxide$V_2O_5$ |
| P121 | Zinc cyanide |
| U032 | Calcium chromate |
| U145 | Lead phosphate |
| U151 | Mercury |
| U204 | Selenious acid |
| U205 | Selenium disulfide |
| U216 | Thallium (I) chloride |
| U217 | Thallium (I) nitrate |

[1] A combustion unit is defined as any thermal technology subject to LAC 33:V.Chapter 30 or Chapter 31 and Chapter 43.Subchapter N.

| Table 6<br>Wastes Excluded from Lab Packs under the Alternative Treatment Standards of LAC 33:V.2227.C | | |
|---|---|---|
| Hazardous waste with the following EPA hazardous waste codes may not be placed in lab packs under the alternative lab pack treatment standards of LAC 33:V.2227.C. | | |
| D009 | K062 | P012 |
| F019 | K071 | P076 |
| K003 | K100 | P078 |
| K004 | K106 | U134 |
| K005 | P010 | U151 |
| K006 | P011 | |

| Table 7. Universal Treatment Standards | | | |
|---|---|---|---|
| **Regulated Constituent-Common Name** | **CAS[1] Number** | **Wastewater Standard Concentration[2] in mg/L** | **Nonwastewater Standard Concentration[3] in mg/kg unless noted as "mg/L TCLP"** |
| **Organic Constituents** | | | |
| Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| Acetone | 67-64-1 | 0.28 | 160 |
| Acetonitrile | 75-05-8 | 5.6 | 38 |
| Acetophenone | 96-86-2 | 0.010 | 9.7 |
| 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| Acrolein | 107-02-8 | 0.29 | NA |
| Acrylamide | 79-06-1 | 19 | 23 |
| Acrylonitrile | 107-13-1 | 0.24 | 84 |
| Aldicarb sulfone[6] | 1646-88-4 | 0.056 | 0.28 |
| Aldrin | 309-00-2 | 0.021 | 0.066 |
| 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| Aniline | 62-53-3 | 0.81 | 14 |
| o-Anisidine (2-methoxyaniline) | 90-04-0 | 0.010 | 0.66 |
| Anthracene | 120-12-7 | 0.059 | 3.4 |
| Aramite | 140-57-8 | 0.36 | NA |
| alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| delta-BHC | 319-86-8 | 0.023 | 0.066 |
| gamma-BHC | 58-89-9 | 0.0017 | 0.066 |
| Barban[6] | 101-27-9 | 0.056 | 1.4 |
| Bendiocarb[6] | 22781-23-3 | 0.056 | 1.4 |
| Benomyl[6] | 17804-35-2 | 0.056 | 1.4 |
| Benzene | 71-43-2 | 0.14 | 10 |
| Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| Benzal chloride | 98-87-3 | 0.055 | 6.0 |
| Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| Bromodichloromethane | 75-27-4 | 0.35 | 15 |

| Table 7. Universal Treatment Standards | | | |
|---|---|---|---|
| **Regulated Constituent-Common Name** | **CAS[1] Number** | **Wastewater Standard Concentration[2] in mg/L** | **Nonwastewater Standard Concentration[3] in mg/kg unless noted as "mg/L TCLP"** |
| Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| Butylate[6] | 2008-41-5 | 0.042 | 1.4 |
| Butyl benzyl phthalate | 85-68-7 | 0.017 | 28 |
| 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| Carbaryl[6] | 63-25-2 | 0.006 | 0.14 |
| Carbenzadim[6] | 10605-21-7 | 0.056 | 1.4 |
| Carbofuran[6] | 1563-66-2 | 0.006 | 0.14 |
| Carbofuran phenol[6] | 1563-38-8 | 0.056 | 1.4 |
| Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/L TCLP |
| Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| Carbosulfan[6] | 55285-14-8 | 0.028 | 1.4 |
| Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| Chlorobenzilate | 510-15-6 | 0.10 | NA |
| 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | 0.28 |
| Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| Chloroethane | 75-00-3 | 0.27 | 6.0 |
| bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| Chloroform | 67-66-3 | 0.046 | 6.0 |
| bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | NA |
| Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| Chrysene | 218-01-9 | 0.059 | 3.4 |
| p-Cresidine | 120-71-8 | 0.010 | 0.66 |
| o-Cresol | 95-48-7 | 0.11 | 5.6 |
| m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| m-Cumenyl methylcarbamate[6] | 64-00-6 | 0.056 | 1.4 |
| Cyclohexanone | 108-94-1 | 0.36 | 0.75 mg/L TCLP |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| Dibromomethane | 74-95-3 | 0.11 | 15 |
| 2,4-D(2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |

| Table 7. Universal Treatment Standards | | | |
|---|---|---|---|
| **Regulated Constituent-Common Name** | **CAS[1] Number** | **Wastewater Standard Concentration[2] in mg/L** | **Nonwastewater Standard Concentration[3] in mg/kg unless noted as "mg/L TCLP"** |
| Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| Dibenzo(a,e)pyrene | 192-65-4 | 0.061 | NA |
| m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| Dieldrin | 60-57-1 | 0.017 | 0.13 |
| Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| 2,4-Dimethylaniline (2,4-xylidine) | 95-68-1 | 0.010 | 0.66 |
| 2-4-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |
| 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| Di-n-octyl-phthalate | 117-84-0 | 0.017 | 28 |
| p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | NA |
| Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| 1,4-Dioxane | 123-91-1 | 12.0 | 170 |
| Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| 1,2-Diphenyl hydrazine | 122-66-7 | 0.087 | NA |
| Disulfoton | 298-04-4 | 0.017 | 6.2 |
| Dithiocarbamates (total) [6] | NA | 0.028 | 28 |
| EPTC[6] | 759-94-4 | 0.042 | 1.4 |
| Endosulfan I | 959-98-8 | 0.023 | 0.066 |
| Endosulfan II | 33213-65-9 | 0.029 | 0.13 |
| Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| Endrin | 72-20-8 | 0.0028 | 0.13 |
| Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| Ethyl acetate | 141-78-6 | 0.34 | 33 |
| Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |
| Ethyl benzene | 100-41-4 | 0.057 | 10 |
| Ethyl ether | 60-29-7 | 0.12 | 160 |

| Table 7. Universal Treatment Standards | | | |
|---|---|---|---|
| **Regulated Constituent-Common Name** | **CAS[1] Number** | **Wastewater Standard Concentration[2] in mg/L** | **Nonwastewater Standard Concentration[3] in mg/kg unless noted as "mg/L TCLP"** |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.28 | 28 |
| Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| Ethylene oxide | 75-21-8 | 0.12 | NA |
| Famphur | 52-85-7 | 0.017 | 15 |
| Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| Fluorene | 86-73-7 | 0.059 | 3.4 |
| Formetanate hydrochloride[6] | 23422-53-9 | 0.056 | 1.4 |
| Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD) | 35822-46-9 | 0.000035 | 0.0025 |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) | 67562-39-4 | 0.000035 | 0.0025 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF) | 55673-89-7 | 0.000035 | 0.0025 |
| Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| Hexachloroethane | 67-72-1 | 0.055 | 30 |
| Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| Iodomethane | 74-88-4 | 0.19 | 65 |
| Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| Isodrin | 465-73-6 | 0.021 | 0.066 |
| Isosafrole | 120-58-1 | 0.081 | 2.6 |
| Kepone | 143-50-0 | 0.0011 | 0.13 |
| Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| Methanol | 67-56-1 | 5.6 | 0.75 mg/L TCLP |
| Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| Methiocarb[6] | 2032-65-7 | 0.056 | 1.4 |
| Methomyl[6] | 16752-77-5 | 0.028 | 0.14 |
| Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| 4,4-Methylene bis(2-Chloroaniline) | 101-14-4 | 0.50 | 30 |
| Methylene chloride | 75-09-2 | 0.089 | 30 |
| Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| Methyl methansulfonate | 66-27-3 | 0.018 | NA |
| Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| Metolcarb[6] | 1129-41-5 | 0.056 | 1.4 |
| Mexacarbate[6] | 315-18-4 | 0.056 | 1.4 |
| Molinate[6] | 2212-67-1 | 0.042 | 1.4 |
| Naphthalene | 91-20-3 | 0.059 | 5.6 |
| 2-Naphthylamine | 91-59-8 | 0.52 | NA |

| Table 7. Universal Treatment Standards | | | |
|---|---|---|---|
| **Regulated Constituent-Common Name** | **CAS[1] Number** | **Wastewater Standard Concentration[2] in mg/L** | **Nonwastewater Standard Concentration[3] in mg/kg unless noted as "mg/L TCLP"** |
| o-Nitroaniline | 88-74-4 | 0.27 | 14 |
| p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| Nitrobenzene | 98-95-3 | 0.068 | 14 |
| 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| N-nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |
| N-nitrosomethylethylamine | 10595-95-6 | 0.40 | 2.3 |
| N-Nitrosomorpholine | 59-89-2 | 0.40 | 2.3 |
| N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) | 3268-87-9 | 0.000063 | 0.005 |
| 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 | 0.005 |
| Oxamyl[6] | 23135-22-0 | 0.056 | 0.28 |
| Parathion | 56-38-2 | 0.014 | 4.6 |
| Total PCBs (sum of all PCB isomers, or all Arochlors)[8] | 1336-36-3 | 0.10 | 10 |
| Pebulate[6] | 1114-71-2 | 0.042 | 1.4 |
| Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| Phenacetin | 62-44-2 | 0.081 | 16 |
| Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| Phenol | 108-95-2 | 0.039 | 6.2 |
| 1,3-Phenylenediamine | 108-45-2 | 0.010 | 0.66 |
| Phorate | 298-02-2 | 0.021 | 4.6 |
| Phthalic acid | 100-21-0 | 0.055 | 28 |
| Phthalic anhydride | 85-44-9 | 0.055 | 28 |
| Physostigmine[6] | 57-47-6 | 0.056 | 1.4 |
| Physostigmine salicylate[6] | 57-64-7 | 0.056 | 1.4 |
| Promecarb[6] | 2631-37-0 | 0.056 | 1.4 |
| Pronamide | 23950-58-5 | 0.093 | 1.5 |
| Propham[6] | 122-42-9 | 0.056 | 1.4 |
| Propoxur[6] | 114-26-1 | 0.056 | 1.4 |
| Prosulfocarb[6] | 52888-80-9 | 0.042 | 1.4 |
| Pyrene | 129-00-0 | 0.067 | 8.2 |
| Pyridine | 110-86-1 | 0.014 | 16 |
| Safrole | 94-59-7 | 0.081 | 22 |
| Silvex (2,4,5-TP) | 93-72-1 | 0.72 | 7.9 |
| 2,4,5-T (2,4,5-Trichlorophenoxyacetic acid) | 93-76-5 | 0.72 | 7.9 |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |

| Table 7. Universal Treatment Standards | | | |
|---|---|---|---|
| **Regulated Constituent-Common Name** | **CAS[1] Number** | **Wastewater Standard Concentration[2] in mg/L** | **Nonwastewater Standard Concentration[3] in mg/kg unless noted as "mg/L TCLP"** |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| Thiodicarb [6] | 59669-26-0 | 0.019 | 1.4 |
| Thiophanate-methyl [6] | 23564-05-8 | 0.056 | 1.4 |
| Toluene | 108-88-3 | 0.080 | 10 |
| Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| Triallate [6] | 2303-17-5 | 0.042 | 1.4 |
| Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| Triethylamine[6] | 101-44-8 | 0.081 | 1.5 |
| tris-(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | 0.10 |
| Vernolate[6] | 1929-77-7 | 0.042 | 1.4 |
| Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| Xylenes-mixed isomers (sum of o-, m-, and p- xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| **Inorganic Constituents** | | | |
| Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| Barium | 7440-39-3 | 1.2 | 21 mg/L TCLP |
| Beryllium | 7440-41-7 | 0.82 | 1.22 mg/L TCLP |
| Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| Cyanides (Total)[4] | 57-12-5 | 1.2 | 590 |
| Cyanides (Amenable)[4] | 57-12-5 | 0.86 | 30 |
| Fluoride[5] | 16984-48-8 | 35 | NA |
| Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| Mercury—Nonwastewater from Retort | 7439-97-6 | NA | 0.20 mg/L TCLP |
| Mercury—All Others | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| Selenium[7] | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| Sulfide[5] | 18496-25-8 | 14 | NA |
| Thallium | 7440-28-0 | 1.4 | 0.20 mg/L TCLP |
| Vanadium [5] | 7440-62-2 | 4.3 | 1.6 mg/L TCLP |
| Zinc[5] | 7440-66-6 | 2.61 | 4.3 mg/L TCLP |

[1] CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.

[2] Concentration standards for wastewaters are expressed in mg/L and are based on analysis of composite samples.

[3] Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of LAC 33:V.Chapter 31 or LAC 33:V.Chapter 43.Subchapter N or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in LAC 33:V.2223. All concentration standards for nonwastewaters are based on analysis of grab samples.

[4] Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

[5] These constituents are not *underlying hazardous constituents* in characteristic wastes, according to the definition at LAC 33:V.2203.A.

[6] Between August 26, 1998 and March 4, 1999, these constituents are not *underlying hazardous constituents* as defined in LAC 33:V.2203.

[7] This constituent is not an underlying hazardous constituent as defined at LAC 33:V.2203 because its UTS level is greater than its TC level, thus a treated selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.

[8] This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004-D011 only.

[NOTE: NA means Not Applicable.]

**Table 8**
**Alternative Treatment Standards for Hazardous Debris[1]**

| Technology Description | Performance and/or Design and Operating Standard | Contaminent Restrictions[2] |
|---|---|---|
| A. Extraction Technologies | | |
| 1. Physical Extraction | | |
| a. Abrasive Blasting: Removal of contaminated debris surface layers using water and/or air pressure to propel a solid media (e.g., steel shot, aluminum oxide grit, plastic beads). | Glass, Metal, Plastic, Rubber: Treatment to a clean debris surface.[3]<br>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Removal of at least 0.6 cm of the surface layer; treatment to a clean debris surface.[3] | All Debris: none |
| b. Scarification, Grinding, and Planing: Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed. | Same as above | Same as above |
| c. Spalling: Drilling or chipping holes at appropriate locations and depths in the contaminated debris surface and applying a tool which exerts a force on the sides of those holes such that the surface layers are removed. The surface layer removed remains hazardous debris subject to the debris treatment standards. | Same as above | Same as above |
| d. Vibratory Finishing: Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed.[4] | Same as above | Same as above |
| e. High-Pressure Steam and Water Sprays: Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from the debris surfaces or to remove contaminated debris surface layers. | Same as above | Same as above |
| 2. Chemical Extraction | | |
| a. Water Washing and Spraying: Application of water sprays or water baths of sufficient temperature, pressure, residence time, agitation, surfactants, acids, bases, and detergents to remove hazardous contaminants from the debris surfaces and surface pares or to remove contaminated debris surface layers. | All Debris: Treatment to a clean debris surface[3].<br>Brick, Pavement, Cloth, Concrete, Paper, Rock, Wood: Debris must be no more than 1.2 cm (1/2 in.) in one dimension (i.e. thickness limit[5]) except that this thickness limit may be waived under an "Equivalent Technology" approval under LAC 33:V.2228.B[8]; debris surfaces must be in contact with water solution for at least 15 minutes. | Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Contaminant must be soluble to at least 5 percent by weight in water solution or in emulsion; if debris is contaminated with a dioxin-listed waste[6] an "Equivalent Technology" approval under LAC 33:V.2228.B[8] must be obtained. |

| Table 8<br>Alternative Treatment Standards for Hazardous Debris[1] | | |
|---|---|---|
| **Technology Description** | **Performance and/or Design and Operating Standard** | **Contaminent Restrictions[2]** |
| b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying nonaqueous liquid or liquid solution which causes the hazardous contaminants on contaminated debris to enter the liquid phase and be flushed away from the debris along with the liquid or liquid solution while using appropriate agitation, temperature, and residence time.[4] | Same as above | Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Same as above, except that contaminant must be soluble to at least 5 percent by weight in the solvent. |
| c. Vapor Phase Solvent Extraction: Application of organic vapor using sufficient agitation, temperature, and residence time to cause hazardous contaminants on contaminated debris surfaces and surface pores to enter the vapor phase and be flushed away with the organic vapor.[4] | Same as above, except that brick, cloth, concrete, paper, pavement, rock, and wood surfaces must be in contact with the organic vapor for at least 60 minutes. | Same as above |
| 3. Thermal Extraction | | |
| a. High Temperature Metals Recovery: Application of sufficient heat, residence time, mixing, fluxing agents, and/or carbon in smelting, melting, or refining furnace to separate metals from debris. | For refining furnaces, treated debris must be separated from treatment residues using simple physical or mechanical means[9], and, prior to further treatment, such residuals must meet the waste-specific treatment standards for organic compounds in waste contaminating the debris. | Debris contaminated with a dioxin-listed waste[5]: Obtain an "Equivalent Technology" approval under LAC 33:V.2228.B[8]. |
| b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas.[7] | All Debris: Obtain an "Equivalent Technology" approval under LAC 33:V.2228.B[8]; treated debris must be separated from treatment residues using simple physical or mechanical means[9], and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in waste contaminating the debris.<br>Brick, Cloth, Concrete, Paper, Pavement, Rock,Wood: Debris must be no more than 10 cm (4 in.) in one dimension (i.e. thickness limit[5]), except that this thickness limit may be waived under an "Equivalent Technology" approval under LAC 33:V.2228.B[8]. | All Debris: Metals other than mercury. |
| B. Destruction Technologies | | |
| 1. Biological Destruction (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegration of organic or nonmetallic inorganic compounds (i.e. inorganics that contain phosphorus, nitrogen, or sulfur) in units operated under either aerobic or anaerobic conditions. | All Debris: Obtain an "Equivalent Technology" approval under LAC 33:V.2228.B[8]; treated debris must be separated from treatment residues using simple physical or mechanical means[9], and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in waste contaminating the debris.<br>Brick, Cloth, Concrete, Paper, Rock, Wood: Debris must be no more than 1.2 cm (2 in.) in one dimension (i.e. thickness limit[5]), except that this thickness limit may be waived under an "Equivalent Technology" approval under LAC 33:V.2228.B[8]. | All Debris: Metals contaminants. |
| 2. Chemical Destruction | | |
| a. Chemical Oxidation: Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination reagents-(1) hypochlorite (i.e. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent efficiency[4]. Chemical oxidation specifically includes what is referred to as alkaline chlorination. | Same as above | All Debris: Metals contaminants. |

| Table 8<br>Alternative Treatment Standards for Hazardous Debris[1] | | |
|---|---|---|
| **Technology Description** | **Performance and/or Design and Operating Standard** | **Contaminent Restrictions[2]** |
| b. Chemical Reduction: Chemical reaction utilizing the following reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2)sodium, potassium, or alkali salts of sulfites, bisulfites, and metabisulfites, and polyethylene glycols (e.g. NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing agents of equivalent efficiency[4]. | Same as above | Same as above |
| 3. Thermal Destruction: Treatment in an incinerator operating in accordance with LAC 33:V.Chapter 31 or Chapter 43.Subchapter N; a boiler or industrial furnace operating in accordance with LAC 33:V.Chapter 30, or other thermal treatment unit operated in accordance with LAC 33:V.Chapter 32, or Chapter 43.Subchapter O, but excluding for purposes of these debris treatment standards Thermal Desorption units. | Treated debris must be separated from treatment residuals using simple physical or mechanical means[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. | Brick, Concrete, Glass, Pavement, Rock: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste[5]: Obtain an "Equivalent Technology" approval under LAC 33:V.2228.B[8], except that this requirement does not apply to vitrification. |
| C. Immobilization Technologies | | |
| 1. Macroencapsulation: Application of surface-coating materials such as polymeric organics (e.g. resins and plastics) or use a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. | Encapsulating material must completely encapsulate debris and must be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes). | None |
| 2. Microencapsulation: Stabilization of the debris with the following reagents (or waste reagents) such that the leachabilty of the hazardous contaminents is reduced: (1) Portland cement; and/or (2) lime/pozzolons (e.g. fly ash and cement kiln dust). Reagents (e.g. iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength or to reduce the leachability of the hazardous constituents.[5] | Leachability of the hazardous contaminants must be reduced. | None |
| 3. Sealing: Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant. | Sealing must avoid exposure of the debris surface to potential leaching media and sealant must be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes). | None |

ENDNOTE: [1]Hazardous debris must be treated by either these standards or the waste-specific treatment standards for the waste contaminating the debris. The treatment standards must be met for each type of debris contained in a mixture of debris types, unless the debris is converted into treatment residue as a result of the treatment process. Debris treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

ENDNOTE: [2]Contaminant restriction means that the technology is not BDAT for that contaminant. If debris containing a restricted contaminant is treated by the technology, the contaminant must be subsequently treated by the technology for which it is not restricted in order to be land disposed (and excluding from Subtitle C regulation).

ENDNOTE: [3]Clean debris surface means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5 percent of each square inch of surface area.

ENDNOTE: [4]Acids, solvents, and chemical reagents may react with some debris and contaminants to form hazardous compounds. For example, acid washing of cyanide-contaminated debris could result in the formation of hydrogen cyanide. Some acids may also react violently with some debris and contaminants, depending on the concentration of the acid and the type of debris and contaminants. Debris treaters should refer to the safety precautions specified in the Material Safety Data Sheets for various acids to avoid applying an incompatible acid to a particular debris/contaminant combination. For example, concentrated sulfuric acid may react violently with certain organic compounds, such as acrylonitrile.

ENDNOTE: [5]If reducing the particle size of debris to meet the treatment standards results in material that no longer meets the 60-mm minimum particle size limit for debris, such material is subject to the waste-specific treatment standards for the waste contaminating the material, unless the debris has been cleaned and separated from contaminated soil and waste prior to size reduction. At a minimum, simple physical or mechanical means must be used to provide such cleaning and separation of nondebris materials to ensure that the debris surface is free of caked soil, waste, or nondebris materials.

ENDNOTE: [6]Dioxin-listed wastes are EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, and F027.

ENDNOTE: [7]Thermal desorption is distinguished from thermal destruction in that the primary purpose of thermal desorption is to volatilize contaminates and to remove them from the treatment chamber for subsequent destruction or other treatment.

ENDNOTE: [8]The demonstration "Equivalent Technology" under LAC 33:V.2228.B must document that the technology treat appropriate contaminants to the level equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

ENDNOTE: [9]Any soil, waste, and other nondebris material that remains on the debris surface (or remains mixed with the debris) after treatment is considered a treatment residual that must be separated from the debris using, at a minimum, simple physical or mechanical means. Examples of simple physical or mechanical means are vibratory or trommel screening or water washing. The debris surface need not be cleaned to a "clean debris surface" as defined in endnote 3 when separating treated debris from residue; rather, the surface must be free of caked soil, waste, or other nondebris material. Treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

**Table 9.**
**List of Halogenated Organic Compounds (HOCs)**
**Regulated under LAC 33:V.2215**

In determining the concentration of HOCs in a hazardous waste for purposes of the LAC 33:V.2215 land disposal prohibition, EPA has defined the HOCs that must be included in a calculation as any compounds having a carbon-halogen bond that are listed in the table below.

| | | |
|---|---|---|
| **I.** | **Volatiles** | |
| | 1. | Bromodichloromethane |
| | 2. | Bromomethane |
| | 3. | Carbon Tetrachloride |
| | 4. | Chlorobenzene |
| | 5. | 2-Chloro-1,3-butadiene |
| | 6. | Chlorodibromomethane |
| | 7. | Chloroethane |
| | 8. | 2-Chloroethyl vinyl ether |
| | 9. | Chloroform |
| | 10. | Chloromethane |
| | 11. | 3-Chloropropene |
| | 12. | 1,2-Dibromo-3-chloropropane |
| | 13. | 1,2-Dibromomethane |
| | 14. | Dibromomethane |
| | 15. | Trans-1,4-Dichloro-2-butene |
| | 16. | Dichlorodifluoromethane |
| | 17. | 1,1-Dichloroethane |
| | 18. | 1,2-Dichloroethane |
| | 19. | 1,1-Dichloroethylene |
| | 20. | Trans-1,2-Dichloroethene |
| | 21. | 1,2-Dichloropropane |
| | 22. | Trans-1,3-Dichloropropene |
| | 23. | cis-1,3-Dichloropropene |
| | 24. | Iodomethane |
| | 25. | Methylene chloride |
| | 26. | 1,1,1,2-Tetrachloroethane |
| | 27. | 1,1,2,2-Tetrachloroethane |
| | 28. | Tetrachloroethene |
| | 29. | Tribromomethane |
| | 30. | 1,1,1-Trichloroethane |
| | 31. | 1,1,2-Trichloroethane |
| | 32. | Trichlorothene |
| | 33. | Trichloromonofluoromethane |
| | 34. | 1,2,3-Trichloropropane |
| | 35. | Vinyl Chloride |
| **II.** | **Semivolatiles** | |
| | 1. | Bis(2-chloroethoxy)ethane |
| | 2. | Bis(2-chloroethyl)ether |
| | 3. | Bis(2-chloroisopropyl)ether |
| | 4. | p-Chloroaniline |
| | 5. | Chlorobenzilate |
| | 6. | p-Chloro-m-cresol |
| | 7. | 2-Chloronaphthalene |
| | 8. | 2-Chlorophenol |
| | 9. | 3-Chloropropionitrile |
| | 10. | m-Dichlorobenzene |
| | 11. | o-Dichlorobenzene |
| | 12. | p-Dichlorobenzene |
| | 13. | 3,3'-Dichlorobenzidine |
| | 14. | 2,4-Dichlorophenol |
| | 15. | 2,6-Dichlorophenol |
| | 16. | Hexachlorobenzene |
| | 17. | Hexachlorobutadiene |
| | 18. | Hexachlorocyclopentadiene |
| | 19. | Hexachloroethane |
| | 20. | Hexachloroprophene |
| | 21. | Hexachloropropene |
| | 22. | 4,4'-Methylenebis(2-chloroanaline) |

**Table 9.**
**List of Halogenated Organic Compounds (HOCs)**
**Regulated under LAC 33:V.2215**

In determining the concentration of HOCs in a hazardous waste for purposes of the LAC 33:V.2215 land disposal prohibition, EPA has defined the HOCs that must be included in a calculation as any compounds having a carbon-halogen bond that are listed in the table below.

| | | |
|---|---|---|
| | 23. | Pentachlorobenzene |
| | 24. | Pentachloroethane |
| | 25. | Pentachloronitrobenzene |
| | 26. | Pentachlorophenol |
| | 27. | Pronamide |
| | 28. | 1,2,4,5-Tetrachlorobenzene |
| | 29. | 2,3,4,6-Tetrachlorophenol |
| | 30. | 1,2,4-Trichlorobenzene |
| | 31. | 2,4,5-Trichlorophenol |
| | 32. | 2,4,6-Trichlorophenol |
| | 33. | Tris(2,3-dibromopropyl)phosphate |
| **III.** | **Organochlorine Pesticides** | |
| | 1. | Aldrin |
| | 2. | alpha-BHC |
| | 3. | beta-BHC |
| | 4. | delta-BHC |
| | 5. | gamma-BHC |
| | 6. | Chlorodane |
| | 7. | DDD |
| | 8. | DDE |
| | 9. | DDT |
| | 10. | Dieldrin |
| | 11. | Endosulfan I |
| | 12. | Endosulfan II |
| | 13. | Endrin |
| | 14. | Endrin aldehyde |
| | 15. | Heptachlor |
| | 16. | Heptachlor epoxide |

**Table 9.**
**List of Halogenated Organic Compounds (HOCs)**
**Regulated under LAC 33:V.2215**

In determining the concentration of HOCs in a hazardous waste for purposes of the LAC 33:V.2215 land disposal prohibition, EPA has defined the HOCs that must be included in a calculation as any compounds having a carbon-halogen bond that are listed in the table below.

| | | |
|---|---|---|
| | 17. | Isodrin |
| | 18. | Kepone |
| | 19. | Methoxyclor |
| | 20. | Toxaphene |
| **IV.** | **Phenoxyacetic Acid Herbicides** | |
| | 1. | 2,4-Dichlorophenoxyacetic acid |
| | 2. | Silvex |
| | 3. | 2,4,5-T |
| **V.** | **PCBs** | |
| | 1. | Aroclor 1016 |
| | 2. | Aroclor 1221 |
| | 3. | Aroclor 1232 |
| | 4. | Aroclor 1242 |
| | 5. | Aroclor 1248 |
| | 6. | Aroclor 1254 |
| | 7. | Aroclor 1260 |
| | 8. | PCBs not otherwise specified |
| **VI.** | **Dioxins and Furans** | |
| | 1. | Hexachlorodibenzo-p-dioxins |
| | 2. | Hexachlorodibenzofuran |
| | 3. | Pentachlorodibenzo-p-dioxins |
| | 4. | Pentachlorodibenzofuran |
| | 5. | Tetrachlorodibenzo-p-dioxins |
| | 6. | Tetrachlorodibenzofuran |
| | 7. | 2,3,7,8-Tetrachlorodibenzo-p-dioxin |

**Table 10.**
**Wastes Excluded from the Treatment Standards under LAC 33:V.2223**

| Facility Name[1] and Address | Waste Code | See Also | Regulated Hazardous Constituent | Wastewaters Concentration (mg/L) (Notes) | Nonwastewaters Concentration (mg/Kg) (Notes) |
|---|---|---|---|---|---|
| Craftsman Plating and Tinning Corp. Chicago, IL | F006 | Table 2 | Cyanides (Total) | 1.2 (2) | 1800 (4) |
| | | | Cyanides (amenable) | 0.86 (2) and (3) | 30 (4) |
| | | | Cadmium | 1.6 | NA |
| | | | Chromium | 0.32 | NA |
| | | | Lead | 0.040 | NA |
| | | | Nickel | 0.44 | NA |
| Northwestern Plating Works, Inc. Chicago, IL | F006 | Table 2 | Cyanides (Total) | 1.2 (2) and (3) | 970 (4) |
| | | | Cyanides (amenable) | 0.86 (2) | 30 (4) |
| | | | Cadmium | 1.6 | NA |
| | | | Chromium | 0.32 | NA |
| | | | Lead | 0.040 | NA |
| | | | Nickel | 0.44 | NA |

[1] A facility may certify compliance with these treatment standards according to provisions in LAC 33:V.2245 and 2247.

[2] Cyanide Wastewater Standards for F006 are based on analysis of composite samples.

[3] These facilities must comply with 0.86 mg/L for amenable cyanides in the wastewater exiting the alkaline chlorination system. These facilities must also comply with LAC 33:V.2245.D for appropriate monitoring frequency consistent with the facilities' waste analysis plan.

[4] Cyanide nonwastewaters are analyzed using SW-846 Method 9010C or 9012B, sample size 10 grams, distillation time, 1 hour and 15 minutes.

[NOTE: NA means Not Applicable.]

| Table 11. |
|---|
| Appendix VII, Table 1, Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the LDRs, of 40 CFR 268, published July 1, 2001, and in 66 FR 27297, May 16, 2001, is hereby incorporated by reference. |

**Table 12.**
**Metal-Bearing Wastes Prohibited From Dilution in a Combustion Unit According to LAC 33:V.2207.C[1]**

| Waste Code | Waste Description |
|---|---|
| D004 | Toxicity characteristic for arsenic. |
| D005 | Toxicity characteristic for barium. |
| D006 | Toxicity characteristic for cadmium. |
| D007 | Toxicity characteristic for chromium. |
| D008 | Toxicity characteristic for lead. |
| D009 | Toxicity characteristic for mercury. |
| D010 | Toxicity characteristic for selenium. |
| D011 | Toxicity characteristic for silver. |
| F006 | Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. |
| F007 | Spent cyanide plating bath solutions from electroplating operations. |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. |
| F010 | Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process. |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. |
| F012 | Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process. |
| F019 | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process. |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments. |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated). |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. |
| K008 | Oven residue from the production of chrome oxide green pigments. |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces. |
| K069 | Emission control dust/sludge from secondary lead smelting. |

**Table 12.**
**Metal-Bearing Wastes Prohibited From Dilution in a Combustion Unit According to LAC 33:V.2207.C[1]**

| Waste Code | Waste Description |
|---|---|
| K071 | Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used. |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. |
| K106 | Sludges from the mercury cell processes for making chlorine. |
| P010 | Arsenic acid $H_3AsO_4$. |
| P011 | Arsenic oxide $As_2O_5$. |
| P012 | Arsenic trioxide. |
| P013 | Barium cyanide. |
| P015 | Beryllium. |
| P029 | Copper cyanide Cu(CN). |
| P074 | Nickel cyanide $Ni(CN)_2$. |
| P087 | Osmium tetroxide. |
| P099 | Potassium silver cyanide. |
| P104 | Silver cyanide. |
| P113 | Thallic oxide. |
| P114 | Thallium (I) selenite. |
| P115 | Thallium (I) sulfate. |
| P119 | Ammonium vanadate. |
| P120 | Vanadium oxide $V_2O_5$. |
| P121 | Zinc cyanide. |
| U032 | Calcium chromate. |
| U145 | Lead phosphate. |
| U151 | Mercury. |
| U204 | Selenious acid. |
| U205 | Selenium disulfide. |
| U216 | Thallium (I) chloride. |
| U217 | Thallium (I) nitrate. |

[1] A combustion unit is defined as any thermal technology subject to LAC 33:V.Chapter 30, Chapter 31, and/or Chapter 43.Subchapter N.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:1057 (December 1990), amended LR 17:658 (July 1991), LR 21:266 (March 1995), LR 22:22 (January 1996), LR 22:834 (September 1996), LR 23:566 (May 1997), LR 24:301 (February 1998), LR 24:670 (April 1998), LR 24:1732 (September 1998), LR 25:451 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:282 (February 2000), LR 27:295 (March 2001), LR 29:322 (March 2003), LR 30:1682 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 32:828 (May 2006), LR 32:1843 (October 2006), LR 34:625 (April 2008), LR 34:1014 (June 2008).

# Chapter 23. Waste Piles

## §2301. Applicability

A. The regulations in this Subpart apply to owners and operators of facilities that store or treat hazardous waste in piles, except as specified in LAC 33:V.1501.

B. The regulations in this Subpart do not apply to owners or operators of waste piles that are closed with wastes left in place. Such waste piles are subject to regulations as specified in LAC 33:V.Chapter 25 (Landfills).

C. The owner or operator of any waste pile that is inside or under a structure that provides protection from

precipitation so that neither run-off nor leachate is generated is in compliance with LAC 33:V.Chapter 33 (Groundwater Protection) provided that:

1. the waste pile is designed as specified in LAC 33:V.2303.A and is inspected as required by LAC 33:V.2307 on a quarterly basis (or less often with the approval of the administrative authority);

2. liquids or materials containing free liquids are not placed in the pile;

3. the pile is protected from surface water run-off by the structure or in some other manner;

4. the pile, where necessary, is designed and operated to control dispersal of the waste by wind or by means other than wetting; and

5. the pile will not generate leachate through decomposition or other reactions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1107 (June 1998).

## §2303. Design and Operating Requirements

A. A waste pile (except for the portion of the waste pile in operation prior to date of issuance of the hazardous waste permit) must have:

1. a synthetic liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil, or groundwater or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or, groundwater or surface water) during the active life of the facility. The liner must be:

a. constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operations;

b. placed upon a foundation or base capable of providing support to the liner and resistant to pressure gradients above and below the liner in order to prevent failure of the liner due to settlement, compression, or uplift; and

c. installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

2. a leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The administrative authority will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 centimeters (1 foot). The leachate collection and removal system must be constructed of materials that are:

a. chemically resistant to the waste managed in the pile and the leachate expected to be generated;

b. of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and any equipment used at the pile; and

c. designed and operated to function without clogging through the scheduled closure of the waste pile.

B. The owner or operator may be exempted from the requirements of LAC 33:V.2303.A if the administrative authority finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents into the groundwater or surface water at any future time. In deciding whether to grant an exemption, the administrative authority will consider:

1. the nature and quantity of the wastes;

2. the proposed alternate design and operation;

3. the hydrogeologic setting of the facility, including attenuating capacity and thickness of the liners and soils present between the pile, and groundwater or surface water; and

4. all other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.

C. The owner or operator of each new waste pile unit, each lateral expansion of a waste pile unit, and each replacement of an existing waste pile unit must install two or more liners and a leachate collection and removal system above and between such liners.

1. The liner system must include:

a. a top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

b. a composite bottom liner consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than $1 \times 10^{-7}$ cm/sec. The administrative authority may require additional liner design requirements based on the location of the waste pile in relation to drinking water aquifers.

2. The liners must comply with LAC 33:V.2303.A.1.a-c.

3. The leachate collection and removal system immediately above the top liner must be designed, constructed, operated, and maintained to collect and remove leachate from the waste pile during the active life and post-closure care period. The administrative authority will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 1 foot (30 cm). The leachate collection and removal system must comply with LAC 33:V.2303.C.4.c-d.

4. The leachate collection and removal system between the liners (and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems) is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner which are likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this Section are satisfied by installation of a system that is, at a minimum:

a. constructed with a bottom slope of 2 percent or more;

b. constructed of granular drainage materials with a hydraulic conductivity of $1 \times 10^{-2}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of $3 \times 10^{-5}$ $m^2$/sec or more;

c. constructed of materials that are chemically resistant to the waste managed in the waste pile and the leachate expected to be generated and that are of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the waste pile;

d. designed and operated to minimize clogging during the active life and post-closure care period; and

e. constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed from the sump.

5. The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

6. The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of groundwater.

D. The administrative authority may approve alternative design or operating practices to those specified in LAC 33:V.2303.C if the owner or operator demonstrates to the administrative authority that such design and operating practices, together with location characteristics:

1. will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as the liners and leachate collection and removal systems specified in LAC 33:V.2303.C; and

2. will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

E. LAC 33:V.2303.C does not apply to monofills that are granted a waiver by the administrative authority in accordance with LAC 33:V.2903.L.

F. The owner or operator of any replacement waste pile unit is exempt from LAC 33:V.2303.C if:

1. the existing unit was constructed in compliance with the design standards of Section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

2. there is no reason to believe that the liner is not functioning as designed.

G. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 24-hour, 25-year storm.

H. The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

I. Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

J. If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the pile to control wind dispersal. Wetting of the waste pile for control of particulate matter is not allowed unless the waste pile is equipped with a leachate collection system equivalent to LAC 33:V.2303.A.2.

K. The owner or operator of a double-lined waste pile is subject to regulation under LAC 33:V.Chapter 33 and the following conditions.

1. The pile must be underlain by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. Both liners must meet all the specifications of LAC 33:V.2303.A.1.

2. A leak detection system must be designed, constructed, maintained, and operated between the liners to detect any migration of liquids into the space between the liners.

3. The pile must have a leachate collection and removal system above the top liner that is designed, constructed, maintained, and operated in accordance with LAC 33:V.2303.A.2.

4. If liquid leaks into the leak detection system, the owner or operator must:

a. notify the Office of Environmental Services of the leak in writing within seven days after detecting the leak; and

b. within a period of time specified in the permit, remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of the liquids through the liner, and obtain a certification from a qualified engineer that, to the best of his knowledge and opinion, the leak has been stopped.

L. The administrative authority will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this Section are satisfied.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 20:1000 (September 1994), LR 21:266, 267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2480 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2111 (October 2007), LR 34:997 (June 2008).

## §2304. Action Leakage Rate

A. The administrative authority shall approve an action leakage rate for waste pile units subject to LAC 33:V.2303.C or D. The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

B. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly flow rate from the monitoring data obtained under LAC 33:V.2309.C to an average daily flow rate (gallons per acre per day) for each sump. Unless the administrative authority approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §2305. Exemptions

A. There are no exemptions from the groundwater protection requirements in LAC 33:V.Chapter 33 except as provided in LAC 33:V.3301.C.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 20:1000 (September 1994).

## §2306. Response Actions

A. The owner or operator of waste pile units subject to LAC 33:V.2303.C or D must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in LAC 33:V.2306.B.

B. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

1. notify the Office of Environmental Services in writing of the exceedance within seven days of the determination;

2. submit a preliminary written assessment to the Office of Environmental Services within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

3. determine to the extent practicable the location, size, and cause of any leak;

4. determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

5. determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

6. within 30 days after the notification that the action leakage rate has been exceeded, submit to the Office of Environmental Services the results of the analyses specified in LAC 33:V.2306.B.3-5, of actions taken, and of remedial actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the administrative authority a report summarizing the results of any remedial actions taken and actions planned.

C. To make the leak and/or remediation determinations in LAC 33:V.2306.B.3-5, the owner or operator must:

1. assess the sources of liquids and amounts of liquids by source;

2. conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to

identify the sources of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

3. assess the seriousness of any leaks in terms of potential for escaping into the environment; or

4. document why such assessments are not needed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2480 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2111 (October 2007), LR 34:1897 (September 2008).

## §2307. Inspection of Synthetic Liners

A. The facility must provide the Office of Environmental Services with 30 days advance notice of the initial liner installation to allow the administrative authority the opportunity to inspect the liner and its installation.

B. The liner must be inspected on a regular basis by removing the waste pile. The facility must notify the Office of Environmental Services at least 30 days prior to the inspection to allow the administrative authority the opportunity to inspect the liner. If deterioration, a crack, or other condition is identified that is causing or could cause a leak, the owner or operator must:

1. notify the administrative authority of the condition in writing within seven days after detecting the condition; and

2. repair or replace the liner and foundation or base and obtain a certification from an independent qualified engineer that, to the best of his knowledge and opinion, the liner and foundation or base have been repaired and leakage will not occur; or

3. if a detection monitoring program pursuant to LAC 33:V.3317 has already been established in the permit (to be complied with only if a leak occurs), comply with that program and any other applicable requirements of LAC 33:V.Chapter 33 within the period of time specified in the permit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2480 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2111 (October 2007).

## §2309. Monitoring and Inspection

A. During construction or installation, liners (except in the case of existing portions of piles exempt from LAC 33:V.2303.A), and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

1. synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

2. soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

B. While a waste pile is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

1. deterioration, malfunctions, or improper operation of run-on and run-off control systems;

2. proper functioning of wind dispersal control systems, where present;

3. the presence of leachate in and proper functioning of leachate collection and removal systems, where present. Leachate must be disposed of properly; and

4. the presence of liquids in leak detection system.

C. An owner or operator required to have a leak detection system under LAC 33:V.2303.C must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 33:1626 (August 2007).

## §2311. Special Requirements for Ignitable or Reactive Waste

A. Ignitable or reactive waste must not be placed in a waste pile unless the waste and the pile satisfy all applicable requirements of LAC 33:V.Chapter 22, and:

1. the waste is treated, rendered, or mixed before or immediately after placement in the pile so that:

a. the resulting waste, mixture, or dissolution of material no longer meets the description of ignitable or reactive waste under the characteristics of ignitability or reactivity in LAC 33:V.4903.B or D; and

b. the general requirements for ignitable, reactive, or incompatible wastes as specified in LAC 33:V.1517.B are met; or

2. the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:1057 (December 1990), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1898 (September 2008).

### §2313. Special Requirements for Incompatible Wastes

A. Incompatible wastes, or incompatible wastes and materials must not be placed in the same pile, unless LAC 33:V.1517.B or 4321 for interim status facilities is complied with.

B. A pile of hazardous waste that is incompatible with any waste or other stored nearby in containers, other piles, open tanks, or surface impoundments must be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device.

C. Hazardous waste must not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with LAC 33:V.1517.B or 4321 for interim status facilities.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §2315. Closure and Post-Closure Care

A. At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless LAC 33:V.109.*Hazardous Waste*.6 applies.

B. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection A of this Section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must either:

1. close the facility and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills as specified in LAC 33:V.2521; or

2. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment.

C. The owner or operator of a waste pile that does not comply with the liner requirements of LAC 33:V.2303.A.1 and is not exempt under LAC 33:V.2301.C and 2303.B must:

1. include in the closure plan for the pile under LAC 33:V.3511 a plan for complying with LAC 33:V.2315.A and a contingent plan for complying with LAC 33:V.2315.B in case all contaminated subsoils cannot be practicably removed at closure; and

2. prepare a contingent post-closure plan under LAC 33:V.3523 for complying with LAC 33:V.2315.B in case all contaminated subsoils cannot be practicably removed at closure.

D. The cost estimates calculated under LAC 33:V.3705 and 3709 for closure and post-closure care of a pile subject to this Section must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under LAC 33:V.2315.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992), amended by the Office of the Secretary, LR 24:2245 (December 1998).

### §2317. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027

A. Hazardous wastes F020, F021, F022, F023, F026, and F027 must not be placed in waste piles that are not enclosed (as defined in LAC 33:V.2301.C) unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by the administrative authority pursuant to the standards set out in this Subsection, and in accord with all other applicable requirements of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37. The factors to be considered are:

1. the volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials co-disposed with these wastes; and

4. the effectiveness of additional treatment, design, or monitoring techniques.

B. The administrative authority may determine that additional design, operating, and monitoring requirements are necessary for piles managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air so as to protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 20:1000 (September 1994).

# Chapter 24. Hazardous Waste Munitions and Explosives Storage

## §2401. Applicability

A. The requirements of this Chapter apply to owners or operators who store munitions and explosive hazardous wastes, except as LAC 33:V.1501 provides otherwise.

[NOTE: Depending on explosive hazards, hazardous waste munitions and explosives may also be managed in other types of storage units, including containment buildings (LAC 33:V.Chapter 18), tanks (LAC 33:V.Chapter 19), or containers (LAC 33:V.Chapter 21). See LAC 33:V.5309 for storage of waste military munitions.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1739 (September 1998).

## §2403. Design and Operating Standards

A. Hazardous waste munitions and explosives storage units must be designed and operated with containment systems, controls, and monitoring that:

1. minimize the potential for detonation or other means of release of hazardous waste, hazardous constituents, hazardous decomposition products, or contaminated runoff to the soil, groundwater, surface water, and atmosphere;

2. provide a primary barrier, which may be a container (including a shell) or tank, designed to contain the hazardous waste;

3. for wastes stored outdoors, provide that the waste and containers will not be in standing precipitation;

4. for liquid wastes, provide a secondary containment system that assures that any released liquids are contained and promptly detected and removed from the waste area or vapor detection system that assures that any released liquids or vapors are promptly detected and an appropriate response taken (e.g., additional containment, such as overpacking or removal from the waste area); and

5. provide monitoring and inspection procedures that assure the controls and containment systems are working as designed and that releases that may adversely impact human health or the environment are not escaping from the unit.

B. Hazardous waste munitions and explosives stored under this Chapter may be stored in one of the following.

1. Earth-covered magazines, must be:

a. constructed of waterproofed, reinforced concrete or structural steel arches, with steel doors that are kept closed when not being accessed;

b. designed and constructed as follows:

i. to be of sufficient strength and thickness to support the weight of any explosives or munitions stored and any equipment used in the unit;

ii. to provide working space for personnel and equipment in the unit; and

iii. to withstand movement activities that occur in the unit; and

c. located and designed, with walls and earthen covers that direct an explosion in the unit in a safe direction, so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.

2. Above-ground magazines must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.

3. Outdoor or open storage areas must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.

C. Hazardous waste munitions and explosives must be stored in accordance with a standard operating procedure specifying procedures to ensure safety, security, and environmental protection. If these procedures serve the same purpose as the security and inspection requirements of LAC 33:V.1507, the preparedness and prevention procedures of LAC 33:V.1511, and the contingency plan and emergency procedures requirements of LAC 33:V.1513, then these procedures will be used to fulfill those requirements.

D. Hazardous waste munitions and explosives must be packaged to ensure safety in handling and storage.

E. Hazardous waste munitions and explosives must be inventoried at least annually.

F. Hazardous waste munitions and explosives and their storage units must be inspected and monitored as necessary to ensure the explosives' safety and to ensure that there is no migration of contaminants out of the unit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1739 (September 1998).

## §2405. Closure and Post-Closure Care

A. At closure of a magazine or unit that stored hazardous waste under this Chapter, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste and manage them as hazardous waste unless LAC 33:V.109.*Hazardous Waste*.6 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for magazines or units must meet all of the requirements specified in LAC 33:V.Chapters 35 and 37, except that the owner or operator may defer closure of the unit as long as it remains in service as a munitions or explosives magazine or storage unit.

B. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection A of this Section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he or she must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (LAC 33:V.2521).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1740 (September 1998).

# Chapter 25. Landfills

## §2501. Applicability

A. The regulations in this Chapter apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as specified in LAC 33:V.1501.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1107 (June 1998).

## §2503. Design and Operating Requirements

A. Any landfill that is not covered by LAC 33:V.2503.K or 4512.A must have a liner system for all portions of the landfill (except for existing portions of such landfill). The liner system must have:

1. a liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil, or groundwater or surface water throughout the active life (including the closure period) of the landfill. The liner, at a minimum, must consist of a synthetic liner laid on top of a permanent barrier at the bottom and along the sides of the landfill. The liner must be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner must be installed to cover all surrounding earth likely to be in contact with the waste or leachate. The liner must be:

a. constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

b. placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift;

c. be resistant to the action of the elements, contents placement (including equipment used to place contents), and chemical action of the contents by means protecting the integrity of the barrier; and

d. the permanent barrier shall be at least 3 feet of recompacted clay with a permeability of $1 \times 10^{-7}$ cm/sec or less and so designed and operated as to prevent endangering any fresh-water aquifer by the migration of contaminants from the facility, or equivalent system acceptable to administrative authority; and

2. a leachate collection and removal system immediately above the synthetic liner that is designed, constructed, maintained and operated to collect and remove leachate from the landfill. The administrative authority will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 centimeters (1 foot). The leachate collection and removal system must be designed and operated to function without clogging through the scheduled closure of the landfill and constructed of materials that are:

a. chemically resistant to the waste managed in the landfill and the leachate expected to be generated; and

b. of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and any equipment used at the landfill.

B. Unless the permittee demonstrates to the administrative authority that the first permeable zone in which groundwater monitoring would occur is not a potable water aquifer, a leachate detection system shall be provided. A permanent barrier of at least 3 feet of recompacted clay with a permeability of $1 \times 10^{-7}$ cm/sec or less shall be installed below the leachate detection system, which is located immediately under the liner system as required by LAC 33:V.2503.A unless an equivalent system is acceptable to the administrative authority.

C. The owner or operator of any replacement landfill unit is exempt from LAC 33:V.2503.L if:

1. the existing unit was constructed in compliance with the design standards of Section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

2. there is no reason to believe that the liner is not functioning as designed.

D. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from a 24-hour, 25-year storm.

E. The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

F. Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to

maintain the design capacity of the system. Collected material must be disposed of properly.

G. If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the landfill to control wind dispersal. Wetting of the landfill for control of particulate matter is not allowed unless the landfill is equipped with a leachate collection system equivalent to LAC 33:V.2503.A.2.

H. The administrative authority will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this Section are satisfied.

I. If noxious gases are generated, (or have the potential to be generated), the administrative authority may specifically require a gas collection and control system.

J. Accumulated rainfall and groundwater must be removed from the active portions of landfills in a timely manner.

K. Materials That May Be Landfilled

1. Materials that may be landfilled using clay encapsulation in compliance with the permit, any order of the assistant secretary, and state or federal regulations, if they meet the following criteria:

a. the material does not contain free liquid, except for laboratory packs;

b. the content of the metals listed in LAC 33:V.4903.D as amended does not exceed 50 percent;

c. the free cyanide content does not exceed 500 ppm;

d. the phenol concentration does not exceed 5 percent;

e. the PCB content does not exceed 50 ppm;

f. any leachate that would be produced can be handled by the facility with existing technology;

g. halogenated solvents content does not exceed 5 percent, i.e., waste streams numbers F001, F002, K016, K019, K029, K030, K085, K095, K096, P028, U025, U037, U044, U048, U070, U071, U072, U076, U077, U078, U079, U080, U083, U084, U131, U184, U207, U208, U209, U210, U226, U227, and U228;

h. nonhalogenated solvents content does not exceed 10 percent, i.e, waste streams numbers F003, F004, F005, F009, K025, U019, U056, U159, U220, and U239;

i. the material is not a confined gas;

j. it is not an *infectious waste* as defined in LAC 33:V.109;

k. it is not an ignitable waste as described in LAC 33:V.4903.B;

l. it is not a corrosive waste as characterized by the pH limits in LAC 33:V.4903.C;

m. it is not a reactive waste as described in LAC 33:V.4903.D;

n. it is not a *radioactive waste* as defined by the Radiation Protection regulations (LAC 33:XV); and

o. it is not a listed *hazardous waste* as defined in LAC 33:V.Chapter 49 and it is not banned from land disposal as set forth in LAC 33:V.Chapter 22.

2. Permittees may request approval for landfilling of wastes which do not meet the criteria on a case-by-case basis. Such a request must include specific data on how such waste does not meet the criteria, documentation on why high technology destruction/detoxification is not practicable, and provide risk assessment information as to why such landfilling will not endanger public health or the environment.

3. The administrative authority may authorize changes, up to double the specified value, on the following materials listed in LAC 33:V.2503.J.1: metals, free cyanide, phenol, halogenated solvents, and nonhalogenated solvents.

L. The owner or operator of each new landfill unit on which construction commenced after January 29, 1992, each lateral expansion of a landfill unit on which construction commenced after July 29, 1992, and each replacement of an existing landfill unit that was to commence reuse after July 29, 1992, must have installed two or more liners and a leachate collection and removal system above and between such liners. *Construction commences* is as defined in LAC 33:V.109.*Existing Facilities*.

1. The liner system must include:

a. a top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

b. a composite bottom liner consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than $1 \times 10^{-7}$ cm/sec. The administrative authority may require additional liner design requirements based on the location of the landfill in relation to drinking water aquifers.

2. The liners must comply with LAC 33:V.2503.A.1.a-d.

3. The leachate collection and removal system immediately above the top liner must be designed, constructed, operated, and maintained to collect and remove leachate from the landfill during the active life and post-closure care period. The administrative authority will specify design and operating conditions in the permit to ensure that

the leachate depth over the liner does not exceed 1 foot (30 cm). The leachate collection and removal system must comply with LAC 33:V.2503.L.4.c-d.

4. The leachate collection and removal system between the liners (and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems) is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner which are likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this Section are satisfied by installation of a system that is, at a minimum:

a. constructed with a bottom slope of 2 percent or more;

b. constructed of granular drainage materials with a hydraulic conductivity of 1 x $10^{-2}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3 x $10^{-5}$ $m^2$/sec or more;

c. constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated and are of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the landfill;

d. designed and operated to minimize clogging during the active life and post-closure care period; and

e. constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

5. The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

6. The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of groundwater.

M. The administrative authority may approve alternative design or operating practices to those specified in LAC 33:V.2503.L if the owner or operator demonstrates to the administrative authority that such design and operating practices, together with location characteristics:

1. will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as the liners and leachate collection and removal systems specified in LAC 33:V.2503.L; and

2. will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

N. The double liner requirements set forth in LAC 33:V.2503.L may be waived by the administrative authority for any monofill under the following circumstances:

1. the monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the Toxicity Characteristic in LAC 33:V.4903.E (Hazardous Waste Numbers D004 through D017 only); and

2. the monofill meets the criteria of either LAC 33:V.2503.M.2.a or b below:

a. the monofill:

i. has at least one liner for which there is no evidence that such liner is leaking;

ii. is located more than 1/4 mile from an *underground source of drinking water* (as that term is defined in LAC 33:V.109); and

iii. is in compliance with generally applicable groundwater monitoring requirements for facilities with permits;

b. the owner or operator demonstrates that the monofill is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any future time.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:220 (March 1990), LR 17:368 (April 1991), LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 21:266, 267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2480 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1898 (September 2008).

## §2504. Action Leakage Rate

A. The administrative authority shall approve an action leakage rate for landfill units subject to LAC 33:V.2503.L or M. The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

B. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under LAC 33:V.2507.D to an average daily flow rate (gallons per acre per day) for each sump. Unless the administrative authority approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period and monthly during the post-closure care period when monthly monitoring is required under LAC 33:V.2507.D.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §2505. Exemption

A. There are no exemptions from the groundwater protection requirements in LAC 33:V.Chapter 33.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §2507. Monitoring and Inspection

A. The facility must provide the department with 30 days advanced notice of the times of installation to allow the administrative authority the opportunity to inspect the liner and installation.

B. During construction or installation, liners (except in the case of existing portions of landfills exempt from LAC 33:V.2503.A) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

1. synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

2. soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

C. While a landfill is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

[Comment: The permit application must include a detailed inspection plan.]

1. deterioration, malfunctions, or improper operation of run-on and run-off control systems;

2. the presence of liquids in leak detection systems;

3. proper functioning of wind dispersal control systems, where present; and

4. the presence of leachate in and proper functioning of leachate collection and removal systems, where present.

D. An owner or operator required to have a leak detection system under LAC 33:V.2503.L or M must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

1. After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If, at any time during the post-closure care period, the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

2. *Pump Operating Level*—a liquid level proposed by the owner or operator and approved by the administrative authority based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995).

## §2508. Response Actions

A. The owner or operator of landfill units subject to LAC 33:V.2503.L or M must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in LAC 33:V.2508.B.

B. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

1. notify the Office of Environmental Services in writing of the exceedance within seven days of the determination;

2. submit a preliminary written assessment to the Office of Environmental Services, within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

3. determine to the extent practicable the location, size, and cause of any leak;

4. determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

5. determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

6. within 30 days after the notification that the action leakage rate has been exceeded, submit to the Office of Environmental Services the results of the analyses specified in LAC 33:V.2508.B.3-5, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the administrative authority a report summarizing the results of any remedial actions taken and remedial actions planned.

C. To make the leak and/or remediation determinations in LAC 33:V.2508.B.3-5, the owner or operator must:

1. assess the sources of liquids and amounts of liquids by source;

2. conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the sources of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

3. assess the seriousness of any leaks in terms of potential for escaping into the environment; or

4. document why such assessments are not needed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2481 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2461 (October 2005), LR 33:2111 (October 2007), LR 34:1898 (September 2008).

## §2509. Surveying and Recordkeeping

A. The owner or operator of a landfill must maintain the following items in the operating record:

1. on a map, the exact location and dimensions, including depth of each cell with respect to permanently surveyed benchmarks; and

2. the contents of each cell and the approximate location of each hazardous waste type within each cell.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §2511. Special Requirements for Ignitable or Reactive Waste

A. Except as provided in LAC 33:V.2511.B and 2519, ignitable or reactive waste must not be placed in a landfill, unless the waste and landfill meet all applicable requirements of LAC 33:V.Chapter 22, and:

1. the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste in LAC 33:V.4903.B or D; and

2. LAC 33:V.1517.B is complied with.

B. Except for prohibited wastes subject to treatment standards in LAC 33:V.Chapter 22, ignitable wastes in containers may be landfilled without meeting the requirements of LAC 33:V.2511.A, provided that the wastes are disposed of in such a way that they are protected from any material or conditions which may cause them to ignite. At a minimum, ignitable wastes:

1. must be disposed of in non-leaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause ignition of the wastes; and

2. must be covered daily with soil or other non-combustible material to minimize the potential for ignition of the wastes; and

3. must not be disposed of in cells that contain or will contain other wastes which may generate heat sufficient to cause ignition of the waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:1057 (December 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1740 (September 1998).

## §2513. Special Requirements for Incompatible Wastes

A. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same landfill cell, unless LAC 33:V.1517 is complied with or LAC 33:V.4321 for interim status facilities.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984).

## §2515. Special Requirements for Bulk and Containerized Liquids

A. The placement of bulk or noncontainerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.

B. Containers holding free liquids must not be placed in a landfill unless:

1. all free-standing liquids:

a. have been removed by decanting, or other methods;

b. have been mixed with sorbent or solidified so that the free-standing liquid is no longer present; or

c. have been otherwise eliminated; or

2. the container is very small such as an ampule; or

3. the container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or

4. the container is a *lab pack* as defined in LAC 33:V.109 and is disposed of in accordance with LAC 33:V.2519.

C. To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095B (Paint Filter Liquids Test) as described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.

D. The placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the administrative authority, or the administrative authority determines, that:

1. the only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

2. placement in such owner's or operator's landfill will not present a risk of contamination of any *underground source of drinking water* or *groundwater* (as these terms are defined in LAC 33:V.109).

E. Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in this Subsection; materials that pass one of the tests in Paragraph E.2 of this Section; or materials that are determined by the administrative authority to be nonbiodegradable through the petition process in LAC 33:I.Chapter 9.

1. Nonbiodegradable Sorbents. The following materials are nonbiodegradable sorbents:

a. inorganic minerals, other inorganic materials, and elemental carbon, such as aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas (illite), vermiculites, zeolites; calcium carbonate (organic free limestone); oxides/hydroxides, alumina, lime, silica (sand), diatomaceous earth; perlite (volcanic glass); expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/activated carbon; or

b. high molecular weight synthetic polymers, such as polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers. This does not include polymers derived from biological material or polymers specifically designed to be degradable; or

c. mixtures of these nonbiodegradable materials.

2. Tests for Nonbiodegradable Sorbents

a. The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)-Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi.

b. The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)-Standard Practice for Determining Resistance of Plastics to Bacteria.

c. The sorbent material is determined to be nonbiodegradable under OECD test 301B: [$CO_2$ Evolution (Modified Sturm Test)].

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, in LR 10:200 (March 1984), amended LR 16:220 (March 1990), LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 22:821 (September 1996), amended by the Office of the Secretary, LR 23:299 (March 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:680 (April 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:998 (June 2008).

## §2517. Special Requirements for Containers

A. Unless they are very small, such as an ampule, containers must be either:

1. at least 90 percent full when placed in the landfill; or

2. emptied and crushed flat, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §2519. Disposal of Small Containers of Hazardous Waste in Overpacked Drums (Lab Packs)

A. Lab packs may be placed in a landfill if the following requirements are met:

1. hazardous waste must be packaged in non-leaking inside containers. The inside containers must be designed and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the contained waste. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the Louisiana Department of Public Safety (LDPS) hazardous materials/hazardous waste regulations LAC 33:V.Subpart 2.Chapter 101 if those regulations specify a particular inside container for the waste;

2. the inside containers must be overpacked in an open head LDPS specification metal shipping container LAC 33:V.Subpart 2.Chapter 101 of no more than 416-liter (110-gallon) capacity and surrounded by, at a minimum, a sufficient quantity of sorbent material to completely sorb all of the liquid contents of the inside containers. The metal

outer container must be full after packing with inside containers and sorbent material;

3. the sorbent material used must not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers in accordance with LAC 33:V.1517;

4. *incompatible wastes*, as defined in LAC 33:V.109, must not be placed in the same outside container;

5. *reactive wastes*, other than cyanide- or sulfide-bearing waste, as defined in LAC 33:V.109, must be treated or rendered non-reactive prior to packaging in accordance with Paragraphs A.1, 2, 3, 4, and 6 of this Section. Cyanide- and sulfide- bearing reactive waste may be packed in accordance with Paragraphs A.1, 2, 3, 4, and 6 of this Section without first being treated or rendered non-reactive; and

6. such disposal is in compliance with the requirements of LAC 33:V.Chapter 22. Persons who incinerate lab packs according to the requirements in LAC 33:V.2227.C.1 may use fiber drums in place of metal outer containers. Such fiber drums must meet the LDPS specifications in LAC 33:V.Subpart 2.Chapter 101, and be overpacked according to the requirements in Paragraph A.2 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, in LR 10:200 (March 1984), amended LR 16:1057 (December 1990), LR 21:266 (March 1995).

## §2521. Closure and Post-Closure Care

A. At final closure of the landfill or upon closure of any cell, the owner or operator must cover the landfill or cell with a final cover designed and constructed to:

1. provide long-term minimization of migration of liquids through the closed landfill;

2. function with minimum maintenance;

3. promote drainage and minimize erosion or abrasion of the cover;

4. accommodate settling and subsidence so that the cover's integrity is maintained; and

5. have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

B. After final closure, the owner or operator must comply with all post-closure requirements contained in LAC 33:V.3519-3527, including maintenance and monitoring throughout the post-closure care period (specified in the permit under LAC 33:V.3521.A.1). The owner or operator must:

1. maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

2. maintain and monitor the leak detection system in accordance with LAC 33:V.2503.L.4.d, 2503.L.5, and 2507.D, where such a system is present between double liner systems and comply with all other applicable leak detection system requirements of LAC 33:V.Subpart 1;

3. continue to operate the leachate collection and removal system until leachate is no longer detected;

4. maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.Chapter 33;

5. prevent run-on and run-off from eroding or otherwise damaging the final cover; and

6. protect and maintain surveyed benchmarks used in complying with LAC 33:V.Chapter 33.

C. During the post-closure care period, if liquid leaks into a leak detection system installed under LAC 33:V.3305, the owner or operator must notify the Office of Environmental Services of the leak in writing within seven days after detecting the leak.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 21:944 (September 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2481 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2112 (October 2007).

## §2523. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027

A. Hazardous Wastes F020, F021, F022, F023, F026, and F027 must not be placed in a landfill unless the owner or operator operates the landfill in accordance with a management plan for these wastes which is approved by the administrative authority pursuant to the standards set out in this Subsection, and in accordance with all other applicable requirements of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37. The factors to be considered are:

1. the volume, physical and chemical characteristics of the wastes, including their potential to migrate through the soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials codisposed with these wastes; and

4. the effectiveness of additional treatment, design or monitoring requirements.

B. The administrative authority may determine that additional design, operating and monitoring requirements are necessary for landfills containing hazardous wastes F020,

F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air so as to protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 20:1000 (September 1994).

# Chapter 26. Corrective Action Management Units and Special Provisions for Cleanup

## §2601. Applicability of Corrective Action Management Unit (CAMU) Regulations

A. Except as provided in Subsection B of this Section, CAMUs are subject to the requirements of LAC 33:V.2603.

B. CAMUs that were approved before April 22, 2002, or for which substantially complete applications (or equivalents) were submitted to the department on or before November 20, 2000, are subject to the requirements in LAC 33:V.2602 for grandfathered CAMUs. CAMU waste, activities, and design shall not be subject to the standards in LAC 33:V.2603, so long as the waste, activities, and design remain within the general scope of the CAMU as approved.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:285 (February 2000), LR 28:1191 (June 2002), repromulgated LR 28:1580 (July 2002).

## §2602. Grandfathered Corrective Action Management Units (CAMUs)

A. To implement remedies under LAC 33:V.3322 or RCRA Section 3008(h), or to implement remedies at a permitted facility that is not subject to LAC 33:V.3322, the administrative authority may designate an area at the facility as a CAMU under the requirements in this Section. *CAMU* means an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility. A CAMU must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the CAMU originated. One or more CAMUs may be designated at a facility.

1. Placement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes.

2. Consolidation or placement of remediation wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements.

B. The administrative authority may designate a *regulated unit* (as defined in LAC 33:V.3301.B) as a CAMU, or may incorporate a regulated unit into a CAMU, under the following conditions.

1. The regulated unit is closed or closing, meaning it has begun the closure process under LAC 33:V.3513 or 4383.

2. Inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.

3. The LAC 33:V.Chapters 33, 35, and 37 requirements and the unit-specific requirements of Chapters 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, and 43 that applied to that regulated unit shall continue to apply to that portion of the CAMU after incorporation into the CAMU.

C. The administrative authority shall designate a CAMU in accordance with the following.

1. The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies.

2. Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents.

3. The CAMU shall include uncontaminated areas of the facility only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility.

4. Areas within the CAMU where wastes remain in place after closure of the CAMU shall be managed and contained so as to minimize future releases, to the extent practicable.

5. The CAMU shall expedite the timing of remedial activity implementation, when appropriate and practicable.

6. The CAMU shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU.

7. The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.

D. The owner/operator shall provide sufficient information to enable the administrative authority to designate a CAMU in accordance with the criteria in LAC 33:V.2603.

E. The administrative authority shall specify, in the permit or order, requirements for CAMUs, which include the following.

1. The areal configuration of the CAMU shall be provided.

2. Requirements for remediation waste management shall include the specification of applicable design, operation, and closure requirements.

3. Requirements for groundwater monitoring shall be sufficient to:

a. continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in groundwater from sources located within the CAMU; and

b. detect and subsequently characterize releases of hazardous constituents to groundwater that may occur from areas of the CAMU in which wastes will remain in place after closure of the CAMU.

4. Closure and post-closure requirements shall include the following:

a. closure of CAMUs, which shall:

i. minimize the need for further maintenance; and

ii. control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere;

b. requirements for closure of CAMUs that shall include the following, as appropriate and as deemed necessary by the administrative authority, for a given CAMU:

i. requirements for excavation, removal, treatment, or containment of wastes;

ii. for areas in which wastes will remain after closure of the CAMU, requirements for capping of such areas; and

iii. requirements for removal and decontamination of equipment, devices, and structures used in remediation waste management activities within the CAMU;

c. in establishing specific closure requirements for CAMUs under LAC 33:V.2603.E, the administrative authority shall consider the following factors:

i. CAMU characteristics;

ii. volume of wastes that remain in place after closure;

iii. potential for releases from the CAMU;

iv. physical and chemical characteristics of the waste;

v. hydrological and other relevant environmental conditions at the facility that may influence the migration of any potential or actual releases; and

vi. potential for exposure of humans and environmental receptors if releases were to occur from the CAMU; and

d. post-closure requirements, as necessary to protect human health and the environment, including for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed, to ensure the integrity of any cap, final cover, or other containment system.

F. The administrative authority shall document the rationale for designating CAMUs and shall make such documentation available to the public.

G. Incorporation of a CAMU into an existing permit must be approved by the administrative authority according to the procedures for department-initiated permit modifications under LAC 33:V.323 or according to the permit modification procedures of LAC 33:V.321.C.

H. The designation of a CAMU does not change EPA's existing authority to address cleanup levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1191 (June 2002).

## §2603. Corrective Action Management Units (CAMUs)

A. To implement remedies under LAC 33:V.3322 or RCRA Section 3008(h), or to implement remedies at a permitted facility that is not subject to LAC 33:V.3322, the administrative authority may designate an area at the facility as a CAMU under the requirements in this Section. *CAMU* means an area within a facility that is used only for managing CAMU-eligible wastes for implementing corrective action or cleanup at the facility. A CAMU must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the CAMU originated. One or more CAMUs may be designated at a facility.

1. Definition. *CAMU-Eligible Waste*—

a. all solid and hazardous wastes and all media (including groundwater, surface water, soils, and sediments) and debris that are managed for implementing cleanup. As-generated wastes (either hazardous or nonhazardous) from ongoing industrial operations at a site are not CAMU-eligible wastes;

b. wastes that would otherwise meet the description in Subparagraph A.1.a of this Section are not CAMU-eligible wastes when:

i. the wastes are hazardous wastes found during cleanup in intact or substantially intact containers, tanks, or other non-land-based units found above ground, unless the wastes are first placed in the tanks, containers, or non-land-based units as part of cleanup or the containers or tanks are excavated during the course of cleanup; or

ii. the administrative authority exercises the discretion in Paragraph A.2 of this Section to prohibit the wastes from management in a CAMU; and

c. notwithstanding Subparagraph A.1.a of this Section, when appropriate, as-generated nonhazardous waste may be placed in a CAMU when such waste is being used to facilitate treatment or the performance of the CAMU.

2. The administrative authority may prohibit, where appropriate, the placement of waste in a CAMU when the administrative authority has or receives information that such wastes have not been managed in compliance with applicable land disposal treatment standards of LAC 33:V.Chapter 22, applicable unit design requirements of Chapters 5, 18, 19, 21, 23, 24, 25, 27, 28, 29, 32, and 35, or applicable unit design requirements of Chapter 43 or that noncompliance with other applicable requirements of this Chapter likely contributed to the release of the waste.

3. Prohibition against Placing Liquids in CAMUs

a. The placement of bulk or noncontainerized liquid hazardous waste or free liquids contained in hazardous waste (whether or not sorbents have been added) in any CAMU is prohibited except when placement of such wastes facilitates the remedy selected for the waste.

b. The requirements in LAC 33:V.2515.C for placement of containers holding free liquids in landfills apply to placement in a CAMU except when placement facilitates the remedy selected for the waste.

c. The placement of any liquid that is not a hazardous waste in a CAMU is prohibited unless such placement facilitates the remedy selected for the waste or a demonstration is made in accordance with LAC 33:V.2515.D.

d. The absence or presence of free liquids in either a containerized or a bulk waste must be determined in accordance with LAC 33:V.2515.B. Sorbents used to treat free liquids in CAMUs must meet the requirements of LAC 33:V.2515.D.

4. Placement of CAMU-eligible wastes into or within a CAMU does not constitute land disposal of hazardous wastes.

5. Consolidation or placement of CAMU-eligible wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements.

B. The administrative authority may designate a *regulated unit* (as defined in LAC 33:V.3301.B) as a CAMU or may incorporate a regulated unit into a CAMU under the following conditions.

1. The regulated unit is closed or closing, meaning it has begun the closure process under LAC 33:V.3513 or 4383.

2. Inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.

3. The LAC 33:V.Chapters 33, 35, and 37 requirements and the unit-specific requirements of Chapters 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, and 43 that applied to the regulated unit shall continue to apply to that portion of the CAMU after incorporation into the CAMU.

C. The administrative authority shall designate a CAMU that will be used for storage and/or treatment only in accordance with Subsection F of this Section. The administrative authority shall designate all other CAMUs in accordance with the following.

1. The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies.

2. Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents.

3. The CAMU shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing CAMU-eligible waste is more protective than management of such wastes at contaminated areas of the facility.

4. Areas within the CAMU where wastes remain in place after closure of the CAMU shall be managed and contained so as to minimize future releases, to the extent practicable.

5. The CAMU shall expedite the timing of remedial activity implementation, when appropriate and practicable.

6. The CAMU shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU.

7. The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.

D. The owner/operator shall provide sufficient information to enable the administrative authority to designate a CAMU in accordance with the criteria in this Section. This must include, unless not reasonably available, information on:

1. the origin of the waste and how it was subsequently managed (including a description of the timing and circumstances surrounding the disposal and/or release);

2. whether the waste was listed or identified as hazardous at the time of disposal and/or release; and

3. whether the disposal and/or release of the waste occurred before or after the land disposal requirements of LAC 33:V.Chapter 22 were in effect for the waste listing or characteristic.

E. The administrative authority shall specify, in the permit or order, requirements for CAMUs, which include the following.

1. The areal configuration of the CAMU shall be provided.

2. Except as provided in Subsection G of this Section, requirements for CAMU-eligible waste management shall include the specification of applicable design, operation, treatment, and closure requirements.

3. Minimum Design Requirements. CAMUs, except as provided in Subsection F of this Section, into which wastes are placed must be designed in accordance with the following.

a. Unless the administrative authority approves alternate requirements under Subparagraph E.3.b of this Section, CAMUs that consist of new, replacement, or laterally expanded units must include a composite liner and a leachate collection system that is designed and constructed to maintain less than a 30 cm depth of leachate over the liner. For purposes of this Section, *composite liner* means a system consisting of two components: the upper component must consist of a minimum 30 mil flexible membrane liner (FML), and the lower component must consist of at least a 2-foot layer of compacted soil with a hydraulic conductivity of no more than $1x10^{-7}$ cm/sec. FML components consisting of high density polyethylene (HDPE) must be at least 60 mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.

b. Alternate Requirements. The administrative authority may approve alternate requirements if:

i. the administrative authority finds that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents into the groundwater or surface water at least as effectively as the liner and leachate collection systems in Subparagraph E.3.a of this Section; or

ii. the CAMU is to be established in an area with existing significant levels of contamination, and the administrative authority finds that an alternative design, including a design that does not include a liner, would prevent migration from the unit that would exceed long-term remedial goals.

4. Minimum Treatment Requirements. Unless the wastes will be placed in a CAMU for storage and/or treatment only in accordance with Subsection F of this Section, CAMU-eligible wastes that, absent this Section, would be subject to the treatment requirements of LAC 33:V.Chapter 22 and that the administrative authority determines contain principal hazardous constituents must be treated to the standards specified in Subparagraph E.4.c of this Section.

a. Principal hazardous constituents are those constituents that the administrative authority determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

i. In general, the administrative authority will designate as principal hazardous constituents:

(a). carcinogens that pose a potential direct risk from ingestion or inhalation, at the site, at or above $10^{-3}$ risk level; and

(b). non-carcinogens that pose a potential direct risk from ingestion or inhalation, at the site, an order of magnitude or greater over their reference dose.

ii. The administrative authority will also designate constituents as principal hazardous constituents, when appropriate, when risks to human health and the environment posed by the potential migration of constituents in wastes to groundwater are substantially higher than cleanup levels or goals at the site. When making such a designation, the administrative authority may consider such factors as constituent concentrations and fate and transport characteristics under site conditions.

iii. The administrative authority may also designate other constituents as principal hazardous constituents that the administrative authority determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

b. In determining which constituents are principal hazardous constituents, the administrative authority must consider all constituents that, absent this Section, would be subject to the treatment requirements in LAC 33:V.Chapter 22.

c. Waste that the administrative authority determines contains principal hazardous constituents must meet treatment standards determined in accordance with Subparagraph E.4.d or e of this Section.

d. Treatment Standards for Wastes Placed in CAMUs

i. For non-metals, treatment must achieve 90 percent reduction in total principal hazardous constituent concentrations, except as provided by Clause E.4.d.iii of this Section.

ii. For metals, treatment must achieve 90 percent reduction in principal hazardous constituent concentrations as measured in leachate from the treated waste or media (tested according to the TCLP) or 90 percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by Clause E.4.d.iii of this Section.

iii. When treatment of any principal hazardous constituent to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the Universal Treatment Standard is not required. Universal Treatment Standards are identified in LAC 33:V.2299.Appendix, Table 7.

iv. For waste exhibiting the hazardous characteristic of ignitability, corrosivity, or reactivity, the waste must also be treated to eliminate these characteristics.

v. For debris, the debris must be treated in accordance with LAC 33:V.2230 or by methods described in or to levels established under Clauses E.4.d.i-iv or Subparagraph E.4.e of this Section, whichever the administrative authority determines is appropriate.

vi. Alternatives to TCLP. For metal-bearing wastes for which metals removal treatment is not used, the administrative authority may specify a leaching test other than the TCLP (Method 1311, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110) to measure treatment effectiveness, provided the administrative authority determines that an alternative leach testing protocol is appropriate for use and that the alternative more accurately reflects conditions at the site that affect leaching.

e. Adjusted Standards. The administrative authority may adjust the treatment level or method in Subparagraph E.4.d of this Section to a higher or lower level, based on one or more of the following factors, as appropriate. The adjusted level or method must be protective of human health and the environment:

i. the technical impracticability of treatment to the levels or by the methods in Subparagraph E.4.d of this Section;

ii. the levels or methods in Subparagraph E.4.d of this Section would result in concentrations of principal hazardous constituents that are significantly above or below cleanup standards applicable to the site (established either site-specifically or promulgated under state or federal law);

iii. the views of the affected local community on the treatment levels or methods in Subparagraph E.4.d of this Section, as applied at the site, and for treatment levels, the treatment methods necessary to achieve these levels;

iv. the short-term risks presented by the on-site treatment method necessary to achieve the levels or treatment methods in Subparagraph E.4.d of this Section; and

v. the long-term protection offered by the engineering design of the CAMU and related engineering controls:

(a). when the treatment standards in Subparagraph E.4.d of this Section are substantially met and the principal hazardous constituents in the waste or residuals are of very low mobility;

(b). when cost-effective treatment has been used and the CAMU meets the RCRA Subtitle C liner and leachate collection requirements for new land disposal units at LAC 33:V.2503.L and M;

(c). when, after review of appropriate treatment technologies, the administrative authority determines that cost-effective treatment is not reasonably available, and the CAMU meets the RCRA Subtitle C liner and leachate collection requirements for new land disposal units at LAC 33:V.2503.L and M;

(d). when cost-effective treatment has been used and the principal hazardous constituents in the treated wastes are of very low mobility; or

(e). when, after review of appropriate treatment technologies, the administrative authority determines that cost-effective treatment is not reasonably available, the principal hazardous constituents in the wastes are of very low mobility, and either the CAMU meets or exceeds the liner standards for new, replacement, or laterally expanded CAMUs in Subparagraphs E.3.a and b of this Section or the CAMU provides substantially equivalent or greater protection.

f. The treatment required by the treatment standards must be completed prior to, or within a reasonable time after, placement in the CAMU.

g. For the purpose of determining whether wastes placed in CAMUs have met site-specific treatment standards, the administrative authority may, as appropriate, specify a subset of the principal hazardous constituents in the waste as analytical surrogates for determining whether treatment standards have been met for other principal hazardous constituents. This specification will be based on the degree of difficulty of treatment and analysis of constituents with similar treatment properties.

5. Except as provided in Subsection F of this Section, CAMUs shall have requirements for groundwater monitoring and corrective action that are sufficient to:

a. continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in groundwater from sources located within the CAMU;

b. detect and subsequently characterize releases of hazardous constituents to groundwater that may occur from areas of the CAMU in which wastes will remain in place after closure of the CAMU; and

c. provide notification to the administrative authority and corrective action as necessary to protect human health and the environment from releases to groundwater from the CAMU.

6. Except as provided in Subsection F of this Section, CAMUs shall have the following closure and post-closure requirements:

a. closure of CAMUs, which shall:

i. minimize the need for further maintenance; and

ii. control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, post-closure escape of hazardous wastes, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere;

b. requirements for closure of CAMUs that shall include the following, as appropriate and as deemed

necessary by the administrative authority, for a given CAMU:

i. requirements for excavation, removal, treatment, or containment of wastes; and

ii. requirements for removal and decontamination of equipment, devices, and structures used in CAMU-eligible waste management activities within the CAMU;

c. in establishing specific closure requirements for CAMUs under this Subsection, the administrative authority shall consider the following factors:

i. CAMU characteristics;

ii. volume of wastes that remain in place after closure;

iii. potential for releases from the CAMU;

iv. physical and chemical characteristics of the waste;

v. hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential or actual releases; and

vi. potential for exposure of humans and environmental receptors if releases were to occur from the CAMU;

d. cap requirements, as follows:

i. at final closure of the CAMU, for areas in which wastes will remain after closure of the CAMU, with constituent concentrations at or above remedial levels or goals applicable to the site, the owner or operator must cover the CAMU with a final cover designed and constructed to meet the following performance criteria, except as provided in Clause E.6.d.ii of this Section:

(a). provide long-term minimization of migration of liquids through the closed unit;

(b). function with minimum maintenance;

(c). promote drainage and minimize erosion or abrasion of the cover;

(d). accommodate settling and subsidence so that the cover's integrity is maintained; and

(e). have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present; and

ii. the administrative authority may determine that modifications to Clause E.6.d.i of this Section are needed to facilitate treatment or the performance of the CAMU (e.g., to promote biodegradation); and

e. post-closure requirements as necessary to protect human health and the environment and to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed, to ensure the integrity of any cap, final cover, or other containment system.

F. CAMUs used for storage and/or treatment only are CAMUs in which wastes will not remain after closure. Such CAMUs must be designated in accordance with all of the requirements of this Section, except as follows.

1. CAMUs that are used for storage and/or treatment only and that operate in accordance with the time limits established in the staging pile regulations at LAC 33:V.2605.D.1.c, H, and I are subject to the requirements for staging piles at LAC 33:V.2605.D.1.a and b and 2, E, F, J, and K in lieu of the performance standards and requirements for CAMUs in Subsection C and Paragraphs E.3-6 of this Section.

2. CAMUs that are used for storage and/or treatment only and that do not operate in accordance with the time limits established in the staging pile regulations at LAC 33:V.2605.D.1.c, H, and I:

a. must operate in accordance with a time limit, established by the administrative authority, that is no longer than necessary to achieve a timely remedy selected for the waste; and

b. are subject to the requirements for staging piles at LAC 33:V.2605.D.1.a and b and 2, E, F, J, and K in lieu of the performance standards and requirements for CAMUs in Subsection C and Paragraphs E.4 and 6 of this Section.

G. CAMUs into which wastes are placed where all wastes have constituent levels at or below remedial levels or goals applicable to the site do not have to comply with the requirements for liners at Subparagraph E.3.a of this Section, requirements for caps at Subparagraph E.6.d of this Section, groundwater monitoring requirements at Paragraph E.5 of this Section or, for treatment and/or storage-only CAMUs, the design standards at Subsection F of this Section.

H. The administrative authority shall provide public notice and a reasonable opportunity for public comment before designating a CAMU. Such notice shall include the rationale for any proposed adjustments under Subparagraph E.4.e of this Section to the treatment standards in Subparagraph E.4.d of this Section.

I. Notwithstanding any other provision of this Section, the administrative authority may impose additional requirements as necessary to protect human health and the environment.

J. Incorporation of a CAMU into an existing permit must be approved by the administrative authority according to the procedures for department-initiated permit modifications under LAC 33:V.323 or according to the permit modification procedures of LAC 33:V.321.C.

K. The designation of a CAMU does not change EPA's existing authority to address cleanup levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment,

Environmental Planning Division, LR 28:1192 (June 2002), amended LR 29:323 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 34:627 (April 2008), LR 34:1014 (June 2008).

## §2604. Temporary Units (TU)

A. For temporary tanks and container storage areas used to treat or store hazardous remediation wastes during remedial activities required under LAC 33:V.3322 or RCRA Section 3008(h), or at a permitted facility that is not subject to LAC 33:V.3322, the administrative authority may designate a unit at the facility as a temporary unit. A temporary unit must be located within the contiguous property under the control of the owner/operator where the wastes to be managed in the temporary unit originated. For temporary units, the administrative authority may replace the design, operating, or closure standard applicable to these units under LAC 33:V.Chapters 9-11, 15-21, 23-29, 31-37, and 43 with alternative requirements which protect human health and the environment.

B. Any temporary unit to which alternative requirements are applied in accordance with LAC 33:V.2603.A shall be:

1. located within the facility boundary; and

2. used only for treatment or storage of remediation wastes.

C. In establishing standards to be applied to a temporary unit, the administrative authority shall consider the following factors:

1. length of time such unit will be in operation;

2. type of unit;

3. volumes of wastes to be managed;

4. physical and chemical characteristics of the wastes to be managed in the unit;

5. potential for releases from the unit;

6. hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases; and

7. potential for exposure of humans and environmental receptors if releases were to occur from the unit.

D. The administrative authority shall specify in the permit or order the length of time which a temporary unit will be allowed to operate to be no longer than a period of one year. The administrative authority shall also specify the design, operating, and closure requirements for the unit.

E. The administrative authority may extend the operational period of a temporary unit once for no longer than a period of one year beyond that time originally specified in the permit or order, if the administrative authority determines that:

1. continued operation of the unit will not pose a threat to human health and the environment; and

2. continued operation of the unit is necessary to ensure timely and efficient implementation of remedial actions at the facility.

F. Incorporation of a temporary unit or a time-extension for a temporary unit into an existing permit shall be:

1. approved in accordance with the procedures for department-initiated permit modifications under LAC 33:V.323; or

2. requested by the owner/operator as a Class II modification according to the procedures under LAC 33:V.321.

G. The administrative authority shall document the rationale for designating a temporary unit and for granting time extensions for temporary units and shall make such documentation available to the public.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 21:944 (September 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:285 (February 2000).

## §2605. Staging Piles

[NOTE: This Section is written in a special format to make it easier to understand the regulatory requirements. Like other department and USEPA regulations, this establishes enforceable legal requirements. For this Section, *I* and *you* refer to the owner/operator.]

A. What is a staging pile? A staging pile is an accumulation of solid, non-flowing *remediation waste* (as defined in LAC 33:V.109) that is not a containment building and is used only during remedial operations for temporary storage at a facility. A staging pile must be located within the contiguous property under the control of the owner/operator where the wastes to be managed in the staging pile originated. Staging piles must be designated by the administrative authority according to the requirements in this Section. For the purposes of this Section, storage includes mixing, sizing, blending, or other similar physical operations as long as they are intended to prepare the wastes for subsequent management or treatment.

B. When may I use a staging pile? You may use a staging pile to store hazardous remediation waste (or remediation waste otherwise subject to land disposal restrictions) only if you follow the standards and design criteria the administrative authority has designated for that staging pile. The administrative authority must designate the staging pile in a permit or, at an interim status facility, in a closure plan or order (consistent with LAC 33:V.4303.A.5 and B.5). The administrative authority must establish conditions in the permit, closure plan, or order that comply with Subsections D-K of this Section.

C. What information must I provide to get a staging pile designated? When seeking a staging pile designation, you must provide:

1. sufficient and accurate information to enable the administrative authority to impose standards and design criteria for your staging pile according to Subsections D-K of this Section;

2. certification by an independent, qualified professional engineer for technical data, such as design drawings and specifications, and engineering studies, unless the administrative authority determines, based on information that you provide, that this certification is not necessary to ensure that a staging pile will protect human health and the environment; and

3. any additional information the administrative authority determines is necessary to protect human health and the environment.

D. What performance criteria must a staging pile satisfy? The administrative authority must establish the standards and design criteria for the staging pile in the permit, closure plan, or order.

1. The standards and design criteria must comply with the following:

a. the staging pile must facilitate a reliable, effective, and protective remedy;

b. the staging pile must be designed so as to prevent or minimize releases of hazardous wastes and hazardous constituents into the environment, and minimize or adequately control cross-media transfer, as necessary to protect human health and the environment (for example, through the use of liners, covers, runoff/run-on controls, as appropriate); and

c. the staging pile must not operate for more than two years, except when the administrative authority grants an operating term extension under Subsection I of this Section (entitled "May I receive an operating extension for a staging pile?"). You must measure the two-year limit, or other operating term specified by the administrative authority in the permit, closure plan, or order, from the first time you place remediation waste into a staging pile. You must maintain a record of the date when you first placed remediation waste into the staging pile for the life of the permit, closure plan, or order, or for three years, whichever is longer.

2. In setting the standards and design criteria, the administrative authority must consider the following factors:

a. length of time the pile will be in operation;

b. volumes of wastes you intend to store in the pile;

c. physical and chemical characteristics of the wastes to be stored in the unit;

d. potential for releases from the unit;

e. hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential releases; and

f. potential for human and environmental exposure to potential releases from the unit.

E. May a staging pile receive ignitable or reactive remediation waste? You must not place ignitable or reactive remediation waste in a staging pile unless:

1. you have treated, rendered, or mixed the remediation waste before you placed it in the staging pile so that:

a. the remediation waste no longer meets the definition of ignitable or reactive under LAC 33:V.4903.B or D; and

b. you have complied with LAC 33:V.1517.B; or

2. you manage the remediation waste to protect it from exposure to any material or condition that may cause it to ignite or react.

F. How do I handle incompatible remediation wastes in a staging pile? The term *incompatible waste* is defined in LAC 33:V.109. You must comply with the following requirements for incompatible wastes in staging piles:

1. you must not place incompatible remediation wastes in the same staging pile unless you have complied with LAC 33:V.1517.B;

2. if remediation waste in a staging pile is incompatible with any waste or material stored nearby in containers, other piles, open tanks, or land disposal units (for example, surface impoundments), you must separate the incompatible materials, or protect them from one another by using a dike, berm, wall, or other device; and

3. you must not pile remediation waste on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to comply with LAC 33:V.1517.B.

G. Are staging piles subject to Land Disposal Restrictions (LDR) and Minimum Technological Requirements (MTR)? No. Placing hazardous remediation wastes into a staging pile does not constitute land disposal of hazardous wastes or create a unit that is subject to the minimum technological requirements of RCRA 3004(o).

H. How long may I operate a staging pile? The administrative authority may allow a staging pile to operate for up to two years after hazardous remediation waste is first placed into the pile. You must use a staging pile no longer than the length of time designated by the administrative authority in the permit, closure plan, or order (the operating term), except as provided in Subsection I of this Section.

I. May I receive an operating extension for a staging pile?

1. The administrative authority may grant one operating term extension of up to 180 days beyond the operating term limit contained in the permit, closure plan, or order (see Subsection L of this Section for modification procedures). To justify to the administrative authority the need for an extension, you must provide sufficient and accurate information to enable the administrative authority to determine that continued operation of the staging pile:

a. will not pose a threat to human health and the environment; and

b. is necessary to ensure timely and efficient implementation of remedial actions at the facility.

2. The administrative authority may, as a condition of the extension, specify further standards and design criteria in the permit, closure plan, or order, as necessary, to ensure protection of human health and the environment.

J. What is the closure requirement for a staging pile located in a previously contaminated area?

1. Within 180 days after the operating term of the staging pile expires, you must close a staging pile located in a previously contaminated area of the site by removing or decontaminating all:

a. remediation waste;

b. contaminated containment system components; and

c. structures and equipment contaminated with waste and leachate.

2. You must also decontaminate contaminated subsoils in a manner and according to a schedule that the administrative authority determines will protect human health and the environment.

3. The administrative authority must include the above requirements in the permit, closure plan, or order in which the staging pile is designated.

K. What is the closure requirement for a staging pile located in an uncontaminated area?

1. Within 180 days after the operating term of the staging pile expires, you must close a staging pile located in an uncontaminated area of the site according to LAC 33:V.2315.A and 3507, or according to LAC 33:V.4379 and 4475.A.

2. The administrative authority must include the above requirement in the permit, closure plan, or order in which the staging pile is designated.

L. How may my existing permit (for example, RAP), closure plan, or order be modified to allow me to use a staging pile?

1. To modify a permit, other than a RAP, to incorporate a staging pile or staging pile operating term extension, either:

a. the administrative authority must approve the modification under the procedures for agency-initiated permit modifications in LAC 33:V.322; or

b. you must request a Class 2 modification under LAC 33:V.321.C.

2. To modify a RAP to incorporate a staging pile or staging pile operating term extension, you must comply with the RAP modification requirements under LAC 33:V.640 and 645.

3. To modify a closure plan to incorporate a staging pile or staging pile operating term extension, you must follow the applicable requirements under LAC 33:V.3511.C or 4381.C.

4. To modify an order to incorporate a staging pile or staging pile operating term extension, you must follow the terms of the order and the applicable provisions of LAC 33:V.4303.A.5 or B.5.

M. Is information about the staging pile available to the public? The administrative authority must document the rationale for designating a staging pile or staging pile operating term extension and make this documentation available to the public.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:285 (February 2000), amended LR 28:1196 (June 2002), amended by the Office of the Secretary, Legal Affairs Division, LR 34:998 (June 2008).

## §2607. Disposal of CAMU-Eligible Wastes in Permitted Hazardous Waste Landfills

A. The administrative authority with regulatory oversight at the location where the cleanup is taking place may approve placement of CAMU-eligible wastes in hazardous waste landfills not located at the site from which the waste originated, without the wastes meeting the requirements of LAC 33:V.Chapter 22, if the conditions in Paragraphs A.1-3 of this Section are met.

1. The waste must meet the definition of CAMU-eligible waste in LAC 33:V.2603.A.1.

2. The administrative authority with regulatory oversight at the location where the cleanup is taking place shall identify principal hazardous constituents in such waste, in accordance with LAC 33:V.2603.E.4.a and b, and require that such principal hazardous constituents are treated to any of the following standards specified for CAMU-eligible wastes:

a. the treatment standards under LAC 33:V.2603.E.4.d;

b. treatment standards adjusted in accordance with LAC 33:V.2603.E.4.e.i, iii, iv, or v.(a); or

c. treatment standards adjusted in accordance with LAC 33:V.2603.E.4.e.v.(b) when treatment has been used and that treatment significantly reduces the toxicity or mobility of the principal hazardous constituents in the waste, minimizing the short-term and long-term threat posed by the waste, including the threat at the remediation site.

3. The landfill receiving the CAMU-eligible waste must have a RCRA hazardous waste permit, meet the requirements for new landfills in LAC 33:V.Chapter 25, and be authorized to accept CAMU-eligible wastes. For the purposes of this requirement, "permit" does not include interim status.

B. The person seeking approval shall provide sufficient information to enable the administrative authority with regulatory oversight at the location where the cleanup is taking place to approve placement of CAMU-eligible waste in accordance with Subsection A of this Section. Information required by LAC 33:V.2603.D.1-3 for CAMU applications must be provided, unless it is not reasonably available.

C. The administrative authority with regulatory oversight at the location where the cleanup is taking place shall provide public notice and a reasonable opportunity for public comment before approving CAMU-eligible waste for placement in an off-site permitted hazardous waste landfill, consistent with the requirements for CAMU approval at LAC 33:V.2603.H. The approval must be specific to a single remediation.

D. Applicable hazardous waste management requirements in LAC 33:V. Chapters 5, 18, 19, 21, 23, 24, 25, 27, 28, 29, 32, and 35, including recordkeeping requirements to demonstrate compliance with treatment standards approved under this Section, for CAMU-eligible waste must be incorporated into the receiving facility permit through permit issuance or a permit modification, providing notice and an opportunity for comment and a hearing. Notwithstanding LAC 33:V.307.A, a landfill may not receive hazardous CAMU-eligible waste under this Section unless its permit specifically authorizes receipt of such waste.

E. For each remediation, CAMU-eligible waste may not be placed in an off-site landfill authorized to receive CAMU-eligible waste in accordance with Subsection D of this Section until the following additional conditions have been met.

1. The landfill owner/operator shall notify the administrative authority responsible for oversight of the landfill and persons on the facility mailing list, maintained in accordance with LAC 33:V.717.A.1.e, of his or her intent to receive CAMU-eligible waste in accordance with this Section. The notice must identify the source of the remediation waste, the principal hazardous constituents in the waste, and treatment requirements.

2. Any comments from persons on the facility mailing list, including objections to the receipt of the CAMU-eligible waste, shall be provided to the administrative authority within 15 days of notification.

3. The administrative authority shall have the opportunity to object to the placement of the CAMU-eligible waste in the landfill for a period of 30 days after notification. The administrative authority may extend the review period an additional 30 days because of public concerns or insufficient information.

4. CAMU-eligible wastes shall not be placed in the landfill until the administrative authority has notified the facility owner/operator that he or she does not object to its placement.

5. If the administrative authority objects to the placement or does not notify the facility owner/operator that he or she has chosen not to object, the facility shall not receive the waste, notwithstanding LAC 33:V.307.A, until the objection has been resolved or the owner/operator obtains a permit modification in accordance with the procedures of LAC 33:V.321.C specifically authorizing receipt of the waste.

6. As part of the permit issuance or permit modification process of Paragraph D of this Section, the administrative authority may modify, reduce, or eliminate the notification requirements of this Subsection as they apply to specific categories of CAMU-eligible waste, based on minimal risk.

F. Generators of CAMU-eligible wastes sent off-site to a hazardous waste landfill under this Section must comply with the requirements of LAC 33:V.2245.D. Off-site facilities treating CAMU-eligible wastes to comply with this Section must comply with the requirements of LAC 33:V.2247.C, except that the certification must be with respect to the treatment requirements of Paragraph A.2 of this Section.

G. For the purposes of this Section only, the *design of the CAMU* in LAC 33:V.2603.E.4.e.v means design of the permitted RCRA Subtitle C landfill.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1196 (June 2002).

# Chapter 27. Land Treatment

## §2701. Applicability

A. The regulations in this Chapter apply to owners and operators of facilities that treat or dispose of hazardous waste in land treatment units, except as LAC 33:V.1501 provides otherwise.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1107 (June 1998).

## §2703. Design and Operating Requirements

A. The owner or operator must design, construct, operate and maintain the unit to maximize the degradation, transformation, and immobilization of hazardous constituents in the treatment zone. The owner or operator must design, construct, operate, and maintain the unit in accordance with all design and operating conditions that were used in the treatment demonstration under LAC 33:V.2707. At a minimum, the administrative authority will specify the following in the facility permit:

1. the rate and method of waste application to the treatment zone;

2. measures to control soil pH;

3. measures to enhance microbial or chemical reactions (e.g., fertilization, tilling); and

4. measures to control the moisture content of the treatment zone.

B. The owner or operator must design, construct, operate, and maintain the treatment zone to minimize run-off of hazardous constituents during the active life of the land treatment unit.

C. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a 24-hour, 25-year storm.

D. The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

E. Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system. Collected material must be disposed of properly.

F. If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator must manage the unit to control wind dispersal.

G. The owner or operator must inspect the unit weekly and after storms to detect evidence of:

1. deterioration, malfunctions, or improper operation of run-on and run-off control systems; and

2. improper functioning of wind dispersal control measures.

H. The administrative authority will specify in the facility permit how the owner or operator will design, construct, operate and maintain the land treatment unit in compliance with this Section.

I. Landfarms shall be isolated from contact with public, private, irrigation, or livestock water supplies, both surface and underground. A permit application shall address the technical requirements of LAC 33:V.Chapters 15, 27, 33, 35, and 37.

J. Requirements

1. Soils shall be fine-grained with high clay or organic content (e.g., CL, OL, MH, CH, and OH under the Unified Soil Classification System).

2. Soils shall maintain a high cation exchange capacity to absorb metallic elements in the waste by natural (pH range of the soil) or artificial means (additives).

3. Landfarms shall be located in a hydrologic section where the historic high water table is at a safe depth below the zone of incorporation, or the water table at the site shall be controlled to a safe depth below this zone (see LAC 33:V.2705.C.2).

4. Topography shall provide for drainage to prevent ponding.

5. Land slope shall be controlled to prevent erosion.

6. Run-off shall be collected and contained and disposed of by irrigation through reapplication to the treatment zone during drought periods, evaporation, or treatment. Any discharge into the off-site environment shall be governed by a NPDES permit.

7. Groundwater monitoring systems shall be installed that meet with the approval of the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:684 (August 1990).

## §2705. Treatment Program

A. An owner or operator subject to this Chapter must establish a land treatment program that is designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The treatment program must include:

1. the wastes that are capable of being treated at the unit based on a demonstration under LAC 33:V.2707;

2. design measures and operating practices necessary to maximize the success of degradation, transformation, and immobilization processes in the treatment zone in accordance with LAC 33:V.2703.A; and

3. unsaturated zone monitoring provisions meeting the requirements of LAC 33:V.2711.

B. The administrative authority will specify in the facility permit the hazardous constituents that must be degraded, transformed, or immobilized under this Subpart. Hazardous constituents are constituents identified in LAC 33:V.3105, Table 1 that are reasonably expected to be in or derived from waste placed in or on the treatment zone.

[Comment: The permit application must list the hazardous constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to LAC 33:V.1519.]

C. The administrative authority will specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below and including the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of hazardous constituents. The maximum depth of the treatment zone must be:

1. no more than 1.5 meters (5 feet) from the initial soil surface; and

2. more than 1 meter (3 feet) above the seasonal high water table.

D. The administrative authority will specify in the facility permit the elements of the treatment program.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §2707. Treatment Demonstration

A. For each waste that will be applied to the treatment zone, the owner or operator must demonstrate, prior to application of the waste, that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.

B. In making this demonstration, the owner or operator may use field tests, laboratory analyses, available data, or in the case of existing units, operating data. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration required under LAC 33:V.2707.A, he must obtain a treatment or disposal permit as specified in LAC 33:V.305.D. The administrative authority will specify in this permit the testing, analytical, design, and operating requirements (including the duration of the tests and analyses, and in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and clean-up activities) necessary to meet the requirements in LAC 33:V.2707.C.

C. Any field test or laboratory analysis conducted in order to make a demonstration under LAC 33:V.2707.A must:

1. accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:

a. the characteristics of the waste (including the presence of constituents in LAC 33:V.3105, Table 1);

b. the climate in the area;

c. the topography of the surrounding area;

d. the characteristics of the soil in the treatment zone (including depth); and

e. the operating practices to be used at the unit;

2. be likely to show that hazardous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment unit; and

3. be conducted in a manner that protects human health and the environment considering:

a. the characteristics of the waste to be tested;

b. the operating and monitoring measures taken during the course of the test;

c. the duration of the test;

d. the volume of waste used in the test;

e. in the case of field tests, the potential for migration of hazardous constituents to groundwater or surface water.

D. Permits for Land Treatment Demonstrations Using Field Tests or Laboratory Analyses

1. For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of LAC 33:V.2707, the administrative authority may issue a treatment demonstration permit. The permit must contain only those requirements necessary to meet the standards in LAC 33:V.2707.C. The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses, or as a two-phase facility permit covering the field tests or laboratory analyses and design, construction, operation and maintenance of the land treatment unit.

a. The administrative authority may issue a two-phase facility permit if he finds that, based on information submitted in Part II of the application, substantial, although incomplete or inconclusive, information already exists upon which to base the issuance of a facility permit.

b. If the administrative authority finds that not enough information exists upon which he can establish permit conditions to attempt to provide for compliance with all of the requirements of this Chapter, he must issue a treatment demonstration permit covering only the field test or laboratory analyses.

2. If the administrative authority finds that a phased permit may be issued, he will establish, as requirements in the first phase of the facility permit, conditions for conducting the field tests or laboratory analyses. These permit conditions will include design and operating parameters (including the duration of the tests or analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, post-demonstration clean-up activities, and any other conditions which the administrative authority finds may be necessary under LAC 33:V.2707.C. The administrative authority will include conditions in the second phase of the facility permit to attempt to meet all requirements of this Chapter pertaining to unit design, construction, operation and maintenance. The administrative authority will establish these conditions in the second phase of the permit based upon the substantial but incomplete or inconclusive information contained in the Part II application.

a. The first phase of the permit will be effective as provided in LAC 33:V.705.B.

b. The second phase of the permit will be effective as provided in LAC 33:V.2707.D.4.

3. When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration, he must submit to the Office of Environmental Services a certification, signed by a person authorized to sign a permit application or report under LAC 33:V.507 and 509, that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in phase one of the permit for conducting such tests or analyses. The owner or operator must also submit all data collected during the field tests or

laboratory analyses within 90 days of completion of those tests or analyses unless the administrative authority approves a later date.

4. If the administrative authority determines that the results of the field tests or laboratory analyses meet the requirements of LAC 33:V.2707, he or she will modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with this Chapter, based upon the results of the field tests or laboratory analyses.

a. This permit modification may proceed under LAC 33:V.321.C, or otherwise will proceed as a modification under LAC 33:V.323.B.2.c. If such modifications are necessary, the second phase of the permit will become effective only after those modifications have been made.

b. If no modifications of the second phase of the permit are necessary, the administrative authority will give notice of his or her final decision to the permit applicant and to each person who submitted written comments on the phased permit or who requested notice of the final decision on the second phase of the permit. The second phase of the permit then will become effective as specified in LAC 33:V.705.B.

c. If modifications under LAC 33:V.323.B are necessary, the second phase of the permit will become effective only after those modifications have been made.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:614 (July 1990), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2481 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2461 (October 2005), LR 33:2112 (October 2007).

## §2709. Food-Chain Crops

A. No produce or food-chain crops may be allowed to grow on a landfarm. Additionally, grasses and other cover plants may not be used for grazing or hay production for domestic livestock.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste Division, Hazardous Waste Division, LR 10:200 (March 1984).

## §2711. Unsaturated Zone Monitoring

An owner or operator subject to this Chapter must establish an unsaturated zone monitoring program to discharge the following responsibilities.

A. The owner or operator must monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.

1. The administrative authority will specify the hazardous constituents to be monitored in the facility permit. The hazardous constituents to be monitored are those specified under LAC 33:V.2705.B.

2. The administrative authority may require monitoring for principal hazardous constituents (PHCs) in lieu of the constituents specified under LAC 33:V.2705.B. PHCs are hazardous constituents contained in the wastes to be applied at the unit that are the most difficult to treat, considering the combined effects of degradation, transformation, and immobilization. The administrative authority will establish PHCs if he finds, based on waste analyses, treatment demonstrations, or other data, that effective degradation, transformation, or immobilization of the PHCs will assure treatment at least equivalent levels for the other hazardous constituents in the wastes.

B. The owner or operator must install an unsaturated zone monitoring system that includes soil monitoring using soil cores and soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system must consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:

[Comment: The permit application must also address the following:
(1) Sampling equipment, procedures, and frequency;
(2) Procedures for selecting sampling locations;
(3) Analytical procedures;
(4) Chain of custody control;
(5) Procedures for establishing background values;
(6) Statistical methods for interpreting results;
(7) The justification for any hazardous constituents recommended for selection as principal hazardous constituents in accordance with the criteria for such selection in LAC 33:V.2711.A; and
(8) A list of hazardous constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to LAC 33:V.1519.]

1. represent background soil-pore liquid quality and the chemical makeup of soil that has not been affected by leakage from the treatment zone; and

2. indicate the quality of soil-pore liquid and the chemical makeup of the soil below the treatment zone.

C. The owner or operator must establish a background value for each hazardous constituent to be monitored under LAC 33:V.2711.A. The permit will specify the background values for each constituent or specify the procedures to be used to calculate the background values.

1. Background soil values may be based on a one-time sampling at a background plot having characteristics similar to those of the treatment zone.

2. Background soil-pore liquid values must be based on at least quarterly sampling for one year at a background plot having characteristics similar to those of the treatment zone.

3. The owner or operator must express all background values in a form necessary for the determination of statistically significant increases under LAC 33:V.2711.F.

4. In taking samples for the determination of all background values, the owner or operator must use an unsaturated zone monitoring system that complies with LAC 33:V.2711.B.1.

D. The owner or operator must conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The administrative authority will specify the frequency and timing of soil and soil-pore liquid monitoring in the facility permit after considering the frequency, timing, and rate of waste application, and the soil permeability. The owner or operator must express the results of soil and soil-pore liquid monitoring in a form necessary for the determination of statistically significant increases under LAC 33:V.2711.F.

E. The owner or operator must use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical makeup of the soil below the treatment zone. At a minimum, the owner or operator must implement procedures and techniques for:

1. sample collection;

2. sample preservation and shipment;

3. analytical procedures; and

4. chain of custody control.

F. The owner or operator must determine whether there is a statistically significant change over background values for any hazardous constituent to be monitored under LAC 33:V.2711.A below the treatment zone each time he conducts soil monitoring and soil-pore liquid monitoring under LAC 33:V.2711.D.

1. In determining whether a statistically significant increase has occurred, the owner or operator must compare the value of each constituent, as determined under LAC 33:V.2711.D, to the background value for that constituent according to the statistical procedure specified in the facility permit under this Subsection.

2. The owner or operator must determine whether there has been a statistically significant increase below the treatment zone within a reasonable time period after completion of sampling. The administrative authority will specify that time period in the facility permit after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of soil and soil-pore liquid samples.

3. The owner or operator must determine whether there is a statistically significant increase below the treatment zone using a statistical procedure that provides reasonable confidence that migration from the treatment zone will be identified. The administrative authority will specify a statistical procedure in the facility permit that he finds:

a. is appropriate for the distribution of the data used to establish background values; and

b. provides a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.

G. If the owner or operator determines, pursuant to LAC 33:V.2711.F, that there is a statistically significant increase of hazardous constituents below the treatment zone, he must:

1. notify the Office of Environmental Services of this finding in writing within seven days. The notification must indicate what constituents have shown statistically significant increases;

2. within 90 days, submit to the Office of Environmental Services an application for a permit modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.

H. If the owner or operator determines, pursuant to LAC 33:V.2711.F, that there is a statistically significant increase of hazardous constituents below the treatment zone, he may demonstrate that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this Subsection in addition to, or in lieu of, submitting a permit modification application under LAC 33:V.2711.G.2, he is not relieved of the requirement to submit a permit modification application within the time specified in LAC 33:V.2711.G.2 unless the demonstration made under this Subsection successfully shows that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. In making a demonstration under this Subsection, the owner or operator must:

1. notify the Office of Environmental Services in writing within seven days of determining a statistically significant increase below the treatment zone that he intends to make a determination under this Subsection;

2. within 90 days, submit a report to the Office of Environmental Services demonstrating that a source other than the regulated units caused the increase or that the increase resulted from error in sampling, analysis, or evaluation;

3. within 90 days, submit to the Office of Environmental Services an application for a permit modification to make any appropriate changes to the unsaturated zone monitoring program at the facility; and

4. continue to monitor in accordance with the unsaturated zone monitoring program established under this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning

Division, LR 26:2481 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2461 (October 2005), LR 33:2112 (October 2007).

### §2713. Recordkeeping

A. The owner or operator must include hazardous waste application dates, application rates, quantities and locations of each hazardous waste placed in the facility in the operating record required under LAC 33:V.1529.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §2715. Special Requirements for Ignitable or Reactive Waste

A. The owner or operator must not apply ignitable or reactive waste to the treatment zone unless the waste and the treatment zone meet all applicable requirements of LAC 33:V.Chapter 22, and:

1. the waste is immediately incorporated into the soil so that:

a. the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under LAC 33:V.4903.B or D; and

b. LAC 33:V.1517 or 4321 for interim status facilities is complied with; or

2. the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:1057 (December 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994).

### §2717. Special Requirements for Incompatible Wastes

A. The owner or operator must not place incompatible wastes, or incompatible wastes and materials in or on the same treatment zone, unless LAC 33:V.1517 or LAC 33:V.4321 for interim status facilities is complied with.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §2719. Closure and Post-Closure Care

A. During the closure period, the owner or operator must:

1. continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone as required under LAC 33:V.2703.A, except to the extent such measures are inconsistent with LAC 33:V.2719.A.8;

2. continue all operations in the treatment zone to minimize run-off of hazardous constituents as required under LAC 33:V.2703.B;

3. maintain the run-on control system required under LAC 33:V.2703.C;

4. maintain the run-off management system required under LAC 33:V.2703.D;

5. control wind dispersal of particulate matter if required under LAC 33:V.2703.F;

6. continue to comply with any prohibitions or conditions concerning growth of food-chain crops under LAC 33:V.2709;

7. continue unsaturated zone monitoring in compliance with LAC 33:V.2711, except that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone; and

8. establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone. The vegetative cover must be capable of maintaining growth without extensive maintenance.

B. For the purpose of complying with LAC 33:V.3517, when closure is completed, the owner or operator may submit to the Office of Environmental Services certification by an independent, qualified soil scientist, in lieu of an independent, qualified professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

C. During the post-closure care period, the owner or operator must:

1. continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure care activities;

2. maintain a vegetative cover over closed portions of the facility;

3. maintain the run-on control system required under LAC 33:V.2703.C.;

4. maintain the run-off management system required under LAC 33:V.2703.D;

5. control wind dispersal of particulate matter if required under LAC 33:V.2703.F;

6. continue to comply with any prohibitions or conditions concerning growth of food-chain crops under LAC 33:V.2709; and

7. continue unsaturated zone monitoring in compliance with LAC 33:V.2711, except that soil-pore liquid

monitoring may be terminated 90 days after the last application of waste to the treatment zone.

D. The owner or operator is not subject to regulation under Paragraph A.8 and Subsection C of this Section if the administrative authority finds that the level of hazardous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant when using the test specified in Paragraph D.3 of this Section. The owner or operator may submit such a demonstration to the Office of Environmental Services at any time during the closure or post-closure care periods. For the purposes of this Subsection:

1. the owner or operator must establish background soil values and determine whether there is a statistically significant increase over those values for all hazardous constituents specified in the facility permit under LAC 33:V.2705.B:

a. background soil values may be based on a one-time sampling of a background plot having characteristics similar to those of the treatment zone;

b. the owner or operator must express background values and values for hazardous constituents in the treatment zone in a form necessary for the determination of statistically significant increases under LAC 33:V.2719.D.3;

2. in taking samples used in the determination of background and treatment zone values, the owner or operator must take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical makeup of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively;

3. in determining whether a statistically significant increase has occurred, the owner or operator must compare the value of each constituent in the treatment zone to the background value for that constituent using a statistical procedure that provides reasonable confidence that the constituent presence in the treatment zone will be identified. The owner or operator must use a statistical procedure that:

a. is appropriate for the distribution of the data used to establish background values; and

b. provides a reasonable balance between the probability of falsely identifying a hazardous constituent presence in the treatment zone and the probability of failing to identify a real presence in the treatment zone;

4. the owner or operator is not subject to regulation under LAC 33:V.Chapter 33 if the administrative authority finds that the owner or operator satisfies LAC 33:V.2719.D and if unsaturated zone monitoring under LAC 33:V.2711 indicates that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 14:790 (November 1988), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2482 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2461 (October 2005), LR 33:2112 (October 2007), LR 34:999 (June 2008).

### §2723. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026 and F027

A. Hazardous Wastes F020, F021, F022, F023, F026, and F027 must not be placed in a land treatment unit unless the owner or operator operates the facility in accordance with a management plan for these wastes that is approved by the administrative authority pursuant to the standards set out in this Subsection, and in accordance with all other applicable requirements of the LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37. The factors to be considered are:

1. the volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials codisposed with these wastes; and

4. the effectiveness of additional treatment, design, or monitoring techniques.

B. The administrative authority may determine that additional design, operating, and monitoring requirements are necessary for land treatment facilities managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air so as to protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 20:1000 (September 1994).

## Chapter 28. Drip Pads

### §2801. Applicability

A. The requirements of this Chapter apply to owners or operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and/or surface water run-on to an associated collection system. Existing drip pads are those constructed before December 6, 1990 and those for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990. All other drip pads are new drip pads.

B. The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither runoff nor run-on is generated is not subject to regulation under LAC 33:V.2805.F or G, as appropriate.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:944 (September 1995).

## §2803. Assessment of Existing Drip Pad Integrity

A. For each *existing drip pad* as defined in LAC 33:V.2801, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of this Chapter, except the requirements for liners and leak detection systems of LAC 33:V.2805.C. No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of LAC 33:V.2805 are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of LAC 33:V.2805, except the standards for liners and leak detection systems, specified in LAC 33:V.2805.C, and must document the age of the drip pad to the extent possible, to document compliance with Subsection B of this Section.

B. The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of LAC 33:V.2805.C and submit the plan to the Office of Environmental Services no later than two years before the date that all repairs, upgrades, and modifications will be complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of LAC 33:V.2805 and must document the age of the drip pad to the extent possible. The plan must be reviewed and certified by an independent, qualified professional engineer.

C. Upon completion of all upgrades, repairs, and modifications, the owner or operator must submit to the Office of Environmental Services the as-built drawings for the drip pad together with a certification by an independent, qualified professional engineer attesting that the drip pad conforms to the drawings.

D. If the drip pad is found to be leaking or unfit for use, the owner or operator must comply with the provisions of LAC 33:V.2805.N or close the drip pad in accordance with LAC 33:V.2809.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:944 (September 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2482 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2462 (October 2005), LR 33:2112 (October 2007), LR 34:999 (June 2008).

## §2804. Design and Installation of New Drip Pads

A. Owners and operators of new drip pads must ensure that the pads are designed, installed, and operated in accordance with LAC 33:V.2804.A.1 or 2.

1. All of the requirements of LAC 33:V.2805 (except LAC 33:V.2805.A.4 and B), 2807, and 2809 must be met.

2. All of the requirements of LAC 33:V.2805 (except LAC 33:V.2805.C), 2807, and 2809 must be met.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:944 (September 1995).

## §2805. Design and Operating Requirements

Owners and operators of drip pads must ensure that the pads are designed, installed, and operated in accordance with Subsection A or C of this Section.

A. Drip pads must:

1. be constructed of non-earthen materials, excluding wood and non-structurally supported asphalt;

2. be sloped to free-drain treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system;

3. have a curb or berm around the perimeter;

4. have a hydraulic conductivity of less than or equal to $1 \times 10^{-7}$ centimeters per second, e.g., existing concrete drip pads must be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to $1 \times 10^{-7}$ centimeters per second such that the entire surface on which drippage occurs or across which it may run is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed to an associated collection system. This surface material must be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material must be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with LAC 33:V.2805 (except LAC 33:V.2805.C), 2807, and 2809 instead of LAC 33:V.2805 (except LAC 33:V.2805.A.4 and B), 2807, and 2809; and

5. be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of daily operations, e.g., variable and moving loads such as vehicle traffic, movement of wood, etc.

[NOTE: The administrative authority will generally consider applicable standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) or the American Society of Testing Materials (ASTM) in judging the structural integrity requirement of this Subsection.]

B. The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed

and certified by an independent, qualified professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated, and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this Section, except for Subsection C of this Section.

C. If an owner or operator elects to comply with all of the requirements of LAC 33:V.2805 (except LAC 33:V.2805.A.4 and B), 2807 and 2809 instead of LAC 33:V.2805 (except LAC 33:V.2805.C), 2807, and 2809, the drip pad must have:

1. a synthetic liner installed below the drip pad that is designed, constructed, and installed to prevent leakage from the drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or groundwater or surface water during the active life of the facility. The liner must be:

a. constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from vehicular traffic on the drip pad);

b. placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

c. installed to cover all surrounding earth that could come in contact with the waste or leakage; and

2. a leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system must be:

a. constructed of materials that are:

i. chemically resistant to the waste managed in the drip pad and the leakage that might be generated;

ii. of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad;

b. designed and operated to function without clogging through the scheduled closure of the drip pad; and

c. designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time; and

3. a leakage collection system immediately above the liner that is designed, constructed, maintained, and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time, and quantity of any leakage collected in this system and removed must be documented in the operating log.

D. Drip pads must be maintained such that they remain free of cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the drip pad.

[NOTE: See LAC 33:V.2805.N for remedial action required if deterioration or leakage is detected.]

E. The drip pad and associated collection system must be designed and operated to convey, drain, and collect liquid resulting from drippage or precipitation in order to prevent runoff.

F. Unless protected by a structure, as described in LAC 33:V.2801.B, the owner or operator must design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a 24-hour, 25-year storm, unless the system has sufficient excess capacity to contain any runoff that might enter the system.

G. Unless protected by a structure or cover, as described in LAC 33:V.2801.B, the owner or operator must design, construct, operate and maintain a runoff management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

H. The drip pad must be evaluated to determine that it meets the requirements of Subsections A-G of this Section, and the owner or operator must obtain a statement from an independent, qualified professional engineer certifying that the drip pad design meets the requirements of this Section.

I. Drippage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

J. The drip pad surface must be cleaned thoroughly at least once every seven days such that accumulated residues of hazardous waste or other materials are removed, using an appropriate and effective cleaning technique, including but not limited to, rinsing, washing with detergents or other appropriate solvents, or steam cleaning. The owner or operator must document the date and time of each cleaning and the cleaning procedure used in the facility's operating log. The owner/operator must determine if the residues are hazardous in accordance with LAC 33:V.1103 and if so must manage them in accordance with LAC 33:V.Subpart 1.

K. Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

L. After being removed from the treatment vessel, treated wood from pressure and nonpressure processes must be held on the drip pad until drippage has ceased. The owner or operator must maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.

M. Collection and holding units associated with run-on and run-off control systems must be emptied or otherwise

managed as soon as possible after storms to maintain design capacity of the system.

N. Throughout the active life of the drip pad and as specified in the permit, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures.

1. Upon detection of a condition that may have caused or has caused a release of hazardous waste (e.g., upon detection of leakage in the leak detection system), the owner or operator must:

a. enter a record of the discovery in the facility operating log;

b. immediately remove the portion of the drip pad affected by the condition from service;

c. determine what steps must be taken to repair the drip pad and clean up any leakage from below the drip pad, and establish a schedule for accomplishing the repairs; and

d. within 24 hours after discovery of the condition, notify the Office of Environmental Compliance in accordance with LAC 33:I.3923 and, within 10 working days, provide written notice to the Office of Environmental Compliance using the procedures provided in LAC 33:I.3925.B and C, including a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.

2. The administrative authority will review the information submitted, make a determination regarding whether the pad must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

3. Upon completing all repairs and cleanup, the owner or operator must notify SPOC in writing and provide a certification, signed by an independent qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with Subparagraph N.1.d of this Section.

O. Should a permit be necessary, the administrative authority will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this Section are satisfied.

P. The owner or operator must maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past, a description of drippage management practices, and a description of treated wood storage and handling practices.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 21:944 (September 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2482 (November 2000), LR 30:1674 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2462 (October 2005), LR 33:2113 (October 2007), LR 34:627 (April 2008), LR 34:999 (June 2008).

## §2807. Inspections

A. During construction or installation, liners and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of LAC 33:V.2805 by an independent, qualified professional engineer. The certification must be maintained at the facility as part of the facility operating record. After installation, liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

B. While a drip pad is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

1. deterioration, malfunctions or improper operation of run-on and run-off control systems;

2. the presence of leakage in and proper functioning of leak detection system;

3. deterioration or cracking of the drip pad surface.

[NOTE: See LAC 33:V.2805.N for remedial action required if deterioration or leakage is detected.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:944 (September 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 34:999 (June 2008).

## §2809. Closure

A. At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (pad, liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leakage, and manage them as hazardous waste.

B. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection A of this Section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must either:

1. close the facility and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills (LAC 33:V.2521). For permitted units, the requirement to have a permit continues throughout the post-closure period. In addition, for the purpose of closure, post-closure, and financial responsibility, such a drip pad is then considered to be a landfill, and the owner or operator

must meet all of the requirements for landfills specified in LAC 33:V.Chapters 35 and 37; or

2. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment.

C. The owner or operator of an *existing drip pad*, as defined in LAC 33:V.2801, that does not comply with the liner requirements of LAC 33:V.2805.C.1 must:

1. include in the closure plan for the drip pad under LAC 33:V.3511 both a plan for complying with LAC 33:V.2809.A and a contingent plan for complying with LAC 33:V.2809.B in case not all contaminated subsoils can be practicably removed at closure; and

2. prepare a contingent post-closure plan under LAC 33:V.3523 for complying with LAC 33:V.2809.B in case not all contaminated subsoils can be practicably removed at closure.

D. The cost estimates calculated under LAC 33:V.3511 and 3709 for closure and post-closure care of a drip pad subject to this Paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under LAC 33:V.2809.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:944 (September 1995), amended by the Office of the Secretary, LR 24:2246 (December 1998).

# Chapter 29. Surface Impoundments

## §2901. Applicability

A. The regulations in this Subpart apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste except as LAC 33:V.1501 provides otherwise.

[Comment: All surface impoundments used to store hazardous waste, including short-term storage (90 days or less), must have a TSD permit.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1107 (June 1998).

## §2903. Design and Operating Requirements

[Comment: The permit applicant must submit detailed plans and specifications accompanied by an engineering report that must collectively include the information itemized and address the following in addition to the design and operating requirements:

(1) a description of the proposed maintenance and repair procedures;

(2) a description of the operating procedures that will ensure compliance with this Section; and

(3) a certification by a qualified engineer that states that the facilities comply with the applicable design requirements in this Section. The owner or operator of a new facility must submit a statement by a qualified engineer that he will provide such a certification upon completion of construction in accordance with the plans and specifications.]

A. Any surface impoundment that is not covered by LAC 33:V.2903.I must have a liner for all portions of the impoundment (except for the portion of the surface impoundment in operation prior to date of issuance of the hazardous waste permit) and must have a liner designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the impoundment. The liner, at a minimum, must consist of a synthetic liner laid on top of a permanent barrier at the bottom and along the sides of the surface impoundment that will cover all surrounding earth likely to be in contact with the waste or leachate. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil or groundwater or surface water) during the active life of the facility, provided that the impoundment is closed in accordance with LAC 33:V.2911.A. For impoundments that will be closed in accordance with LAC 33:V.2911.C.1, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner must be:

1. constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

2. placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift;

3. the permanent barrier shall be 3 feet of clay with a permeability of $1 \times 10^{-7}$ cm/sec or less and so designed and operated as to prevent endangering any freshwater aquifer by the migration of contaminants from the facility, or an equivalent system acceptable to the administrative authority; and

4. the synthetic liner shall be resistant to action of elements and the planned contents of the impoundment or the basin for a period of time not less than the estimated life of the operation;

[Comment: The permit application must include a bond warranty or other demonstration satisfactory to the administrative authority for liners for which historical performance data is not available.]

5. the synthetic liner must be installed to cover all surrounding earth likely to be in contact with the waste or leachate.

B. The owner or operator will be exempted from the requirements of LAC 33:V.2903.A if the administrative authority finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see LAC 33:V.3307) into the groundwater or surface water at any future time. In deciding whether to grant an exemption, the administrative authority will consider:

1. the nature and quantity of the wastes;

2. the proposed alternate design and operation;

3. the hydrogeologic setting of the facility, including the attenuating capacity and thickness of the liners and soils present between the impoundment and groundwater or surface water; and

4. all other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.

C. The owner or operator of any replacement surface impoundment unit is exempt from LAC 33:V.2903.J if:

1. the existing unit was constructed in compliance with the design standards of Sections 3004.(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

2. there is no reason to believe that the liner is not functioning as designed.

D. A surface impoundment must be designed, constructed, maintained and operated to prevent overtopping resulting from normal or abnormal operations, overfilling, wind and wave action, rainfall, run-on, malfunctions of level controllers, alarms and other equipment, and human error.

E. The surface impoundment must have dikes that are designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the unit.

F. The administrative authority will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this Section are satisfied.

G. Surface run-off within the site utilized shall be impounded on the site and treated as necessary to comply with NPDES discharge permit requirements.

H. Surface run-off outside the site (limits of hazardous waste facilities or, when part of an industrial complex, the limits of company property used for company operations) shall be diverted and prevented from entry into the site.

I. The owner or operator of a double lined surface impoundment is subject to regulation under LAC 33:V.Chapter 33 and the following conditions:

1. the impoundment (including its underlying liners) must be located entirely above the seasonal high water table;

2. the impoundment must be underlain by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. Both liners must meet all the specifications of LAC 33:V.2903;

3. a leak detection system must be designed, constructed, maintained and operated between the liners to detect any migration of liquids into the space between the liners;

4. if liquid leaks into the leak detection system, the owner or operator must:

a. notify the Office of Environmental Services of the leak in writing within seven days after detecting the leak; and

b. within a period of time specified in the permit, remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of liquids through the liner, and obtain a certification from a qualified engineer that, to the best of his knowledge and opinion, the leak has been stopped; or

5. the administrative authority will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this Section are satisfied.

J. The owner or operator of each new surface impoundment unit on which construction commenced after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commenced after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992, must have installed two or more liners and a leachate collection and removal system between such liners. *Construction commences* is as defined in LAC 33:V.109.*Existing Facilities*.

1. The liner system must include:

a. a top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

b. a composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than $1 \times 10^{-7}$cm/sec. The administrative authority may require additional liner design requirements based on the location of the surface impoundment in relation to drinking water aquifers.

2. The liners must comply with LAC 33:V.2903.A.1-5.

3. The leachate collection and removal system between the liners (and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems) is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner which are likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this Section are satisfied by installation of a system that is, at a minimum:

a. constructed with a bottom slope of 2 percent or more;

b. constructed of granular drainage materials with a hydraulic conductivity of 1 x $10^{-1}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3 x $10^{-4}$ $m^2$/sec or more;

c. constructed of materials that are chemically resistant to the waste managed in the surface impoundment and the leachate expected to be generated and are of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes and any waste cover materials or equipment used at the surface impoundment;

d. designed and operated to minimize clogging during the active life and post-closure care period; and

e. constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed from the sump.

4. The owner or operator shall collect and remove pumpable liquids in the sumps to minimize the head on the bottom liner.

5. The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of groundwater.

K. The administrative authority may approve alternative design or operating practices to those specified in LAC 33:V.2903.J if the owner or operator demonstrates to the administrative authority that such design and operating practices, together with location characteristics:

1. will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as the liners and leachate collection and removal system specified in LAC 33:V.2903.J; and

2. will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

L. The double liner requirements set forth in LAC 33:V.2903.J may be waived by the administrative authority if the monofill fulfills the requirements of LAC 33:V.2903.K.1 and 2.

1. The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the toxicity characteristic in LAC 33:V.4903.E.

2. The monofill meets the requirements of either Subparagraph K.2.a or b of this Section.

a. The monofill meets the following criteria:

i. the monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this Subsection, the term *liner* means a liner designed, constructed, installed and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, groundwater, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of LAC 33:V.2903.I on the basis of a liner designed, constructed, installed and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment, the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment will comply with appropriate post-closure requirements, including but not limited to, groundwater monitoring and corrective action;

ii. the monofill is located more than 1/4 mile from an *underground source of drinking water* (as that term is defined in LAC 33:V.109); and

iii. the monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with permits.

b. The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any future time.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:220 (March 1990), LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 21:266, 267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2482 (November 2000), amended by the Office of the Secretary,

Legal Affairs Division, LR 31:2462 (October 2005), LR 33:2113 (October 2007), LR 34:628 (April 2008).

## §2904. Action Leakage Rate

A. The administrative authority shall approve an action leakage rate for surface impoundment units subject to LAC 33:V.2903.J or K. The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

B. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under LAC 33:V.2907.E to an average daily flow rate (gallons per acre per day) for each sump. Unless the administrative authority approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period and, if the unit is closed in accordance with LAC 33:V.2911.B, monthly during the post-closure care period when monthly monitoring is required under LAC 33:V.2907.E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §2905. Exemption

A. There are no exemptions from the groundwater protection requirements in LAC 33:V.Chapter 33.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 20:1000 (September 1994).

## §2906. Response Actions

A. The owner or operator of surface impoundment units subject to LAC 33:V.2903.J or K must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in LAC 33:V.2906.B.

B. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

1. notify the Office of Environmental Services in writing of the exceedance within seven days of the determination;

2. submit a preliminary written assessment to the Office of Environmental Services within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

3. determine to the extent practicable the location, size, and cause of any leak;

4. determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

5. determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

6. within 30 days after the notification that the action leakage rate has been exceeded, submit to the Office of Environmental Services the results of the analyses specified in Paragraphs B.3-5 of this Section, the results of actions taken, and remedial actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Office of Environmental Services a report summarizing the results of any remedial actions taken and actions planned.

C. To make the leak and/or remediation determinations in LAC 33:V.2906.B.3-5, the owner or operator must:

1. assess the sources of liquids and amounts of liquids by source; and

2. conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the sources of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

3. assess the seriousness of any leaks in terms of potential for escaping into the environment; or

4. document why such assessments are not needed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2483 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2462 (October 2005), LR 33:2113 (October 2007), LR 34:1898 (September 2008).

## §2907. Monitoring and Inspection

A. The facility must provide the department with 30 days advance notice of the initial liner installation to allow the administrative authority the opportunity to inspect the liner and its installation.

B. During construction and installation, liners (except in the case of existing portions of surface impoundments exempt from LAC 33:V.2903.A) and cover systems (such as membranes, sheets, or coatings) must be inspected for

uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

1. synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures or blisters; and

2. soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

C. While a surface impoundment is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

1. deterioration, malfunctions, or improper operation of overtopping control systems;

2. sudden drops in the level of the impoundment's contents;

3. the presence of liquids in leak detection systems; and

4. severe erosion or other signs of deterioration in dikes or other containment devices.

D. Prior to the issuance of a permit, and after any extended period of time (at least six months) during which the impoundment was not in service, the owner or operator must obtain a certification from a qualified engineer that the impoundment's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification must establish, in particular, that the dike:

1. will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the impoundment; and

2. will not fail due to scouring or piping, without dependence on any liner system included in the surface impoundment construction.

E. An owner or operator required to have a leak detection system under LAC 33:V.2903.I or J must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

1. After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

2. *Pump Operating Level*—a liquid level proposed by the owner or operator and approved by the administrative authority based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), LR 20:1109 (October 1994).

## §2909. Emergency Repairs; Contingency Plans

A. A surface impoundment must be removed from service in accordance with LAC 33:V.2909.B when:

1. the level of liquids in the impoundment suddenly drops and the drop is not known to be caused by changes in the flows into or out of the impoundment; or

2. the dike leaks.

B. When a surface impoundment must be removed from service as required by Subsection A of this Section, the owner or operator must:

1. immediately shut off the flow or stop the addition of wastes into the impoundment;

2. immediately contain any surface leakage which has occurred or is occurring;

3. immediately stop the leak;

4. take any other necessary steps to stop or prevent catastrophic failure;

5. if a leak cannot be stopped by any other means, empty the impoundment; and

6. notify the Office of Environmental Compliance of the problem in accordance with LAC 33:I.3923 within 24 hours of detection and in writing using the procedures provided in LAC 33:I.3925 within seven days after detecting the problem.

C. As part of the contingency plan required in LAC 33:V.1513, the owner or operator must specify a procedure for complying with the requirements of Subsection B of this Section.

D. No surface impoundment that has been removed from service in accordance with the requirements of this Section may be restored to service unless the portion of the impoundment which was failing is repaired and the following steps are taken.

1. If the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity must be recertified in accordance with LAC 33:V.2907.D.

2. If the impoundment was removed from service as the result of a sudden drop in the liquid level, then:

a. for any existing portion of the impoundment, a liner must be installed in compliance with LAC 33:V.2903.A; and

b. for any other portion of the impoundment, the repaired liner system must be certified by a qualified engineer as meeting the design specifications approved in the permit.

E. A surface impoundment that has been removed from service in accordance with the requirements of this Section and that is not being repaired must be closed in accordance with the provisions of LAC 33:V.2911.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2483 (November 2000), LR 30:1674 (August 2004).

## §2911. Closure and Post-Closure Care

A. At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless LAC 33:V.109.*Hazardous Waste*.6 applies; or

B. if some waste residues or contaminated materials are left in place at final closure, the owner or operator must either:

1. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment; or

2. comply with all post-closure requirements contained in LAC 33:V.3519 and 3527; including maintenance and monitoring throughout the post-closure care period (specified in the permit under LAC 33:V.3521). The owner or operator must:

a. maintain the integrity and effectiveness of the final cover including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

b. maintain and monitor the leak detection system in accordance with LAC 33:V.2903 and 2907.E and comply with all other applicable leak detection system requirements of this Chapter;

c. maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.Chapter 33; and

d. prevent run-on and run-off from eroding or otherwise damaging the final cover.

C. Manage the closure to:

1. eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and residues;

2. stabilize remaining wastes to a bearing capacity sufficient to support final cover; and

3. cover the surface impoundment with a final cover designed and constructed to:

a. provide long-term minimization of the migration of liquids through the closed impoundment;

b. function with minimum maintenance;

c. promote drainage and minimize erosion or abrasion of the final cover;

d. accommodate settling and subsidence so that the cover's integrity is maintained; and

e. have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

D. Special Closure

1. If an owner or operator plans to close a surface impoundment in accordance with Subsection A of this Section, and the impoundment does not comply with the liner requirements of LAC 33:V.2903.A and is not exempt from them in accordance with LAC 33:V.2903.B, then:

a. the closure plan for the impoundment under LAC 33:V.3511 must include both a plan for complying with LAC 33:V.2911.A and a contingent plan for complying with LAC 33:V.2911.B in case all contaminated subsoils cannot be practicably removed at closure; and

b. the owner or operator must prepare a contingent post-closure plan under LAC 33:V.3523 complying with LAC 33:V.2911.B in case all contaminated subsoils cannot be practicably removed at closure.

2. The cost estimates calculated under LAC 33:V.3705 and 3709 for closure and post-closure care of an impoundment subject to this Subpart must include the cost of complying with the contingent post-closure plan, but are not required to include the cost of expected closure under LAC 33:V.2911.A.

E. During the post-closure care period, if liquids leak into a leak detection system the owner or operator must notify the administrative authority of the leak in writing within seven days after detecting the leak.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 20:1109 (October 1994), amended by the Office of the Secretary, LR 24:2246 (December 1998).

### §2913. Special Requirements for Ignitable or Reactive Waste

A. Ignitable or reactive waste must not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of LAC 33:V.Chapter 22, and:

1. the waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:

a. the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under the definition of ignitability or reactivity in LAC 33:V.4903.B or D; and

b. LAC 33:V.1517 is complied with; or for interim status facilities;

2. the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; or

3. the surface impoundment is used solely for emergencies.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:1057 (December 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994).

### §2915. Special Requirements for Incompatible Wastes

A. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same surface impoundment, unless LAC 33:V.1517 is complied with or LAC 33:V.4321 for interim status facilities.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984).

### §2917. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027

A. Hazardous wastes F020, F021, F022, F023, F026 and F027 must not be placed in a surface impoundment unless the owner or operator operates the surface impoundment in accordance with a management plan for these wastes that is approved by the administrative authority pursuant to the standards set out in this Subsection, and in accordance with all other applicable requirements of LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37. The factors to be considered are:

1. the volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2. the attenuative properties of underlying and surrounding soils or other materials;

3. the mobilizing properties of other materials co-disposed with these wastes; and

4. the effectiveness of additional treatment, design or monitoring techniques.

B. The administrative authority may determine that additional design, operating, and monitoring requirements are necessary for surface impoundments managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air so as to protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 20:1000 (September 1994).

### §2919. Air Emission Standards

A. The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of LAC 33:V.Chapter 17.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1740 (September 1998).

## Chapter 30. Hazardous Waste Burned in Boilers and Industrial Furnaces

### §3001. Applicability

A. The regulations of this Chapter apply to hazardous waste burned for energy or material recovery in a *boiler* or *industrial furnace* (as defined in LAC 33:V.109) irrespective of the purpose of burning or processing, except as provided by Subsections B-D, G, and H of this Section. In this Chapter, the term *burn* means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of LAC 33:V.3009-3015 apply to facilities operating under interim status or under a hazardous waste permit as specified in LAC 33:V.3005 and 3007.

B. Integration of the MACT Standards

1. Except as provided by Paragraphs B.2-4 of this Section, the standards of this Chapter do not apply to a new hazardous waste boiler or industrial furnace unit that becomes subject to RCRA permit requirements after October 12, 2005, and no longer apply when an owner or operator of an existing hazardous waste boiler or industrial furnace unit demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, by conducting a comprehensive performance test and submitting to the administrative authority a notification of compliance under 40 CFR 63.1207(j) and 63.1210(d) documenting compliance with the

requirements of 40 CFR Part 63, Subpart EEE. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of this Chapter will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

2. The following standards continue to apply:

a. if the owner or operator elects to comply with LAC 33:V.2001.A.1.a to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, LAC 33:V.3005.E.1, requiring operations in accordance with the operating requirements specified in the permit at all times that hazardous waste is in the unit, and LAC 33:V.3005.E.2.c, requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes. These provisions apply only during startup, shutdown, and malfunction events;

b. the closure requirements of LAC 33:V.3005.I and 3007.L;

c. the standards for direct transfer of LAC 33:V.3023;

d. the standards for regulation of residues of LAC 33:V.3025; and

e. the applicable requirements of LAC 33:V.Chapters 15, 17 (Subchapters B and C), 33, 35, 37, and 43 (Subchapters A-G, R, and V), 4301.A-C, G, and I, and 4306.

3. The owner or operator of a boiler or hydrochloric acid production furnace that is an *area source* as defined in LAC 33:III.5103.A that elects not to comply with the emission standards of 40 CFR 63.1216-1218 for particulate matter, semivolatile and low volatile metals, and total chlorine, also remains subject to:

a. LAC 33:V.3011—Standards to Control Particulate Matter;

b. LAC 33:V.3013—Standards to Control Metals Emissions, except for mercury; and

c. LAC 33:V.3015—Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas ($Cl_2$) Emissions.

4. The particulate matter standard of LAC 33:V.3011 remains in effect for boilers that elect to comply with the alternative to the particulate matter standard under 40 CFR 63.1216(e) and 63.1217(e).

C. The following hazardous wastes and facilities are not subject to regulation under this Chapter:

1. used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in LAC 33:V.4903. Such used oil is subject to regulation under LAC 33:V.Chapter 40;

2. gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;

3. hazardous wastes that are exempt from regulation under LAC 33:V.105.D and 4105.A.1.d.ii-iii, and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under LAC 33:V.108; and

4. coke ovens, if the only hazardous waste burned is EPA Hazardous Waste Number K087, decanter tank tar sludge from coking operations.

D. Owners or operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under this Section, except for LAC 33:V.3003 and 3005.

1. To be exempt from LAC 33:V.3005-3023, an owner or operator of a metal recovery furnace or mercury recovery furnace must comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing must comply with the requirements of Paragraph D.3 of this Section, and owners or operators of lead recovery furnaces that are subject to regulation under the Secondary Lead Smelting NESHAP must comply with the requirements of Subsection H of this Section:

a. provide a one-time written notice to the administrative authority indicating the following:

i. the owner or operator claims exemption under this Paragraph;

ii. the hazardous waste is burned solely for metal recovery consistent with the provisions of Paragraph D.2 of this Section;

iii. the hazardous waste contains recoverable levels of metals; and

iv. the owner or operator will comply with the sampling and analysis and recordkeeping requirements of this Paragraph;

b. sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of this Section by using appropriate methods; and

c. maintain at the facility for at least three years records to document compliance with the provisions of this Paragraph including limits on levels of toxic organic constituents and Btu value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.

2. A hazardous waste meeting either of the following criteria is not processed solely for metal recovery:

a. the hazardous waste has a total concentration of organic compounds listed in LAC 33:V.4901.G, Table 6 exceeding 500 ppm by weight, as-fired and so is considered

to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by Subparagraph D.1.c of this Section; or

b. the hazardous waste has a heating value of 5,000 Btu/lb or more as-fired and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by Subparagraph D.1.c of this Section.

3. To be exempt from LAC 33:V.3005-3023, an owner or operator of a lead or nickel-chromium or mercury recovery furnace (except for owners or operators of lead recovery furnaces subject to regulation under the Secondary Lead Smelting NESHAP) or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing must provide a one-time written notice to the administrative authority identifying each hazardous waste burned, specifying whether the owner or operator claims an exemption for each waste under Paragraph D.1 or 3 of this Section. The owner or operator must comply with the requirements of Paragraph D.1 of this Section for those wastes claimed to be exempt under that Section and must comply with the requirements below for those wastes claimed to be exempt under this Section.

a. The hazardous wastes listed in 40 CFR 266, Appendices XI, XII, and XIII, as adopted and amended at LAC 33:V.3099.Appendices J, K, and L, and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of Paragraph D.1 of this Section, provided that:

i. a waste listed in 40 CFR 266, Appendix XI, as adopted at LAC 33:V.3099.Appendix J, contains recoverable levels of lead; a waste listed in 40 CFR 266, Appendix XII, as adopted and amended at LAC 33:V.3099.Appendix K, contains recoverable levels of nickel or chromium; a waste listed in 40 CFR 266, Appendix XIII, as adopted and amended at LAC 33:V.3099.Appendix L, contains recoverable levels of mercury and less than 500 ppm of LAC 33:V.3105, Table 1 organic constituents; and baghouse bags used to capture metallic dusts emitted by steel manufacturing contain recoverable levels of metal;

ii. the waste does not exhibit the Toxicity Characteristic of LAC 33:V.4903.E for an organic constituent;

iii. the waste is not a hazardous waste listed in LAC 33:V.4901 because it is listed for an organic constituent as identified in LAC 33:V.4901.G, Table 6; and

iv. the owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of Paragraph D.3 of this Section and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to Subparagraph D.1.b of this Section; records to document compliance with Paragraph D.3 of this Section shall be kept for at least three years.

b. The administrative authority may decide on a case-by-case basis that the toxic organic constituents in a material listed in 40 CFR 266, Appendix XI, XII, or XIII, as adopted and amended at LAC 33:V.3099.Appendices K, L, and M, that contains a total concentration of more than 500 ppm toxic organic compounds listed in LAC 33:V.3105, Table 1 may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of this Chapter. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to the requirements of this Chapter when burning that material. In making the hazard determination, the administrative authority will consider the following factors:

i. the concentration and toxicity of organic constituents in the material;

ii. the level of destruction of toxic organic constituents provided by the furnace; and

iii. whether the acceptable ambient levels established in 40 CFR 266, Appendix IV or V, as adopted and amended at LAC 33:V.3099.Appendices D and E, may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average off-site ground level concentration.

E. The standards for direct transfer operations under LAC 33:V.3023 apply only to facilities subject to the permit standards of LAC 33:V.3005 or the interim status standards of LAC 33:V.3007.

F. The management standards for residues under LAC 33:V.3025 apply to any boiler or industrial furnace burning hazardous waste.

G. Owners or operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, iridium, osmium, rhodium, or ruthenium or any combination of these are conditionally exempt from regulation under this Section, except for LAC 33:V.3025.

1. To be exempt from LAC 33:V.3005-3023, an owner or operator must:

a. provide a one-time written notice to the administrative authority indicating the following:

i. the owner or operator claims exemption under this Paragraph;

ii. the hazardous waste is burned solely for legitimate metal recovery; and

iii. the owner or operator will comply with the sampling, analysis, and recordkeeping requirements of this Paragraph;

b. sample and analyze the hazardous waste as necessary to document that the waste contains economically significant amounts of the metals and that the treatment recovers economically significant amounts of precious metal; and

c. maintain at the facility for at least three years records to document that all hazardous wastes burned are for recovery of economically significant amounts of precious metal.

H. Starting June 23, 1997, owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the Secondary Lead Smelting NESHAP, are conditionally exempt from regulation under this Chapter, except for LAC 33:V.3003. To be exempt, an owner or operator must provide a one-time notice to the administrative authority identifying each hazardous waste burned and specifying that the owner or operator claims an exemption under this Subsection. The notice also must state that the waste burned has a total concentration of nonmetal compounds listed in LAC 33:V.3105, Table 1 of less than 500 ppm by weight, as fired and as provided in Subparagraph D.2.a of this Section, or is listed in LAC 33:V.3099.Appendix K.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 21:944 (September 1995), LR 22:821, 835 (September 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1466 (August 1999), LR 27:297 (March 2001), LR 27:712 (May 2001), LR 29:323 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 32:607 (April 2006), LR 34:628 (April 2008), LR 34:1014 (June 2008).

## §3003. Management Prior to Burning

A. Standards for Generators. Generators of hazardous waste burned in a boiler or industrial furnace are subject to LAC 33:V.Chapter 11.

B. Standards for Transporters. Transporters of hazardous waste burned in a boiler or industrial furnace are subject to LAC 33:V.Chapter 13.

C. Standards for Owners and Operators of Storage Facilities

1. Owners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provision of LAC 33:V.Chapters 1, 3, 5, 11, 15, 19, 21, 23, 25, 29, 33, 35, 37 and 43, except as provided by LAC 33:V.3003.C.2. These standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.

2. Owners or operators of facilities that burn, in an on-site boiler or industrial furnace exempt from regulation under the small quantity burner provisions of LAC 33:V.3017, hazardous waste that they generate are exempt from regulation under LAC 33:V.Chapters 1, 3, 5, 11, 15, 19, 21, 23, 25, 29, 33, 35, 37, and 43 with respect to the storage of mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in LAC 33:V.3003.C.1.

[NOTE: Parts of this Section were previously promulgated in LAC 33:V.4142 which has been repealed.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 21:944 (September 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:299 (March 2001).

## §3005. Permit Standards for Burners

A. Applicability

1. General. Owners or operators of boilers and industrial furnaces burning hazardous waste and not operating under interim status must comply with the requirements of this Section and LAC 33:V.535 and 537, except as provided by LAC 33:V.3017.

2. Owners or operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions:

a. general, LAC 33:V.105.G;

b. general facility standards, LAC 33:V.303.A, 1503.A.3, 1503.B.3, 1507, 1509, 1515, 1517, 1519, 1527.E, and 1531.A;

c. preparedness and prevention, LAC 33:V.1511;

d. contingency plan and emergency procedures, LAC 33:V.1513;

e. manifest system, recordkeeping, and reporting, LAC 33:V.1516.B, 1516.C, 1516.D, and 1527;

f. releases from solid waste management units, LAC 33:V.3301 and 3322;

g. closure and post-closure, LAC 33:V.3507, 3511, 3513, 3515, and 3517.A;

h. financial requirements, LAC 33:V.3703, 3705, 3707, 3714, 3717 and 3719; and

i. air emission standards for equipment leaks, LAC 33:V.Chapter 43.Subchapter R.

B. Hazardous Waste Analysis

1. The owner or operator must provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in LAC 33:V.3105, Table 1, that may reasonably be expected to be in the waste. Such constituents must be identified and quantified, if present, at levels detectable by using appropriate analytical procedures. The LAC 33:V.3105, Table 1 constituents excluded from this analysis must be identified and the basis for their exclusion explained. This analysis will be used to provide all information required by this Section and LAC 33:V.535 and 537 and to enable the permit writer to prescribe such permit conditions as are necessary to protect human health and the environment. Such analysis must be included as a portion of Part II of the permit application, or, for facilities operating under the interim status standards of LAC 33:V.3007, as a portion of the trial burn plan that may be submitted before Part II of the application under the provisions of LAC 33:V.537.D, as well as any other analysis required by the permit authority in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim status standards of LAC 33:V.3007 must provide the information required by LAC 33:V.535 and 537 to the greatest extent possible.

2. Throughout normal operation, the owner or operator must conduct sufficient sampling and analyses to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the permit.

C. Emissions Standards. Owners and operators must comply with emissions standards provided by LAC 33:V.3009-3015.

D. Permits

1. The owner or operator of a boiler or industrial furnace may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified for those hazardous wastes under LAC 33:V.3005.E, except in approved trial burns under the conditions specified in LAC 33:V.535.

2. Hazardous wastes not specified in the permit may not be burned until operating conditions have been specified under a new permit or permit modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with Part II of a permit application under LAC 33:V.535.

3. Boilers and industrial furnaces operating under the interim status standards of LAC 33:V.3007 are permitted under procedures specified in LAC 33:V.535.

4. The administrative authority shall establish appropriate conditions in permits for new boilers and industrial furnaces (those boilers and industrial furnaces not operating under the interim status standards of LAC 33:V.3007) for each of the applicable requirements of this Paragraph, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet the requirements of LAC 33:V.3007, sufficient to comply with the following standards.

a. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a point of operational readiness to conduct a trial burn, not to exceed a duration of 720 hours operating time when burning hazardous waste, the administrative authority will specify the operating requirements most likely to ensure compliance with the standards of LAC 33:V.3005.E, based on the engineering judgment of the administrative authority. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation shall include those specified by the applicable provisions of LAC 33:V.3009-3015. The administrative authority may extend the duration of this period for up to 720 additional hours when the applicant demonstrates good cause for the extension.

b. For the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the emission standards of LAC 33:V.3009-3015 and must be in accordance with the approved trial burn plan.

c. For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow the owner or operator to analyze samples, compute data, and submit to the Office of Environmental Services the trial burn results, and for the administrative authority to modify the facility permit to reflect the trial burn results, the administrative authority will specify the operating requirements most likely to ensure compliance with the emission standards of LAC 33:V.3009-3015, based on engineering judgment.

d. For the remaining duration of the permit, the operating requirements must be those demonstrated in a trial burn or by alternative data specified in LAC 33:V.535 as sufficient to ensure compliance with the emission standards of LAC 33:V.3009-3015.

E. Operating Requirements

1. General. Boilers or industrial furnaces burning hazardous waste must be operated in accordance with the operating requirements specified in the permit at all times where there is hazardous waste in the unit.

2. Specific requirements to ensure compliance with the organic emissions standards are as follows.

a. Carbon Monoxide and Hydrocarbon Standard. The permit must incorporate the stack gas carbon monoxide (CO) limit and, as appropriate, a hydrocarbon (HC) limit as specified in LAC 33:V.3009.B-F. The permit limits will be specified as follows:

i. when complying with the CO standard of LAC 33:V.3009.B.1, the permit limit is 100 ppmv;

ii. when complying with the alternative CO standard under LAC 33:V.3009.C, the permit limit for CO is based on the trial burn and is established as the average over

all valid runs of the highest hourly rolling average CO level of each run, and the *permit limit for HC is 20 ppmv* (as defined in LAC 33:V.3009.C.1), except as provided in LAC 33:V.3009.F;

iii. when complying with the alternative HC limit for industrial furnaces under LAC 33:V.3009.F, the permit limit for HC and CO is the baseline level when hazardous waste is not burned as specified by that Subsection.

b. DRE Standard. Operating conditions demonstrated in a trial burn or by alternate data as specified in LAC 33:V.535 to be sufficient to comply with the DRE performance standard of LAC 33:V.3009.A or as those special operating requirements provided by LAC 33:V.3009.A.4 for the waiver of the DRE trial burn, will be specified on a case-by-case basis for each hazardous waste burned. When the DRE trial burn is not waived under LAC 33:V.3009.A.4, each set of operating requirements will specify the composition of the hazardous waste (including acceptable variations in the physical or chemical properties of the hazardous waste which will not affect compliance with the DRE performance standard) to which the operating requirements apply. For each such hazardous waste, the permit will specify acceptable operating limits, including the following conditions, as appropriate:

i. feed rate of hazardous waste and other fuels measured and specified as prescribed in LAC 33:V.3005.E;

ii. minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in LAC 33:V.3005.E.6;

iii. appropriate controls of the hazardous waste firing system;

iv. allowable variation in boiler and industrial furnace system design or operating procedures;

v. minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in LAC 33:V.3005.E.6;

vi. an appropriate indicator of combustion gas velocity, measured and specified as prescribed in LAC 33:V.3005.E.6, unless documentation is provided under LAC 33:V.537 demonstrating adequate combustion gas residence time; and

vii. such other operating requirements as are necessary to ensure that the DRE performance standard of LAC 33:V.3009.A is met.

c. Start-Up and Shutdown. During start-up and shutdown of the boiler or industrial furnace, hazardous waste (except waste fed solely as an ingredient under the Tier I, or adjusted Tier I, feed rate screening limits for metals and chloride/chlorine, and except low risk waste exempt from the trial burn requirements under LAC 33:V.3009.A.5, 3011, 3013, and 3015) must not be fed into the device unless the device is operating within the conditions of operation specified in the permit.

3. Specific operating requirements to ensure conformance with the metals standards are as follows.

a. For conformance with the Tier I (or adjusted Tier I) metals feed rate screening limits provided by LAC 33:V.3013.B or E, the permit will specify the following operating requirements:

i. total feed rate of hazardous waste, measured and specified as prescribed in LAC 33:V.3005.E.6;

ii. total feed rate of each metal level in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under provisions of LAC 33:V.3005.E.6; and

iii. a sampling and metals analysis program for the hazardous waste, other fuels, and industrial furnace feedstocks.

b. For conformance with the Tier II metals emission rate screening limits under LAC 33:V.3013.C and the Tier III metals controls under LAC 33:V.3013.D, the permit will specify the following operating requirements:

i. maximum emission rate for each metal specified as the average emission rate during the trial burn;

ii. feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in LAC 33:V.3005.E.6;

iii. feed rate of each metal in the following feedstreams, measured and specified as prescribed in LAC 33:V.3005.E.6:

(a). total feedstreams;

(b). total hazardous waste feed; and

(c). total pumpable hazardous waste feed;

iv. total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in LAC 33:V.3005.E.6;

v. maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in LAC 33:V.3005.E.6;

vi. maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in LAC 33:V.3005.E.6;

vii. maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in LAC 33:V.3005.E.6;

viii. appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

ix. allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

x. such other operating requirements as are necessary to ensure that the metals standards under LAC 33:V.3013.C or D are met.

c. For conformance with an alternative implementation approach approved by the administrative authority under LAC 33:V.3013.F, the permit will specify the following operating requirements:

i. maximum emission rate for each metal specified as the average emission rate during the trial burn;

ii. feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in LAC 33:V.3005.E.6.a;

iii. feed rate of each metal in the following feedstreams, measured and specified as prescribed in LAC 33:V.3005.E.6.a:

(a). total hazardous waste feed; and

(b). total pumpable hazardous waste feed;

iv. total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in LAC 33:V.3005.E.6;

v. maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in LAC 33:V.3005.E.6;

vi. maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in LAC 33:V.3005.E.6;

vii. maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in LAC 33:V.3005.E.6;

viii. appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

ix. allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

x. such other operating requirements as are necessary to ensure that the metals standards under LAC 33:V.3013.C or D are met.

4. Specific operating requirements to ensure conformance with the hydrogen chloride and chlorine gas standards provided by LAC 33:V.3015 are as follows.

a. For conformance with the Tier I total chloride and chlorine feed rate screening limits of LAC 33:V.3015 the permit will specify the following requirements:

i. feed rate of total hazardous waste measured and specified as prescribed in LAC 33:V.3005.E.6;

ii. feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in LAC 33:V.3005.E.6; and

iii. a sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.

b. For conformance with the Tier II HCl and $Cl_2$ emission rate screening limits provided by LAC 33:V.3015 and the Tier III HCl and $Cl_2$ controls under LAC 33:V.3105.C, the permit will specify the following operating requirements:

i. maximum emission rate for HCl and for $Cl_2$ specified as the average emission rate during the trial burn;

ii. feed rate of total hazardous waste measured and specified as prescribed in LAC 33:V.3005.E.6;

iii. total feed rate of chlorine and chloride in total feedstreams, measured and specified as prescribed in LAC 33:V.3005.E.6;

iv. maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in LAC 33:V.3005.E.6;

v. appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

vi. allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

vii. such other operating requirements as are necessary to ensure that the HCl and $Cl_2$ standards under LAC 33:V.3013.B or C are met.

5. Requirements to ensure conformance with the particulate standard are as follows.

a. Except as provided in Subparagraph E.5.b or c of this Section or in LAC 33:III.Chapter 51, the permit shall specify the following operating requirements to ensure conformance with the particulate standard specified in LAC 33:V.3011:

i. total ash feed rate to the device from hazardous waste, other fuels, and industrial furnace feedstocks, measured and specified as prescribed in LAC 33:V.3005.E.6;

ii. maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in LAC 33:V.3005.E.6;

iii. appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

iv. allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

v. such other operating requirements as are necessary to ensure that the particulate standard in LAC 33:V.3011.A is met.

b. Permit conditions to ensure conformance with the particulate matter standard shall not be provided for facilities

exempt from the particulate matter standard under LAC 33:V.3011.B.

c. For cement kilns and light-weight aggregate kilns, permit conditions to ensure compliance with the particulate standard shall not limit the ash content of hazardous waste or other feed materials.

6. Measuring parameters and establishing limits based on trial burn data are as follows.

a. General Requirements. As specified in LAC 33:V.3005.E.2-5, each operating parameter shall be measured, and permit limits on the parameter shall be established, according to either of the following procedures.

i. Instantaneous Limits. A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the permit limit specified as the time-weighted average during all valid runs of the trial burn; or

ii. Hourly Rolling Average

(a). The limit for a parameter may be established and continuously monitored on an hourly rolling average basis. A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds. An hourly rolling average is the arithmetic means of the 60 most recent one-minute average values recorded by the continuous monitoring system.

(b). The permit limit for the parameter shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average value for each run.

b. Rolling Average Limits for Carcinogenic Metals and Lead. Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by LAC 33:V.3005.E.6.a or on (up to) a 24-hour rolling average basis. If the owner or operator elects to use an average period from 2 to 24 hours:

i. the feed rate of each metal shall be limited at any time to 10 times the feed rate that would be allowed on an hourly rolling average basis;

ii. the continuous monitor shall meet the following specifications:

(a). a continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds;

(b). the rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the 60-minute period beginning at one minute after the beginning of the preceding clock hour; and

iii. the permit limit for the feed rate of each metal shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average feed rate for each run.

c. Feed Rate Limits for Metals, Total Chloride and Chlorine, and Ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of LAC 33:V.3005.E.6.a and b.

d. Conduct of Trial Burn Testing

i. If compliance with all applicable emissions standards of LAC 33:V.3009-3015 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

ii. Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of LAC 33:V.3009-3015 or establishing limits on operating parameters under this Section, the facility must operate under trial burn conditions for a sufficient period to reach steady-state operations. The administrative authority may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under LAC 33:V.3013.F need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metal emissions.

iii. Trial burn data on the level of an operating parameter for which a limit must be established in the permit must be obtained during emissions sampling for the pollutant(s) (i.e., metals, PM, $HCl/Cl_2$, organic compounds) for which the parameter must be established as specified by LAC 33:V.3005.

7. General requirements are as follows.

a. Fugitive Emissions. Fugitive emissions from the combustion zone that occur when hazardous waste is being burned must be controlled by:

i. keeping the combustion zone totally sealed against fugitive emissions;

ii. maintaining a combustion zone pressure lower than atmospheric pressure; or

iii. using an alternate means of control demonstrated (with Part II of the permit application) to provide control of fugitive emissions equivalent to that provided by maintaining a combustion zone pressure lower than atmospheric pressure.

b. Automatic Waste Feed Cutoff. A boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed

when operating conditions deviate from those established under this Subsection. The administrative authority may limit the number of cutoffs per an operating period on a case-by-case basis. In addition:

i. the permit limit for (the indicator of) minimum combustion chamber temperature must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber;

ii. exhaust gases must be ducted to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber; and

iii. operating parameters for which permit limits are established must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the administrative authority will establish a minimum period of time after a waste feed cutoff during which the parameter must not exceed the permit limit before the hazardous waste feed may be restarted.

c. Changes. A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits designated in its permit.

F. Monitoring and Inspections

1. The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste.

a. If required by the permit, feed rates and composition of hazardous waste, of other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine must be monitored and recorded.

b. If required by the permit, carbon monoxide (CO), total hydrocarbons, and oxygen must be monitored and recorded continuously at a common point in the boiler or industrial furnace downstream of the combustion zone and before the stack gases are released to the atmosphere as specified in LAC 33:V.3005.E.2.b. The administrative authority may approve an alternative monitoring scheme for monitoring total hydrocarbons. CO, HC, and oxygen monitors must be installed, operated, and maintained in accordance with *Guidelines for Continuous Monitoring of Carbon Monoxide at Hazardous Waste Incinerators, Appendix D*, PES, January 1987.

c. Upon the request of the administrative authority, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate) residues and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the standards of LAC 33:V.3009-3015.

2. All monitors shall record data in units corresponding to the permit limit unless otherwise specified in the permit.

3. The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks when they contain hazardous waste, etc.) must be thoroughly inspected visually, at least daily when hazardous waste is burned, for leaks, spills, fugitive emissions, and signs of tampering.

4. The emergency hazardous waste feed cutoff system and associated alarms must be tested at least weekly when hazardous waste is burned to verify operability, unless the applicant demonstrates to the administrative authority that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. Support for such demonstration shall be included in the operating record. At a minimum, operational testing must be conducted at least monthly.

5. These monitoring and inspection data must be recorded, and the records must be placed in the operating log required by LAC 33:V.1529.

G. Direct Transfer to the Burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with LAC 33:V.3023.

H. Recordkeeping. The owner or operator must maintain in the operating record of the facility all information and data required by this Section for five years.

I. Closure. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the site of the boiler or industrial furnace.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 21:944 (September 1995), LR 22:822 (September 1996), amended by the Office of Environmental Assessment, **Environmental Planning Division**, LR 26:2483 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2463 (October 2005), LR 33:2113 (October 2007), LR 34:628 (April 2008), LR 34:1015 (June 2008), LR 35:1880 (September 2009).

## §3007. Interim Status Standards for Burners

A. Applicability

1. General

a. The purpose of this Section is to establish minimum interim standards for owners or operators of facilities that burn hazardous waste in "existing" boilers or industrial furnaces. The standards provided in this Section define the acceptable management of hazardous waste during the period of interim status. The standards of this Section apply to owners and operators of facilities that are in operation or under construction on the effective date of this

Section until either a permit is issued under LAC 33:V.3009-3015 or until the closure responsibilities identified in this Section are fulfilled.

b. *Existing* or *in existence* means a boiler or industrial furnace that, on or before August 21, 1991, is either in operation burning or processing hazardous waste or for which construction (including the ancillary facilities to burn to process the hazardous waste) has commenced. A facility has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction; and either:

i. a continuous on-site, physical construction program has begun; or

ii. the owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the facility to be completed within a reasonable time.

c. If a boiler or industrial furnace is located at a facility that already has a permit or interim status, then the facility must comply with the applicable regulations dealing with permit modifications in LAC 33:V.4303 or changes in interim status in LAC 33:V.321.C.

2. Exemptions. The requirements of this Section do not apply to hazardous waste exempt under LAC 33:V.3001.B.

3. Prohibition on Burning Dioxin-Containing Wastes. The following hazardous waste listed for dioxin and hazardous waste derived from any of these wastes may not be burned in a boiler or industrial furnace operating under the interim status standards of this Section: EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, and F027.

4. Applicability of LAC 33:V.105.G and Chapter 43. Owners or operators of boilers and industrial furnaces that burn hazardous waste and are operating under interim status are subject to the following provisions of LAC 33:V.Chapter 43, except as provided otherwise by this Section:

a. LAC 33:V.105.G;

b. LAC 33:V.Chapter 43.Subchapter A (General Facility Standards);

c. LAC 33:V.Chapter 43.Subchapter B (Preparedness and Prevention);

d. LAC 33:V.Chapter 43.Subchapter C (Contingency Plan and Emergency Procedures);

e. LAC 33:V.Chapter 43.Subchapter D (Manifest System, Recordkeeping, and Reporting), except that LAC 33:V.4353, 4355 and 4363 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources;

f. LAC 33:V.Chapter 43.Subchapter F (Closure and Post-Closure);

g. LAC 33:V.Chapter 43.Subchapter G (Financial Requirements);

h. LAC 33:V.Chapter 43.Subchapter R (Air Emission Standards for Equipment Leaks).

5. Special Requirements for Furnaces. The following controls apply during interim status to industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see LAC 33:V.3007.A.5.b) at any location other than the hot end where products are normally discharged or where fuels are normally fired.

a. Controls

i. The hazardous waste shall be fed at a location where combustion gas temperatures are at least 1800°F;

ii. the owner or operator must determine that adequate oxygen is present in combustion gases to combust organic constituents in the waste and retain documentation of such determination in the facility record;

iii. for cement kiln systems, the hazardous waste shall be fed into the kiln; and

iv. the hydrocarbon controls of LAC 33:V.3007.C.5 or 3009.C apply upon certification of compliance under LAC 33:V.3007.C irrespective of the CO level achieved during the compliance test.

b. Burning Hazardous Waste Solely as an Ingredient. A hazardous waste is burned for a purpose other than solely as an ingredient if it meets either of these criteria:

i. the hazardous waste has a total concentration of nonmetal compounds listed in LAC 33:V.4901.G, Table 6 exceeding 500 ppm by weight, as-fired, and, so, is considered to be burned for destruction. The concentration of nonmetal compounds in a waste as-generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys nonmetal constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the facility record; or

ii. the hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and, so, is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending to augment the heating value to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly blended must be retained in the facility record.

6. Restrictions on Burning Hazardous Waste That is Not a Fuel. Prior to certification of compliance under LAC 33:V.3007.C, owners and operators shall not feed hazardous waste that has a heating value less than 5,000 Btu/lb, as-generated, (except that the heating value of a waste as-generated may be increased to above the 5,000 Btu/lb limit by bona fide treatment; however, blending to augment heating value to meet the 5,000 Btu/lb limit is prohibited and records must be kept to document that impermissible blending has not occurred) in a boiler or industrial furnace, except that:

a. hazardous waste may be burned solely as an ingredient; or

b. hazardous waste may be burned for purposes of compliance testing (or testing prior to compliance testing) for a total period of time not to exceed 720 hours; or

c. such waste may be burned if the administrative authority has documentation to show that, prior to August 21, 1991:

i. the boiler or industrial furnace is operating under the interim status standards for incinerators provided by LAC 33:V.Chapter 43.Subchapter N or the interim status standards for thermal treatment units provided by LAC 33:V.Chapter 43.Subchapter O;

ii. the boiler or industrial furnace met the interim status eligibility requirements under LAC 33:V.4301 for LAC 33:V.Chapter 43.Subchapters N or O; and

iii. hazardous waste with a heating value less than 5,000 Btu/lb was burned prior to that date; or

d. such waste may be burned in a halogen acid furnace if the waste is burned as an excluded ingredient under LAC 33:V.109.*Solid Waste*.5 prior to February 21, 1991, and documentation is kept on file supporting this claim.

7. Direct Transfer to the Burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with LAC 33:V.3023.

B. Certification of Precompliance

1. General. The owner or operator must provide complete and accurate information specified in LAC 33:V.3007.B.2 to the administrative authority on or before August 21, 1991, and must establish limits for the operating parameters specified in LAC 33:V.3007.B.3. Such information is termed a "certification of precompliance" and constitutes a certification that the owner or operator has determined that, when the facility is operated within the limits specified in LAC 33:V.3007.B.3, the owner or operator believes that, using best engineering judgment, emissions of particulate matter, metals, and HCl and $Cl_2$ are not likely to exceed the limits provided by LAC 33:V.3011-3015. The facility may burn hazardous waste only under the operating conditions that the owner or operator establishes under LAC 33:V.3007.B.3 until the owner or operator submits a revised certification of precompliance under LAC 33:V.3007.B.8 or a certification of compliance under LAC 33:V.3007.C, or until a permit is issued.

2. Information Required. The following information must be submitted with the certification of precompliance to support the determination that the limits established for the operating parameters identified in LAC 33:V.3007.B.3 are not likely to result in an exceedance of the allowable emission rates for particulate matter, metals, and HCl and $Cl_2$:

a. general facility information:

i. EPA facility ID number;

ii. facility name, contact person, telephone number, and address;

iii. description of boilers and industrial furnaces burning hazardous waste, including type and capacity of device;

iv. a scaled plot plan showing the entire facility and location of the boilers and industrial furnaces burning hazardous waste; and

v. a description of the air pollution control system on each device burning hazardous waste, including the temperature of the flue gas at the inlet to the particulate matter control system;

b. except for facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by LAC 33:V.3013.B or E and LAC 33:V.3015.B or E, respectively, the estimated uncontrolled (at the inlet to the air pollution control system) emissions of particulate matter, each metal controlled by LAC 33:V.3013, and hydrogen chloride and chlorine, and the following information to support such determinations:

i. the feed rate (lb/hr) of ash, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks);

ii. the estimated partitioning factor to the combustion gas for the materials identified in Subparagraph B.2.a of this Section and the basis for the estimate and an estimate of the partitioning to HCl and $Cl_2$ of total chloride and chlorine in feed materials. To estimate the partitioning factor, the owner or operator must use either best engineering judgment or the procedures specified in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I;

iii. for industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under Clause C.3.b.i of this Section, the estimated enrichment factor for each metal. To estimate the enrichment factor, the owner or operator must use either best engineering judgment or the procedures specified in "Alternative Methodology for Implementing Metals Controls" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I;

iv. if best engineering judgment is used to estimate partitioning factors or enrichment factors under LAC 33:V.3007.B.2.b or c respectively, the basis for the judgment. When best engineering judgment is used to develop or evaluate data or information and make determinations under this Section, the determinations must be made by a qualified, registered professional engineer and a certification of his/her determinations in accordance with LAC 33:V.513 must be provided in the certification of precompliance;

c. for facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by LAC 33:V.3013.B or E and 3015.B.1 or E, the feed rate (lb/hr) of total chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feed stream (hazardous waste, other fuels, industrial furnace feedstocks);

d. for facilities complying with the Tier II or Tier III emission limits for metals or HCl and $Cl_2$ (under LAC 33:V.3013.C or D or 3015.B.2 or C, the estimated controlled (outlet of the air pollution control system) emissions rates of particulate matter, each metal controlled by LAC 33:V.3013, and HCl and $Cl_2$, and the following information to support such determinations:

i. the estimated air pollution control system (APCS) removal efficiency for particulate matter, HCl, $Cl_2$, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium;

ii. to estimate APCS removal efficiency, the owner or operator must use either best engineering judgment or the procedures prescribed in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I;

iii. if best engineering judgment is used to estimate APCS removal efficiency, the basis for the judgment is required. Use of best engineering judgment must be in conformance with provisions of LAC 33:V.3007.B.2.b.iv;

e. determination of allowable emissions rates for HCl, $Cl_2$, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium, and the following information to support such determinations:

i. for all facilities:

(a). physical stack height;

(b). *good engineering practice stack height* as defined by 40 CFR 51.100(ii);

(c). maximum flue gas flow rate;

(d). maximum flue gas temperature;

(e). attach a US Geological Service topographic map (or equivalent) showing the facility location and surrounding land within five kilometers of the facility;

(f). identify terrain type (complex or noncomplex); and

(g). identify land use (urban or rural);

ii. for owners and operators using Tier III site specific dispersion modeling to determine allowable levels under LAC 33:V.3013.D or 3015.C, or adjusted Tier I feed rate screening limits under LAC 33:V.3013.E or 3015.E:

(a). dispersion model and version used;

(b). source of meteorological data;

(c). the dilution factor in micrograms per cubic meter per gram per second of emissions for the maximum annual average off-site (unless on-site is required) ground level concentration (MEI location); and

(d). indicate the MEI location on the map required under LAC 33:V.3007.B.2.e.i.(e);

f. for facilities complying with the Tier II or III emissions rate controls for metals or HCl and $Cl_2$, a comparison of the estimated controlled emissions rates determined under LAC 33:V.3017.B.2.d with the allowable emission rates determined under LAC 33:V.3017.B.2.e;

g. for facilities complying with the Tier I (or adjusted Tier I) feed rate screening limits for metals or total chloride and chlorine, a comparison of actual feed rates of each metal and total chlorine and chloride determined under LAC 33:V.3007.B.2.c to the Tier I allowable feed rates; and

h. for industrial furnaces that feed hazardous waste for any purpose other than solely as an ingredient (as defined by LAC 33:V.3007.A.5.b) at any location other than the product discharge end of the device, documentation of compliance with the requirements of LAC 33:V.3007.A.5.a.i-iii;

i. for industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under LAC 33:V.3007.C.3.b.i:

i. the applicable particulate matter standard in lb/hr; and

ii. the precompliance limit on the concentration of each metal in collected PM.

3. Limits on Operating Conditions. The owner and operator shall establish limits on the following parameters consistent with the determinations made under LAC 33:V.3007.B.2 and certify (under provisions of LAC 33:V.3007.B.9) to the administrative authority that the facility will operate within the limits during interim status when there is hazardous waste in the unit until revised certification of precompliance under LAC 33:V.3007.B.8 or certification of compliance under LAC 33:V.3007.C:

a. feed rate of total hazardous waste and (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E) pumpable hazardous waste;

b. feed rate of each metal in the following feedstreams:

i. total feedstreams, except that industrial furnaces that comply with the alternative metals implementation approach under LAC 33:V.3007.B.4 must specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;

ii. total hazardous waste feed unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E; and

iii. total pumpable hazardous waste feed, unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E;

c. total feed rate of chlorine and chloride in total feedstreams;

d. total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited; and

e. maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under LAC 33:V.3015.B.1 or E and for all metals under LAC 33:V.3013.B or E and the uncontrolled emissions do not exceed the standard under LAC 33:V.3011.

4. Operating Requirements for Furnaces That Recycle PM. Owners and operators of furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions controls under Clause C.3.b.i of this Section must comply with the special operating requirements provided in "Alternative Methodology for Implementing Metals Controls" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I.

5. Measurement of Feed Rates and Production Rate

a. General Requirements. Limits on each of the parameters specified in LAC 33:V.3007.B.3 (except for limits on metals concentrations in collected particulate matter (PM) for industrial furnaces that recycle collected PM) shall be established and continuously monitored under either of the following methods.

i. Instantaneous Limits. A limit for a parameter may be established and continuously monitored and recorded on an instantaneous basis (i.e., the value that occurs at any time) not to be exceeded at any time; or

ii. Hourly Rolling Average Limits. A limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(a). a continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds;

(b). an hourly rolling average is the arithmetic mean of the 60 most recent one-minute average values recorded by the continuous monitoring system.

b. Rolling Average Limits for Carcinogenic Metals and Lead. Feed rate limits for the carcinogenic metals (arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by LAC 33:V.3007.B.5.a.ii or on (up to) a 24-hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours.

i. The feed rate of each metal shall be limited at any time to 10 times the feed rate that would be allowed on an hourly rolling average basis.

ii. The continuous monitor shall meet the following specifications:

(a). a continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds;

(b). the rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour.

c. Feed Rate Limits for Metals, Total Chloride and Chlorine, and Ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of LAC 33:V.3007.B.5.a and b.

6. Public Notice Requirements at Precompliance. On or before August 21, 1991, the owner or operator must submit a notice with the following information for publication in a major local newspaper of general circulation and send a copy of the notice to the appropriate units of state and local government. The owner or operator must provide to the Office of Environmental Services with the certification of precompliance evidence of submitting the notice for publication. The notice, which shall be entitled "Notice of Certification of Precompliance with Hazardous Waste Burning Requirements of LAC 33:V.3007.B," must include:

a. name and address of the owner or operator of the facility as well as the location of the device burning hazardous waste;

b. date that the certification of precompliance is submitted to the administrative authority;

c. brief description of the regulatory process required to comply with the interim status requirements of this Section including required emissions testing to demonstrate conformance with emissions standards for organic compounds, particulate matter, metals, and HCl and $Cl_2$;

d. types and quantities of hazardous waste burned including, but not limited to, source, whether solid or liquid, as well as an appropriate description of the waste;

e. type of device(s) in which the hazardous waste is burned including a physical description and maximum production rate of each device;

f. types and quantities of other fuels and industrial furnace feedstocks fed to each unit;

g. brief description of the basis for this certification of precompliance as specified in LAC 33:V.3007.B.2;

h. locations where the record for the facility can be viewed and copied by interested parties. These records and locations shall, at a minimum, include:

i. the administrative record kept by the Louisiana Department of Environmental Quality (LDEQ) where the supporting documentation was submitted or another location designated by the administrative authority; and

ii. the BIF correspondence file kept at the facility site where the device is located. The correspondence must include all correspondence between the facility and the director, administrative authority, including copies of all certifications and notifications, such as the precompliance certification, precompliance public notice, notice of compliance testing, compliance test report, compliance certification, time extension requests and approvals or denials, enforcement notifications of violations, and copies of EPA and state site visit reports submitted to the owner or operator;

i. notification of the establishment of a facility mailing list whereby interested parties shall notify the LDEQ that they wish to be placed on the mailing list to receive future information and notices about this facility; and

j. location (mailing address) of the applicable LDEQ Regional Office, where further information can be obtained on LDEQ regulation of hazardous waste burning.

7. Monitoring Other Operating Parameters. When the monitoring systems for the operating parameters listed in Subparagraphs C.1.e-m of this Section are installed and operating in conformance with vendor specifications or (for CO, HC, and oxygen) specifications provided by 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I, as appropriate, the parameters shall be continuously monitored and records shall be maintained in the operating record.

8. Revised Certification of Precompliance. The owner or operator may revise at any time the information and operating conditions documented under LAC 33:V.3007.B.2 and 3 in the certification of precompliance by submitting a revised certification of precompliance under procedures provided by those paragraphs.

a. The public notice requirements of LAC 33:V.3007.B.6 do not apply to recertifications.

b. The owner or operator must operate the facility within the limits established for the operating parameters under LAC 33:V.3007.B.3 until a revised certification is submitted under this Paragraph or a certification of compliance is submitted under LAC 33:V.3007.C.

9. Certification of Precompliance Statement. The owner or operator must include the following signed statement with the certification of precompliance submitted to the administrative authority.

> "I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of LAC 33:V.3007.B are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
>
> "I also acknowledge that the operating limits established in this certification pursuant to LAC 33:V.3007.B.3 and 4 are enforceable limits at which the facility can legally operate during interim status until:
>
> (1) a revised certification of precompliance is submitted,
>
> (2) a certification of compliance is submitted, or
>
> (3) an operating permit is issued."

C. Certification of Compliance. The owner or operator shall conduct emissions testing to document compliance with the emissions standards of Clause A.5.a.iv of this Section and LAC 33:V.3009.B-E, 3011, 3013, and 3015, under the procedures prescribed by this Subsection, except under extensions of time provided by Paragraph C.7 of this Section. Based on the compliance test, the owner or operator shall submit to the administrative authority, on or before August 21, 1992, a complete and accurate "certification of compliance" (under LAC 33:V.3007.C.4) with those emission standards establishing limits on the operating parameters specified in LAC 33:V.3007.C.1.

1. Limits on Operating Conditions. The owner or operator shall establish limits on the following parameters based on operations during the compliance test (under procedures prescribed in LAC 33:V.3007.C.4.d) or as otherwise specified and include these limits with the certification of compliance. The boiler or industrial furnace must be operated in accordance with these operating limits and the applicable emissions standards of LAC 33:V.3009.B-E, 3011, 3013, 3015, and 3007.A.5.a.iv at all times when there is hazardous waste in the unit:

a. feed rate of total hazardous waste and (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E), pumpable hazardous waste;

b. feed rate of each metal in the following feedstreams:

i. total feed streams, except that:

(a). facilities that comply with Tier I or Adjusted Tier I metals feed rate screening limits may set their operating limits at the metal feed rate screening limit determined under LAC 33:V.3013.B or E; and

(b). industrial furnaces that must comply with the alternative metals implementation approach under LAC 33:V.3007.C.3.b.ii must specify limits on the concentration of each metal in the collected particulate matter in lieu of feed rate limits for total feedstreams;

ii. total hazardous waste feed (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E); and

iii. total pumpable hazardous waste feed;

c. total feed rate of chlorine and chloride in total feed streams, except that facilities that comply with Tier I or Adjusted Tier I feed rate screening limits may set their operating limits at the total chlorine and chlorine feed rate screening limits determined under LAC 33:V.3015.B.1 or E;

d. total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and light-weighted aggregate kilns is not limited;

e. carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas. When complying with the CO controls of LAC 33:V.3009.B, the CO limit is 100 ppmv, and when complying with the HC controls of LAC 33:V.3009.C, the HC limit is 20 ppmv. When complying with the CO controls of LAC 33:V.3009.C, the CO limit is established based on the compliance test;

f. maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under LAC 33:V.3015.B.1 or E and for all metals under LAC 33:V.3013.B or E and the uncontrolled particulate emissions do not exceed the standard under LAC 33:V.3011;

g. maximum combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible and is upstream of any quench water injection, (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E);

h. maximum flue gas temperature entering a particulate matter control device (unless complying with Tier I or Adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E and the total chlorine and chloride feed rate screening limits under LAC 33:V.3015.B.1 or E);

i. for systems using wet scrubbers, including wet ionizing scrubbers (unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E and the total chlorine and chloride feed rate screening limits under LAC 33:V.3015.B.1 or E):

i. minimum liquid to flue gas ratio;

ii. minimum scrubber blowdown from the system or maximum suspended solids content of scrubber water; and

iii. minimum pH level of the scrubber water;

j. for systems using venturi scrubbers, the minimum differential gas pressure across the venturi (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E and the total chlorine and chloride feed rate screening limits under LAC 33:V.3015.B.1 or E);

k. for systems using dry scrubbers (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3015.B.1 or E and the total chlorine and chloride feed rate screening limits under LAC 33:V.3015.B.1 or E):

i. minimum caustic feed rate; and

ii. maximum flue gas flow rate;

l. for systems using wet ionizing scrubbers or electrostatic precipitators (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E and the total chlorine and chloride feed rate screening limits under LAC 33:V.3015.B.1 or E):

i. minimum electrical power in kilovolt amperes (kVA) to the precipitator plates; and

ii. maximum flue gas flow rate;

m. for systems using fabric filters (baghouses), the minimum pressure drop (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under LAC 33:V.3013.B or E and the total chlorine and chloride feed rate screening limits under LAC 33;V.3015.B.1 or E).

2. Prior Notice of Compliance Testing. At least 30 days prior to the compliance testing required by Paragraph C.3 of this Section, the owner or operator shall notify the Office of Environmental Services and submit the following information:

a. general facility information including:

i. EPA facility ID number;

ii. facility name, contact person, telephone number, and address;

iii. person responsible for conducting compliance testing, including company name, address, and telephone number, and a statement of qualifications;

iv. planned date of the compliance test;

b. specific information on each device to be tested including:

i. description of boiler or industrial furnace;

ii. a scaled plot plan showing the entire facility and location of the boiler or industrial furnace;

iii. a description of the air pollution control system;

iv. identification of the continuous emission monitors that are installed, including:

(a). carbon monoxide monitor;

(b). oxygen monitor;

(c). hydrocarbon monitor, specifying the minimum temperature of the system and, if the temperature is less than 150°C, an explanation of why a heated system is not used (see LAC 33:V.3007.C.5) and a brief description of the sample gas conditioning system;

v. indication of whether the stack is shared with another device that will be in operation during the compliance test;

vi. other information useful to an understanding of the system design or operation;

c. information on the testing planned, including a complete copy of the test protocol and Quality Assurance/Quality Control (QA/QC) plan, and a summary description for each test providing the following information at a minimum:

i. purpose of the test (e.g., demonstrate compliance with emissions of particulate matter); and

ii. planned operating conditions, including levels for each pertinent parameter specified in LAC 33:V.3007.C.1.

3. Compliance Testing

a. General. Compliance testing must be conducted under conditions for which the owner or operator has submitted a certification of precompliance under LAC 33:V.3007.B and under conditions established in the notification of compliance testing required by LAC 33:V.3007.C.2. The owner or operator may seek approval on a case-by-case basis to use compliance test data from one unit in lieu of testing a similar on-site unit. To support the request, the owner or operator must provide a comparison of the hazardous waste burned and other feed streams and the design, operation, and maintenance of both the tested unit and the similar unit. The administrative authority shall provide a written approval to use compliance test data in lieu of testing a similar unit if he finds that the hazardous wastes, the devices, and the operating conditions are sufficiently similar and the data from the other compliance test is adequate to meet the requirements of LAC 33:V.3007.C.

b. Special Requirements for Industrial Furnaces that Recycle Collected PM. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system must comply with one of the following procedures for testing to determine compliance with the metals standards of LAC 33:V.3013.C or D:

i. the special testing requirements prescribed in "Alternative Method for Implementing Metals Controls" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I; or

ii. stack emissions testing for a minimum of six hours each day while hazardous waste is burned during interim status. The testing must be conducted when burning normal hazardous waste for that day at normal feed rates for that day and when the air pollution control system is operated under normal conditions. During interim status, hazardous waste analysis for metals content must be sufficient for the owner or operator to determine if changes in metals content may affect the ability of the facility to meet the metals emissions standards established under LAC 33:V.3013.C or D. Under this option, operating limits (under LAC 33:V.3007.C.1) must be established during compliance testing under LAC 33:V.3007.C.3 only on the following parameters:

(a). feed rate of total hazardous waste;

(b). total feed rate of chlorine and chloride in total feedstreams;

(c). total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited;

(d). carbon monoxide concentration and, where required, hydrocarbon concentration in stack gas;

(e). maximum production rate of the device in appropriate units when producing normal product; or

iii. conduct compliance testing to determine compliance with the metals standards to establish limits on the operating parameters of LAC 33:V.3007.C.1 only after the kiln system has been conditioned to enable it to reach equilibrium with respect to metals fed into the system and metals emissions. During conditioning, hazardous waste and raw materials having the same metals content as will be fed during the compliance test must be fed at the feed rates that will be fed during the compliance test.

c. Conduct of Compliance Testing

i. If compliance with all applicable emissions standards of LAC 33:V.3009-3015 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

ii. Prior to obtaining test data for purposes of demonstrating compliance with the applicable emissions standards of LAC 33:V.3009-3015 or establishing limits on operating parameters under this Section, the facility must operate under compliance test conditions for a sufficient period to reach steady-state operations. Industrial furnaces that recycle collected particulate matter back into the furnace and that comply with LAC 33:V.3007.C.3.b.i or ii, however, need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals.

iii. Compliance test data on the level of an operating parameter for which a limit must be established in the certification of compliance must be obtained during emissions sampling for the pollutant(s) (i.e., metals, PM, $HCl/Cl_2$, organic compounds) for which the parameter must be established as specified by LAC 33:V.3007.C.1.

4. Certification of Compliance. Within 90 days of completing compliance testing, the owner or operator must certify to the administrative authority compliance with the emissions standards of LAC 33:V.3007.A.5.a.iv, 3009.B, C, and E, 3011, 3013, and 3015. The certification of compliance must include the following information:

a. general facility and testing information including:

i. EPA facility ID number;

ii. facility name, contact person, telephone number, and address;

iii. person responsible for conducting compliance testing, including company name, address, and telephone number, and a statement of qualifications;

iv. date(s) of each compliance test;

v. description of boiler or industrial furnace tested;

vi. person responsible for quality assurance/quality control (QA/QC), title, and telephone number, and statement that procedures prescribed in the QA/QC plan submitted under LAC 33:V.3007.C.2.c have been followed, or a description of any changes and an explanation of why changes were necessary;

vii. description of any changes in the unit configuration prior to or during testing that would alter any of the information submitted in the prior notice of compliance testing under LAC 33:V.3007.C.2, and an explanation of why the changes were necessary;

viii. description of any changes in the planned test conditions prior to or during the testing that alter any of the information submitted in the prior notice of compliance testing under LAC 3007.C.2, and an explanation of why the changes were necessary; and

ix. the complete report on results of emissions testing;

b. specific information on each test including:

i. purpose(s) of test (e.g., demonstrate conformance with the emissions limits for particulate matter, metals, HCl, $Cl_2$, and CO);

ii. summary of test results for each run and for each test including the following information:

(a). date of run;

(b). duration of run;

(c). time-weighted average and highest hourly rolling average CO level for each run and for the test;

(d). highest hourly rolling average HC level, if HC monitoring is required for each run and for the test;

(e). if dioxin and furan testing is required under LAC 33:V.3009.E, time-weighted average emissions for each run and for the test of chlorinated dioxin and furan emissions, and the predicted maximum annual average ground level concentration of the toxicity equivalency factor;

(f). time-weighted average particulate matter emissions for each run and for the test;

(g). time-weighted average HCl and $Cl_2$ emissions for each run and for the test;

(h). time-weighted average emissions for the metals subject to regulation under LAC 33:V.3013 for each run and for the test; and

(i). QA/QC results;

c. comparison of the actual emissions during each test with the emissions limits prescribed by LAC 33:V.3009.B, C, and E, 3011, 3013, and 3015 and established for the facility in the certification of precompliance under LAC 33:V.3007.B;

d. determination of operating limits based on all valid runs of the compliance test for each applicable parameter listed in LAC 33:V.3007.C.1 using either of the following procedures:

i. Instantaneous Limits. A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the operating limit specified as the time-weighted average during all runs of the compliance test; or

ii. Hourly Rolling Average Basis

(a). The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(i). a continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds;

(ii). an hourly rolling average is the arithmetic mean of the 60 most recent one-minute average values recorded by the continuous monitoring system;

(b). The operating limit for the parameter shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average value for each run;

iii. Rolling Average Limits for Carcinogenic Metals and Lead. Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by LAC 33:V.3007.C.4.d.ii or on (up to) a 24-hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

(a). the feed rate of each metal shall be limited at any time to 10 times the feed rate that would be allowed on an hourly rolling average basis;

(b). the continuous monitor shall meet the following specifications:

(i). a continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds;

(ii). the rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour; and

(c). the operating limit for the feed rate of each metal shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average feed rate for each run;

iv. Feed Rate Limits for Metals, Total Chloride and Chlorine, and Ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of LAC 33:V.3007.C.4.d.i-iii;

e. Certification of Compliance Statement. The following statement shall accompany the certification of compliance.

> "I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of LAC 33:V.3007.C are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
>
> "I also acknowledge that the operating conditions established in this certification pursuant to LAC 33:V.3007.C.4.d are enforceable limits at which the facility can legally operate during interim status until a revised certification of compliance is submitted."

5. Special Requirements for HC Monitoring Systems. When an owner or operator is required to comply with the hydrocarbon (HC) controls provided by Clause A.5.a.iv of this Section or LAC 33:V.3009.C, a conditioned gas monitoring system may be used in conformance with specifications provided in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I, provided that the owner or operator submits a certification of compliance without using extensions of time provided by Paragraph C.7 of this Section.

6. Special Operating Requirements for Industrial Furnaces that Recycle Collected PM. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system must:

a. when complying with the requirements of Paragraph C.7 of this Section, comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I; and

b. when complying with the requirements of LAC 33:V.3007.C.3.b.ii, comply with the operating requirements prescribed by that paragraph.

7. Extensions of Time

a. If the owner or operator does not submit a complete certification of compliance for all of the applicable emissions standards of LAC 33:V.3009-3015 by August 21, 1992, he/she must either:

i. stop burning hazardous waste and begin closure activities under LAC 33:V.3007 for the hazardous waste portion of the facility; or

ii. limit hazardous waste burning only for purposes of compliance testing (and pretesting to prepare for compliance testing) a total period of 720 hours for the period of time beginning August 21, 1992, submit a notification to the administrative authority by August 21, 1992 stating that the facility is operating under restricted interim status and intends to resume burning hazardous waste, and submit a complete certification of compliance by August 23, 1993; or

iii. obtain a case-by-case extension of time under LAC 33:V.3007.C.7.b.

b. The owner or operator may request a case-by-case extension of time to extend any time limit provided by LAC 33:V.3007.C if compliance with the time limit is not practicable for reasons beyond the control of the owner or operator.

i. In granting an extension, the administrative authority may apply conditions as the facts warrant to ensure timely compliance with the requirements of this Section and that the facility operates in a manner that does not pose a hazard to human health and the environment.

ii. When an owner or operator requests an extension of time to enable the facility to comply with the alternative hydrocarbon provisions of LAC 33:V.3009.F and to obtain a RCRA operating permit because the facility cannot meet the HC limit of LAC 33:V.3009.C, the administrative authority shall, in considering whether to grant the extension:

(a). determine whether the owner or operator has submitted in a timely manner a complete Part B permit application that includes information required under LAC 33:V.535; and

(b). consider whether the owner or operator has made a good faith effort to certify compliance with all other emission controls, including the controls on dioxins and

furans of LAC 33:V.3009.E and the controls on PM, metals, and $HCl/Cl_2$.

iii. If an extension is granted, the administrative authority shall, as a condition of the extension, require the facility to operate under flue gas concentration limits on CO and HC that, based on available information, including information in the Part B permit application, are baseline CO and HC levels as defined by LAC 33:V.3009.F.1.

8. Revised Certification of Compliance. The owner or operator may submit at any time a revised certification of compliance (recertification of compliance) to the Office of Environmental Services under the following procedures:

a. prior to submittal of a revised certification of compliance, hazardous waste may not be burned for more than a total of 720 hours under operating conditions that exceed those established under a current certification of compliance, and such burning may be conducted only for purposes of determining whether the facility can operate under revised conditions and continue to meet the applicable emissions standards of LAC 33:V.3009-3015;

b. at least 30 days prior to first burning hazardous waste under operating conditions that exceed those established under a current certification of compliance, the owner or operator shall notify the Office of Environmental Services and submit the following information:

i. EPA facility ID number, and facility name, contact person, telephone number, and address;

ii. operating conditions that the owner or operator is seeking to revise and description of the changes in facility design or operation that prompted the need to seek to revise the operating conditions;

iii. a determination that when operating under the revised operating conditions, the applicable emissions standards of LAC 33:V.3009-3015 are not likely to be exceeded. To document this determination, the owner or operator shall submit the applicable information required under LAC 33:V.3007.B.2; and

iv. complete emissions testing protocol for any pretesting and for a new compliance test to determine compliance with the applicable emissions standards of LAC 33:V.3009-3015 when operating under revised operating conditions. The protocol shall include a schedule of pre-testing and compliance testing. If the owner and operator revises the scheduled date for the compliance test, he/she shall notify the Office of Environmental Services in writing at least 30 days prior to the revised date of the compliance test;

c. conduct a compliance test under the revised operating conditions and the protocol submitted to the administrative authority to determine compliance with the applicable emissions standards of LAC 33:V.3009-3015; and

d. submit to the Office of Environmental Services a revised certification of compliance under Paragraph C.4 of this Section.

D. Periodic Recertifications. The owner or operator must conduct compliance testing and submit to the Office of Environmental Services a recertification of compliance under provisions of Subsection C of this Section within five years from submitting the previous certification or recertification. If the owner or operator seeks to recertify compliance under new operating conditions, he/she must comply with the requirements of Paragraph C.8 of this Section.

E. Noncompliance with Certification Schedule. If the owner or operator does not comply with the interim status compliance schedule provided by LAC 33:V.3007.B-D, hazardous waste burning must terminate on the date that the deadline is missed, closure activities must begin under LAC 33:V.3007, and hazardous waste burning may not resume except under an operating permit issued under LAC 33:V.537. For purposes of compliance with the closure provisions of LAC 33:V.3007.L, 4381.D.2, and 4383, the boiler or industrial furnace has received "the known final volume of hazardous waste" on the date that the deadline is missed.

F. Start-Up and Shutdown. Hazardous waste (except waste fed solely as an ingredient under the Tier I, or adjusted Tier I, feed rate screening limits for metals and chloride/chlorine) must not be fed into the device during start-up and shutdown of the boiler or industrial furnace, unless the device is operating within the conditions of operation specified in the certification of compliance.

G. Automatic Waste Feed Cutoff. During the compliance test required by LAC 33:V.3007.C.3, and upon certification of compliance under LAC 33:V.3007.C, a boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when the applicable operating conditions specified in LAC 33:V.3007.C.1.a and e-m deviate from those established in the certification of compliance. In addition:

1. to minimize emissions of organic compounds, the minimum combustion chamber temperature (or the indicator of combustion chamber temperature) that occurred during the compliance test must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber, with the minimum temperature during the compliance test defined as either:

a. if compliance with the combustion chamber temperature limit is based on an hourly rolling average, the minimum temperature during the compliance test is considered to be the average over all runs of the lowest hourly rolling average for each run; or

b. if compliance with the combustion chamber temperature limit is based on an instantaneous temperature measurement, the minimum temperature during the compliance test is considered to be the time-weighted average temperature during all runs of the test; and

2. operating parameters limited by the certification of compliance must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the

levels of those parameters comply with the limits established in the certification of compliance.

H. Fugitive Emissions. Fugitive emissions must be controlled by:

1. keeping the combustion zone totally sealed against fugitive emissions; or

2. maintaining the combustion zone pressure lower than atmospheric pressure; or

3. an alternate means of control that the owner or operator can demonstrate provides fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. Support for such demonstration shall be included in the operating record.

I. Changes. A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits specified in the certification of compliance.

J. Monitoring and Inspections

1. The owner or operator must monitor and record, at a minimum, the following while burning hazardous waste:

a. feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine as necessary to ensure conformance with the certification of precompliance or certification of compliance;

b. carbon monoxide (CO), oxygen, and if applicable, hydrocarbons (HC) must be monitored on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with the operating limits specified in the certification of compliance. CO, HC and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I;

c. upon the request of the administrative authority, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate) and the stack gas emissions must be conducted to verify that the operating conditions established in the certification of precompliance or certification of compliance achieve the applicable standards of LAC 33:V.3009-3015.

2. The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel, storage tanks, etc.) must be subjected to thorough visual inspection at least daily when hazardous waste is burned for leaks, spills, fugitive emissions, and signs of tampering.

3. The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every seven days when hazardous waste is burned to verify operability, unless the owner or operator has written documentation that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate, and the administrative authority approves less frequent inspections or testing. Support for such demonstration shall be included in the operating record. At a minimum, operational testing must be conducted at least monthly.

4. These monitoring and inspection data must be recorded and the records must be placed in the operating log.

K. Recordkeeping. The owner or operator must keep in the operating record of the facility all information and data required by this Section for five years.

L. Closure. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace site and must comply with LAC 33:V.3023-3025.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 22:822 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1740 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2483 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2463 (October 2005), LR 33:2114 (October 2007), LR 34:629 (April 2008), LR 34:999 (June 2008).

## §3009. Standards to Control Organic Emissions

A boiler or industrial furnace burning hazardous waste must be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under LAC 33:V.3005.E, it will meet the following standards.

A. DRE Standard. A boiler or industrial furnace burning hazardous waste must meet the destruction and removal efficiency (DRE) performance standard of LAC 33:V.3009.

1. General. A boiler or industrial furnace burning hazardous waste must achieve a DRE of 99.99 percent for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99 percent DRE must be demonstrated during a trial burn for each principal organic hazardous constituent (POHC) designated under LAC 33:V.3009.A in its permit for each waste feed. DRE is determined for each POHC from the following equation.

$$DRE = \left[1 - \frac{W_{out}}{W_{in}}\right] x100$$

where:

$W_{in}$ = mass feed rate of one POHC in the hazardous waste fired to the boiler or industrial furnace

$W_{out}$ = mass emission rate of the same POHC present in stack gas prior to release to the atmosphere

2. Designation of POHCs. Principal organic hazardous constituents (POHCs) are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn in conformance with procedures prescribed in LAC 33:V.537. One or more POHCs will be specified in the facility's permit for each waste feed to be burned. POHCs shall be designated based on the degree of difficulty of destruction of the organic constituents in the hazardous waste and on their concentrations or mass in the waste feed, considering the results of hazardous waste analysis and trial burns or alternative data submitted with Part II of the facility's permit application. POHCs are most likely to be selected from among those compounds listed in LAC 33:V.4901.G, Table 6 that are also present in the normal waste feed. However, if the applicant demonstrates to the administrative authority's satisfaction that a compound not listed in LAC 33:V.4901.G, Table 6 or not present in the normal waste feed is a suitable indicator of compliance with the DRE requirements of this Section, that compound may be designated as a POHC. Such POHCs need not be toxic or organic compounds.

3. Dioxin-Listed Waste. A boiler or industrial furnace burning hazardous waste containing (or derived from) EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, or F027 must achieve a DRE of 99.9999 percent for each POHC designated (under Subparagraph A.1.b of this Section) in its permit. This performance must be demonstrated on POHCs that are more difficult to burn than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. The DRE is determined for each POHC from the equation in Paragraph A.1 of this Section. In addition, the owner or operator of the boiler or industrial furnace must notify the Office of Environmental Services of his intent to burn EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, or F027.

4. Automatic Waiver of DRE Trial Burn. Owners and operators of boilers operated under the special operating requirements provided by LAC 33:V.3021 are considered to be in compliance with the DRE standard of LAC 33:V.3009.A.1 and are exempt from the DRE trial burn.

5. Low Risk Waste. Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with the requirements of LAC 33:V.3019.A are considered to be in compliance with the DRE standard of LAC 33:V.3009.A.1 and are exempt from the DRE trial burn.

B. Carbon Monoxide Standard

1. Except as provided in LAC 33:V.3009.C, the stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste cannot exceed 100 ppmv on an hourly rolling average basis (i.e., over any 60-minute period), continuously corrected to 7 percent oxygen, dry gas basis.

2. CO and oxygen shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Carbon Monoxide and Oxygen for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I.

3. Compliance with the 100 ppmv CO limit must be demonstrated during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). To demonstrate compliance, the highest hourly rolling average CO level during any valid run of the trial burn or compliance test must not exceed 100 ppmv.

C. Alternative Carbon Monoxide Standard

1. The stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste may exceed the 100 ppmv limit provided that stack gas concentrations of hydrocarbons (HC) do not exceed 20 ppmv, except as provided by LAC 33:V.3009.F for certain industrial furnaces.

2. HC limits must be established under this Section on an hourly rolling average basis (i.e., over any 60-minute period), reported as propane, and continuously corrected to 7 percent oxygen, dry gas basis.

3. HC shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I. CO and oxygen shall be continuously monitored in conformance with Paragraph B.2 of this Section.

4. The alternative CO standard is established based on CO data during the trial burn (for a new facility) and the compliance test (for an interim status facility). The alternative CO standard is the average over all valid runs of the highest hourly average CO level for each run. The CO limit is implemented on an hourly rolling average basis, and continuously corrected to 7 percent oxygen, dry gas basis.

D. Special Requirements for Furnaces. Owners or operators of industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see LAC 33:V.3007.A.5.b) at any location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon limits provided by LAC 33:V.3009.C or F irrespective of whether stack gas CO concentrations meet the 100 ppmv limit of LAC 33:V.3009.B.

E. Controls for Dioxins and Furans. Owners or operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of 450-750°F, and industrial furnaces operating under an alternative hydrocarbon limit established under LAC 33:V.3009.F must conduct a site-specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo-p-dioxins and dibenzofurans do not

result in an increased lifetime cancer risk to the hypothetical maximum exposed individual (MEI) exceeding 1 in 100,000:

1. during the trial burn (for new facilities or an interim status facility applying for a permit) or compliance test (for interim status facilities), determine emission rates of the tetra-octa congeners of chlorinated dibenzo-p-dioxins and dibenzofurans (CDDs/CDFs) using Method 0023A, Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110;

2. estimate the 2,3,7,8-TCDD toxicity equivalence of the tetra-octa CDD/CDF congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-Dioxin and Dibenzofuran Congeners" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I. Multiply the emission rates of CDD/CDF congeners with a toxicity equivalence greater than zero (see the procedure) by the calculated toxicity equivalence factor to estimate the equivalent emission rate of 2,3,7,8-TCDD;

3. conduct dispersion modeling using methods recommended in 40 CFR 51, Appendix W ("Guideline on Air Quality Models (Revised)" and its supplements), the "Hazardous Waste Combustion Air Quality Screening Procedure" provided in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I, or in "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised," as incorporated by reference at LAC 33:V.110, to predict the maximum annual average off-site ground level concentration of 2,3,7,8-TCDD equivalents determined under Paragraph E.2 of this Section. The maximum annual average concentration must be used when a person resides on-site; and

4. the ratio of the predicted maximum annual average ground level concentration of 2,3,7,8-TCDD equivalents to the risk-specific dose for 2,3,7,8-TCDD provided in 40 CFR 266, Appendix V, as adopted at LAC 33:V.3099.Appendix E, ($2.2 \times 10^{-7}$) shall not exceed 1.0.

F. Reserved.

G. Monitoring CO and HC in the By-Pass Duct of a Cement Kiln. Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by LAC 33:V.3009.B-D by monitoring in the by-pass duct provided that:

1. hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow; and

2. the by-pass duct diverts a minimum of 10 percent of kiln off-gas into the duct.

H. Use of Emissions Test Data to Demonstrate Compliance and Establish Operating Limits. Compliance with the requirements of this Section must be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the CO and HC limits of this Section or to establish alternative CO or HC limits under this Section must be obtained during the time that DRE testing, and where applicable, CDD/CDF testing under LAC 33:V.3009.E and comprehensive organic emissions testing under LAC 33:V.3009.F is conducted.

I. Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under LAC 33:V.3005) will be regarded as compliance with this Section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this Section may be "information" justifying modification or revocation and re-issuance of a permit under LAC 33:V.323.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

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## §3011. Standards to Control Particulate Matter

A. A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) after correction to a stack gas concentration of 7 percent oxygen, using procedures prescribed in 40 CFR 60, Appendix A, Methods 1-5, and 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I.

B. An owner or operator meeting the requirements of LAC 33:V.3019.B for the low risk waste exemption is exempt from the particulate matter standard.

C. Oxygen Correction

1. Measured pollutant levels must be corrected for the amount of oxygen in the stack gas according to the formula.

$$Pc = Pm \times 14/(E - Y)$$

where:

Pc = corrected concentration of the pollutant in the stack gas

Pm = measured concentration of the pollutant in the stack gas

E = oxygen concentration on a dry basis in the combustion air fed to the device

Y = measured oxygen concentration on a dry basis in the stack

2. For devices that feed normal combustion air, E will equal 21 percent. For devices that feed oxygen-enriched air for combustion (i.e., air with an oxygen concentration

exceeding 21 percent), the value of E will be the concentration of oxygen in the enriched air.

3. Compliance with all emission standards provided by this Chapter must be based on correcting to 7 percent oxygen using this procedure.

D. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under LAC 33:V.3005) will be regarded as compliance with this Section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this Section may be "information" justifying modification or revocation and re-issuance of a permit under LAC 33:V.323.

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## §3013. Standards to Control Metals Emissions

A. General. The owner or operator must comply with the metals standards provided by Subsections B-F of this Section for each metal listed in Subsection B of this Section that is present in hazardous waste at detectable levels by using appropriate analytical procedures.

B. Tier I Feed Rate Screening Limits. Feed rate screening limits for metals are specified in 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A, as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in Paragraph B.7 of this Section.

1. Noncarcinogenic Metals. The feed rates of antimony, barium, lead, mercury, thallium, and silver in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks shall not exceed the screening limits specified in 40 CFR 266, Appendix I, as adopted at Appendix A of this Chapter.

a. The feed rate screening limits for antimony, barium, mercury, thallium, and silver are based on either:

i. an *hourly rolling average* as defined in LAC 33:V.3005.E.6.a.ii; or

ii. an instantaneous limit not to be exceeded at any time.

b. The feed rate screening limit for lead is based on one of the following:

i. an *hourly rolling average* as defined in LAC 33:V.3005.E.6.a.ii;

ii. an averaging period of two to 24 hours as defined in LAC 33:V.3005.E.6.a with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis; or

iii. an instantaneous limit not to be exceeded at any time.

2. Carcinogenic Metals

a. The feed rates of arsenic, cadmium, beryllium, and chromium in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks shall not exceed values derived from the screening limits specified in 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A. The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the feed rate screening limit specified in 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A, shall not exceed 1.0, as provided by the following equation.

$$\sum_{i=1}^{n} \frac{AFR_{(i)}}{FRSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AFR = actual feed rate to the device for metal "i"

FRSL = feed rate screening limit provided by 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A, for metal "i"

b. The feed rate screening limits for the carcinogenic metals are based on either:

i. an hourly rolling average; or

ii. an averaging period of two to 24 hours, as defined in LAC 33:V.3005.E.6.b, with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis.

3. Terrain-Adjusted Effective Stack Height (TESH)

a. The terrain-adjusted effective stack height (TESH) is determined according to the following equation.

$$TESH = Ha + H1 - Tr$$

where:

Ha = actual physical stack height

H1 = plume rise as determined from 40 CFR 266, Appendix VI, as adopted at LAC 33:V.3099.Appendix F, as a function of stack flow rate and stack gas exhaust temperature

Tr = terrain rise within 5 kilometers of the stack

b. The stack height (Ha) may not exceed good engineering practice as specified in 40 CFR 51.100(ii).

c. If the TESH for a particular facility is not listed in the table in the Appendices, the nearest lower TESH listed in the table shall be used. If the TESH is four meters or less, a value of four meters shall be used.

4. Terrain Type. The screening limits are a function of whether the facility is located in noncomplex or complex

terrain. A device located where any part of the surrounding terrain within 5 kilometers of the stack equals or exceeds the elevation of the physical stack height (Ha) is considered to be in complex terrain and the screening limits for complex terrain apply. Terrain measurements are to be made from U.S. Geological Survey 7.5-minute topographic maps of the area surrounding the facility.

5. Land Use. The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, use procedures provided in 40 CFR 266, Appendix IX or X, as adopted and amended at LAC 33:V.3099.Appendix I or J.

6. Multiple Stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls of metals emissions under a RCRA operating permit or interim status controls must comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics. The worst-case stack is determined from the following equation as applied to each stack. The stack with the lowest value of K is the worst-case stack.

$$K=HVT$$

where:

K = a parameter accounting for relative influence of stack height and plume rise;

H = physical stack height (meters);

V = stack gas flow rate ($m^3$/second); and

T = exhaust temperature (°K).

7. Criteria for Facilities Not Eligible for Screening Limits. If any criteria below are met, the Tier I and Tier II screening limits do not apply. Owners and operators of such facilities must comply with either the Tier III standards provided by LAC 33:V.3013.D or with the Adjusted Tier I feed rate screening limits provided by LAC 33:V.3013.E.

a. The device is located in a narrow valley less than 1 kilometer wide.

b. The device has a stack taller than 20 meters and is located such that the terrain rises to the physical height within 1 kilometer of the facility.

c. The device has a stack taller than 20 meters and is located within 5 kilometers of a shoreline of a large body of water such as an ocean or large lake.

d. The physical stack height of any stack is less than 2.5 times the height of any building within five-building heights or five projected building widths of the stack and the distance from the stack to the closest boundary is within five-building heights or five projected building widths of the associated building.

e. The administrative authority determines that standards based on site-specific dispersion modeling are required.

8. Implementation. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate screening limits are not exceeded.

C. Tier II Emission Rate Screening Limits. Emission rate screening limits are specified in 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A, as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in Paragraph B.7 of this Section.

1. Noncarcinogenic Metals. The emission rates of antimony, barium, lead, mercury, thallium, and silver shall not exceed the screening limits specified in 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A.

2. Carcinogenic Metals. The emission rates of arsenic, cadmium, beryllium, and chromium shall not exceed values derived from the screening limits specified in 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A, shall not exceed 1.0, as provided by the following equation.

$$\sum_{i=1}^{n} \frac{AER_{(i)}}{ERSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AER = actual emission rate for metal "i"

ERSL = emission rate screening limit provided by 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A, for metal "i"

3. Implementation. The emission rate limits must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by LAC 33:V.3013.B.1.a and b and 2.b. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under LAC 33:V.3005 or 3007 are not exceeded.

4. Definitions and Limitations. The definitions and limitations provided by LAC 33:V.3013.B for the following terms also apply to the Tier II emission rate screening limits provided by LAC 33:V.3013.B: terrain-adjusted effective stack height; good engineering practice stack height; terrain type; land use; and criteria for facilities not eligible to use the screening limits.

5. Multiple Stacks

a. Owners or operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls must comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

b. The worst-case stack is determined by procedures provided in LAC 33:V.3013.B.6.

c. For each metal, the total emissions of the metal from those stacks shall not exceed the screening limit for the worst-case stack.

D. Tier III and Adjusted Tier I Site-Specific Risk Assessment

1. General. Conformance with the Tier III metals controls must be demonstrated by emissions testing to determine the emission rate for each metal. In addition, conformance with either the Tier III or Adjusted Tier I metals controls must be demonstrated by air dispersion modeling to predict the maximum annual average off-site ground level concentration for each metal and compliance with acceptable ambient levels must be demonstrated.

2. Acceptable Ambient Levels. 40 CFR 266, Appendices IV and V, as adopted and amended at LAC 33:V.3099.Appendices D and E, list the acceptable ambient levels for purposes of this rule. Reference air concentrations (RACs) are listed for the noncarcinogenic metals and $10^{-5}$ risk-specific doses (RSDs) are listed for the carcinogenic metals. The RSD for a metal is the acceptable ambient level for that metal provided that only one of the four carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the RSD as described in Paragraph D.3 of this Section.

3. Carcinogenic Metals. For the carcinogenic metals, arsenic, cadmium, beryllium, and chromium, the sum of the ratios of the predicted maximum annual average off-site ground level concentrations (except that on-site concentrations must be considered if a person resides on site) to the risk-specific dose (RSD) for all carcinogenic metals emitted shall not exceed 1.0 as determined by the following equation.

$$\sum_{i=1}^{n} \frac{Predicted\ Ambient\ Concentration_{(i)}}{Risk\text{-}Specific\ Dose_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

4. Noncarcinogenic Metals. For the noncarcinogenic metals, the predicted maximum annual average off-site ground level concentration for each metal shall not exceed the reference air concentration (RAC).

5. Multiple Stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls must conduct emissions testing (except that facilities complying with Adjusted Tier I controls need not conduct emission testing) and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels.

6. Implementation. Under Tier III, the metals controls must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by LAC 33:V.3013.B.1.a and b. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under LAC 33:V.3005 or 3007 are not exceeded.

E. Adjusted Tier I Feed Rate Screening Limits. The owner or operator may adjust the feed rate screening limits provided by 40 CFR 266, Appendix I, as adopted at LAC 33:V.3099.Appendix A, to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back-calculating from the acceptable ambient levels provided by 40 CFR 266, Appendices IV and V, as adopted and amended at LAC 33:V.3099.Appendices D and E, using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in Paragraph B.2 of this Section.

F. Alternative Implementation Approaches

1. The administrative authority may approve, on a case-by-case basis, approaches to implement the Tier II or Tier III metals emission limits provided by LAC 33:V.3013.C or D alternative to monitoring the feed rate of metals in each feedstream.

2. The emission limits provided by LAC 33:V.3013.D must be determined as follows:

a. for each noncarcinogenic metal, by back-calculating from the RAC provided in 40 CFR 266, Appendix IV, as adopted and amended at LAC 33:V.3099.Appendix D, to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Subsection H of this Section; and

b. for each carcinogenic metal, by:

i. back-calculating from the RSD provided in 40 CFR 266, Appendix V, as adopted at LAC 33:V.3099.Appendix E, to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Subsection H of this Section; and

ii. if more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by LAC 33:V.3013.F.2.b.i such that the sum for all carcinogenic metals of the ratio of the selected emission limit to the emission rate determined by that Paragraph does not exceed 1.0.

G. Metal Emission Testing

1. General. Emission testing for metals shall be conducted using Method 0060, *Determinations of Metals in Stack Emissions*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.

2. Hexavalent Chromium. Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in Method 0061, *Determination of Hexavalent Chromium Emissions from Stationary Sources*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.

H. Dispersion Modeling. Dispersion modeling required under this Section shall be conducted according to methods recommended in 40 CFR 51, Appendix W ("Guidelines on Air Quality Models (revised)" (1986) and its supplements), the "Hazardous Waste Combustion Air Quality Screening Procedure" described in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I, or in "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised," as incorporated by reference at LAC 33:V.110, to predict the maximum annual average off-site ground level concentration. However, on-site concentrations must be considered when a person resides on-site.

I. Enforcement. For purposes of permit enforcement, compliance with the operating requirements specified in the permit (under LAC 33:V.3005.C) will be regarded as compliance with this Section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this Section may be "information" justifying modifications, revocation, or reissuance of a permit under LAC 33:V.323.

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## §3015. Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas ($Cl_2$) Emissions

A. General. The owner or operator must comply with the hydrogen chloride (HCl) and chlorine ($Cl_2$) controls provided by LAC 33:V.3015.B, C, or E.

B. Screening Limits

1. Tier I Feed Rate Screening Limits. Feed rate screening limits are specified for total chlorine in 40 CFR 266, Appendix II, as adopted at LAC 33:V.3099.Appendix B, as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks shall not exceed the levels specified.

2. Tier II Emission Rate Screening Limits. Emission rate screening limits for HCl and $Cl_2$ are specified in 40 CFR 266, Appendix III, as adopted at LAC 33:V.3099.Appendix C, as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of HCl and $Cl_2$ shall not exceed the levels specified.

3. Definitions and Limitations. The definitions and limitations provided by LAC 33:V.3013.B for the following terms also apply to the screening limits provided by this Subsection: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screen limits.

4. Multiple Stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or $Cl_2$ emissions under a RCRA operating permit or interim status controls must comply with the Tier I and Tier II screening limits for those stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

a. The worst-case stack is determined by procedures provided in LAC 33:V.3013.B.6.

b. Under Tier I, the total feed rate of chlorine and chloride to all subject devices shall not exceed the screening limit for the worst-case stack.

c. Under Tier II, the total emissions of HCl and $Cl_2$ from all subject stacks shall not exceed the screening limit for the worst-case stack.

C. Tier III Site-Specific Risk Assessments

1. General. Conformance with the Tier III controls must be demonstrated by emissions testing to determine the emission rate for HCl and $Cl_2$, air dispersion modeling to predict the maximum annual average off-site ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.

2. Acceptable Ambient Levels. 40 CFR 266, Appendix IV, as adopted and amended at LAC 33:V.3099.Appendix D, lists the reference air concentrations (RACs) for HCl (7 micrograms per cubic meter) and $Cl_2$ (0.4 micrograms per cubic meter).

3. Multiple Stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or $Cl_2$ emissions under a RCRA operating permit or interim status controls must conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels for HCl and $Cl_2$.

D. Averaging Periods. The HCl and $Cl_2$ controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks. Under Tier I, the feed rate of total chloride and chlorine is limited to the Tier I Screening Limits. Under Tier II and Tier III, the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate limits are based on either:

1. an *hourly rolling average* as defined in LAC 33:V.3005.E.6; or

2. an instantaneous basis not to be exceeded at any time.

E. Adjusted Tier I Feed Rate Screening Limits. The owner or operator may adjust the feed rate screening limit provided by 40 CFR 266, Appendix II, as adopted at LAC 33:V.3099.Appendix B, to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back-calculating from the acceptable ambient level for $Cl_2$ provided by 40 CFR 266, Appendix IV, as adopted and amended at LAC 33:V.3099.Appendix D, using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit.

F. Emissions Testing. Emissions testing for HCl and $Cl_2$ shall be conducted using the procedures described in 40 CFR 266, Appendix IX, as adopted and amended in Methods 0050 or 0051, EPA Publication SW-846, as incorporated by reference in LAC 33:V:110.

G. Dispersion Modeling. Dispersion modeling shall be conducted according to the provisions of LAC 33:V.3013.H.

H. Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under LAC 33:V.3005) will be regarded as compliance with this Section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this Section may be "information" justifying modification or revocation and re-issuance of a permit under LAC 33:V.323.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 22:825 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1741 (September 1998).

## §3017. Small Quantity On-Site Burner Exemption

A. Exempt Quantities. Owners and operators of facilities that burn hazardous waste in an on-site boiler or industrial furnace are exempt from the requirements of this Chapter provided that:

1. the quantity of hazardous waste burned in a device for a calendar month does not exceed the limits provided in the following table based on the *terrain-adjusted effective stack height* as defined in LAC 33:V.3013.B.3:

| Exempt Quantities for Small Quantity Burner Exemption | | | |
|---|---|---|---|
| **Terrain-Adjusted Effective Stack Height of Device (meters)** | **Allowable Hazardous Waste Burning Rate (gallons/month)** | **Terrain-Adjusted Effective Stack Height of Device (meters)** | **Allowable Hazardous Waste Burning Rate (gallons/month)** |
| 0 to 3.9 | 0 | 40.0 to 44.9 | 210 |
| 4.0 to 5.9 | 13 | 45.0 to 49.9 | 260 |
| 6.0 to 7.9 | 18 | 50.0 to 54.9 | 330 |
| 8.0 to 9.9 | 27 | 55.0 to 59.9 | 400 |
| 10.0 to 11.9 | 40 | 60.0 to 64.9 | 490 |
| 12.0 to 13.9 | 48 | 65.0 to 69.9 | 610 |
| 14.0 to 15.9 | 59 | 70.0 to 74.9 | 680 |
| 16.0 to 17.9 | 69 | 75.0 to 79.9 | 760 |
| 18.0 to 19.9 | 76 | 80.0 to 84.9 | 850 |
| 20.0 to 21.9 | 84 | 85.0 to 89.9 | 960 |
| 22.0 to 23.9 | 93 | 90.0 to 94.9 | 1,100 |
| 24.0 to 25.9 | 100 | 95.0 to 99.9 | 1,200 |
| 26.0 to 27.9 | 110 | 100.0 to 104.9 | 1,300 |
| 28.0 to 29.9 | 130 | 105.0 to 109.9 | 1,500 |
| 30.0 to 34.9 | 140 | 110.0 to 114.9 | 1,700 |
| 35.0 to 39.9 | 170 | 115.0 or greater | 1,900 |

2. the maximum hazardous waste firing rate does not exceed at any time 1 percent of the total fuel requirements for the device (hazardous waste plus other fuel) on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste;

3. the hazardous waste has a minimum heating value of 5,000 Btu/lb, as generated; and

4. the hazardous waste fuel does not contain (and is not derived from) EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, or F027.

B. Mixing with Nonhazardous Fuels. If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with Paragraph A.1 of this Section.

C. Multiple Stacks. If an owner or operator burns hazardous waste in more than one on-site boiler or industrial furnace exempt under this Section, the quantity limits provided by Paragraph A.1 of this Section are implemented according to the following equation.

$$\sum_{i=1}^{n} \frac{ActualQuantityBurned_{(i)}}{AllowableQuantityBurned_{(i)}} \leq 1.0$$

where:

n = the number of stacks

Actual Quantity Burned = the waste quantity burned per month in device "i"

Allowable Quantity Burned = the maximum allowable exempt quantity for stack "i" from the table in LAC 33:V.3017.A.1

[NOTE: Hazardous wastes that are subject to the special requirements for small quantity generators under LAC 33:V.108 may be burned in an off-site device under the exemption provided by LAC 33:V.3017, but must be included in the quantity determination for the exemption.]

D. Notification Requirements. The owner or operator of facilities qualifying for the small quantity burner exemption under this Section must provide a one-time signed, written notice to the administrative authority indicating the following:

1. the combustion unit is operating as a small quantity burner of hazardous waste;

2. the owner or operator is in compliance with the requirements of this Section; and

3. the maximum quantity of hazardous waste that the facility may burn per month as provided by LAC 33:V.3017.A.1.

E. Recordkeeping Requirements. The owner or operator must maintain at the facility for at least three years sufficient records documenting compliance with the hazardous waste quantity, firing rate, and heating value limits of this Section. At a minimum, these records must indicate the quantity of hazardous waste and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 21:944 (September 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:712 (May 2001).

## §3019. Low Risk Waste Exemption

A. Waiver of DRE Standard. The DRE standard of LAC 33:V.3009.A does not apply if the boiler or industrial furnace is operated in conformance with LAC 33:V.3019.A.1 and the owner or operator demonstrates by procedures prescribed in LAC 33:V.3019.A.2 that the burning will not result in unacceptable adverse health effects.

1. The device shall be operated as follows:

a. a minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the administrative authority on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this Section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50 percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

b. primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb;

c. the hazardous waste is fired directly into the primary fuel flame zone of the combustion chamber; and

d. the device operates in conformance with the carbon monoxide controls provided by LAC 33:V.3009.B.1. Devices subject to the exemption provided by this Section are not eligible for the alternative carbon monoxide controls provided by LAC 33:V.3009.C.

2. Procedures to demonstrate that the hazardous waste burning will not pose unacceptable adverse public health effects are as follows.

a. Identify and quantify those nonmetal compounds listed in LAC 33:V.4901.G, Table 6 that could reasonably be expected to be present in the hazardous waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained.

b. Calculate reasonable, worst-case emission rates for each constituent identified in LAC 33:V.3019.A.2.a of this Section by assuming the device achieves 99.9 percent destruction and removal efficiency. That is, assume that 0.1 percent of the mass weight of each constituent fed to the device is emitted.

c. For each constituent identified in LAC 33:V.3019.A.2.a, use emissions dispersion modeling to

predict the maximum annual average ground level concentration of the constituent:

i. dispersion modeling shall be conducted using methods specified in LAC 33:V.3013;

ii. owners or operators of facilities with more than one on-site stack from a boiler or industrial furnace that is exempt under this Section must conduct dispersion modeling of emissions from all stacks exempt under this Section to predict ambient levels prescribed by this Paragraph.

d. Ground level concentrations of constituents predicted under LAC 33:V.3019.A.2.c must not exceed the following levels:

i. for the noncarcinogenic compounds listed in 40 CFR 266, Appendix IV, as adopted and amended at LAC 33:V.3099.Appendix D, the levels established in 40 CFR 266, Appendix IV, as adopted and amended at LAC 33:V.3099.Appendix D;

ii. for the carcinogenic compounds listed in 40 CFR 266, Appendix V, as adopted at LAC 33:V.3099.Appendix E, the sum for all constituents of the ratios of the actual ground level concentration to the level established in 40 CFR 266, Appendix V, as adopted at LAC 33:V.3099.Appendix E, cannot exceed 1.0; and

iii. for constituents not listed in 40 CFR 266, Appendices IV or V, as adopted and amended at LAC 33:V.3099.Appendices D and E, 0.1 micrograms per cubic meter.

B. Waiver of Particulate Matter Standard. The particulate matter standard of LAC 33:V.3013 does not apply if:

1. the DRE standard is waived under LAC 33:V.3019.A; and

2. the owner or operator complies with the Tier I or adjusted Tier I metals feed rate screening limits provided by LAC 33:V.3013.B or E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995), LR 22:826 (September 1996).

## §3021. Waiver of DRE Trial Burn for Boilers

A. Boilers that operate under the special requirements of this Section, and that do not burn hazardous waste containing (or derived from) EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027, are considered to be in conformance with the DRE standard of LAC 33:V.3009.A, and a trial burn to demonstrate DRE is waived. When burning hazardous waste:

1. a minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the administrative authority on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this Section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50 percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

2. boiler load shall not be less than 40 percent. Boiler load is the ratio at any time of the total heat input to the maximum design heat input;

3. primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb, and each material fired in a burner where hazardous waste is fired must have a heating value of at least 8,000 Btu/lb, as-fired;

4. the device shall operate in conformance with the carbon monoxide standard provided by LAC 33:V.3009.B.1. Boilers subject to the waiver of the DRE trial burn provided by this Section are not eligible for the alternative carbon monoxide standard provided by LAC 33:V.3009.C;

5. the boiler must be a watertube type boiler that does not feed fuel using a stoker or stoker type mechanism; and

6. the hazardous waste shall be fired directly into the primary fuel flame zone of the combustion chamber with an air or steam atomization firing system, mechanical atomization system, or a rotary cup atomization system under the following conditions:

a. Viscosity. The viscosity of the hazardous waste fuel as-fired shall not exceed 300 SSU;

b. Particle Size. When a high pressure air or steam atomizer, low pressure atomizer, or mechanical atomizer is used, 70 percent of the hazardous waste fuel must pass through a 200 mesh (74 micron) screen, and when a rotary cup atomizer is used, 70 percent of the hazardous waste must pass through a 100 mesh (150 micron) screen;

c. Mechanical Atomization Systems. Fuel pressure within a mechanical atomization system and fuel flow rate shall be maintained within the design range taking into account the viscosity and volatility of fuel;

d. Rotary Cup Atomization Systems. Fuel flow rate through a rotary cup atomization system must be maintained within the design range taking into account the viscosity and volatility of the fuel.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992), amended LR 21:266 (March 1995).

## §3023. Standards for Direct Transfer

A. Applicability. The regulations in this Section apply to owners and operators of boilers and industrial furnaces subject to LAC 33:V.3005 or 3007 if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.

B. Definitions

1. When used in this Section, the following terms have the meanings given below.

*Container*—any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves (e.g., tank trucks, tanker-trailers, and rail tank cars), and containers placed on or in a transport vehicle.

*Direct Transfer Equipment*—any device (including but not limited to, such devices as piping, fittings, flanges, valves, and pumps) that is used to distribute, meter, or control the flow of hazardous waste between a container (i.e., transport vehicle) and a boiler or industrial furnace.

2. This Section references several requirements provided in LAC 33:V.Chapters 19, 21, and 43.Subpart H and I. For purposes of this Section, the term *tank systems* in those referenced requirements means direct transfer equipment as defined in LAC 33:V.3023.B.1.

C. General Operating Requirements

1. No direct transfer of a pumpable hazardous waste shall be conducted from an open-top container to a boiler or industrial furnace.

2. Direct transfer equipment used for pumpable hazardous waste shall always be closed, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

3. The direct transfer of hazardous waste to a boiler or industrial furnace shall be conducted so that it does not:

a. generate extreme heat or pressure, fire, explosion, or violent reaction;

b. produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;

c. produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

d. damage the structural integrity of the container or direct transfer equipment containing the waste;

e. adversely affect the capability of the boiler or industrial furnace to meet the standards provided by LAC 33:V.3009-3015; or

f. threaten human health or the environment.

4. Hazardous waste shall not be placed in direct transfer equipment, if it could cause the equipment or its secondary containment system to rupture, leak, corrode, or otherwise fail.

5. The owner or operator of the facility shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include at a minimum:

a. spill prevention controls (e.g., check valves, dry discount couplings); and

b. automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.

D. Areas Where Direct Transfer Vehicles (Containers) are Located. Applying the definition of container under this Section, owners or operators must comply with the following requirements:

1. the containment requirements of LAC 33:V.2111;

2. the use and management requirements of LAC 33:V.Chapter 43.Subchapter H, except for LAC 33:V.4417 and 4425 except that, in lieu of the special requirements of LAC 33:V.4427 for ignitable or reactive waste, the owner or operator may comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjacent property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's (NFPA) "Flammable and Combustible Liquids Code," (1977 or 1981), as incorporated by reference at LAC 33:V.110. The owner or operator must obtain and keep on file at the facility a written certification by the local fire marshal that the installation meets the subject NFPA codes; and

3. the closure requirements of LAC 33:V.2117.

E. Direct Transfer Equipment. Direct transfer equipment must meet the following requirements.

1. Secondary Containment. Owners or operators shall comply with the secondary containment requirements of LAC 33:V.4437, except for LAC 33:V.4437.A, D, E, and I as follows:

a. for all new direct transfer equipment, prior to their being put into service; and

b. for existing direct transfer equipment within two years after August 21, 1991.

2. Requirements Prior to Meeting Secondary Containment Requirements

a. For existing direct transfer equipment that does not have secondary containment, the owner or operator shall determine whether the equipment is leaking or is unfit for use. The owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified, registered professional engineer in accordance with LAC 33:V.513 that attests to the equipment's integrity by August 21, 1992.

b. This assessment shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be transferred to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

i. design standard(s), if available, according to which the direct transfer equipment was constructed;

ii. hazardous characteristics of the waste(s) that have been or will be handled;

iii. existing corrosion protection measures;

iv. documented age of the equipment, if available, (otherwise, an estimate of the age); and

v. results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion, and erosion are accounted for.

c. If, as a result of the assessment specified above, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of LAC 33:V.4441.

3. Inspections and Recordkeeping

a. The owner or operator must inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle (container) to the boiler or industrial furnace:

i. overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order;

ii. the above ground portions of the direct transfer equipment to detect corrosion, erosion, or releases of waste (e.g., wet spots, dead vegetation); and

iii. data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges) to ensure that the direct transfer equipment is being operated according to its design.

b. The owner or operator must inspect cathodic protection systems, if used, to ensure that they are functioning properly according to the schedule provided in LAC 33:V.4440.E.

c. Records of inspections made under this Paragraph shall be maintained in the operating record at the facility, and available for inspection for at least three years from the date of the inspection.

4. Design and Installation of New Ancillary Equipment. Owners or operators must comply with the requirements of LAC 33:V.4435.

5. Response to Leaks or Spills. Owners or operators must comply with the requirements of LAC 33:V.4441.

6. Closure. Owners or operators must comply with the requirements of LAC 33:V.4442 except for LAC 33:V.1915.C.2-4.

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## §3025. Regulation of Residues

A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of a hazardous waste under LAC 33:V.105.D.2.d, h, and i unless the device and the owner or operator meet the following requirements.

A. The device meets the following criteria.

1. Boilers. Boilers must burn at least 50 percent coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal.

2. Ore or Mineral Furnaces. Industrial furnaces subject to LAC 33:V.105.D.2.h must process at least 50 percent by weight normal, nonhazardous raw materials.

3. Cement Kilns. Cement kilns must process at least 50 percent by weight normal cement-production raw materials.

B. The owner or operator demonstrates that the hazardous waste does not significantly affect the residue by demonstrating conformance with either of the following criteria.

1. Comparison of Waste-Derived Residue with Normal Residue. The waste-derived residue must not contain LAC 33:V.4901.G, Table 6 constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonably be attributable to burning or processing the hazardous waste (constituents of concern) include toxic constituents in the hazardous waste, and the organic compounds listed in 40 CFR 266, Appendix VIII, as incorporated by reference in LAC 33:V.3099.Appendix H, that may be generated as products of incomplete combustion. For polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed to determine specific congeners and homologues, and the results converted to 2,3,7,8-TCDD equivalent values using the procedure specified in LAC 33:V.3099.Appendix I;

a. Normal Residue. Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of 10 samples representing a minimum of 10 days of operation. Composite samples may be used to develop a sample for analysis provided that the compositing period does not exceed 24 hours. The upper tolerance limit (at 95-percent confidence with a 95-percent proportion of the sample distribution) of the concentration in the normal residue shall be considered the statistically-derived concentration in the normal residue. If changes in raw materials or fuels reduce the statistically-derived concentrations of the toxic constituents of concern in the normal residue, the statistically-derived concentrations must be revised or statistically-derived concentrations of toxic constituents in normal residue must be established for a new mode of operation with the new raw material or fuel. To determine

the upper tolerance limit in the normal residue, the owner or operator shall use statistical procedures prescribed in "Statistical Methodology for Bevill Residue Determinations" in 40 CFR 266, Appendix IX, as adopted and amended at LAC 33:V.3099.Appendix I;

b. Waste-Derived Residue. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residue under LAC 33:V.3025.B.1.a. If so, hazardous waste burning has significantly affected the residue and the residue shall not be excluded from the definition of a hazardous waste. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period. Multiple samples may be analyzed and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; or

2. Comparison of Waste-Derived Residue Concentrations with Health-Based Limits

a. Nonmetal Constituents. The concentration of each nonmetal toxic constituent of concern (specified in Paragraph B.1 of this Section) in the waste-derived residue must not exceed the health-based level specified in 40 CFR 266, Appendix VII, as incorporated by reference and amended in LAC 33:V.3099.Appendix G, or the level of detection, whichever is higher. If a health-based limit for a constituent of concern is not listed in 40 CFR 266, Appendix VII, as incorporated by reference and amended in LAC 33:V.3099.Appendix G, then a limit of 0.002 micrograms per kilogram or the level of detection (which must be determined by using appropriate analytical procedures), whichever is higher, shall be used. The levels specified in 40 CFR 266, Appendix VII (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in 40 CFR 266, Appendix VII.Note 1, as incorporated by reference and amended in LAC 33:V.3099.Appendix G) are administratively stayed under the condition, for those constituents specified in Paragraph B.1 of this Section, that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in LAC 33:V.2299.Appendix, Table 2 for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts, as defined by applicable agency guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the owner or operator may demonstrate such good-faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by LAC 33:V.2299.Appendix, Table 2 for F039 nonwastewaters. In complying with the LAC 33:V.2299.Appendix, Table 2 for F039 nonwastewater levels for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed for total hexachlorodibenzo-p-dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo-p-dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo-p-dioxins, and total tetrachlorodibenzofurans;

[NOTE to Subparagraph B.2.a: The stay, under the condition that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in LAC 33:V.2299.Appendix, Table 2 for F039 nonwastewaters, remains in effect until further administrative action is taken and notice is published in the *Federal Register* or the *Louisiana Register*.]

b. Metal Constituents. The concentration of metals in an extract obtained using the Toxicity Characteristic Leaching Procedure of LAC 33:V.4903.E must not exceed the levels specified in 40 CFR 266, Appendix VII, as adopted and amended at LAC 33:V.3099.Appendix G;

c. Sampling and Analysis. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the health-based levels. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period. Multiple samples may be analyzed and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded.

C. Records sufficient to document compliance with the provisions of this Section shall be retained until closure of the boiler or industrial furnace unit. At a minimum, the following shall be recorded:

1. levels of constituents in LAC 33:V.4901.G, Table 6 that are present in waste-derived residues;

2. if the waste-derived residue is compared with normal residue under LAC 33:V.3025:

a. the levels of constituents in LAC 33:V.4901.G, Table 6, that are present in normal residues; and

b. data and information, including analyses of samples as necessary, obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992),

amended LR 21:266 (March 1995), LR 22:826 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1107 (June 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:300 (March 2001), repromulgated LR 27:513 (April 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1015 (June 2008), LR 34:1898 (September 2008).

## §3099. Appendices—Appendix A, B, C, D, E, F, G, H, I, J, K, and L

### Appendix A. Tier I and Tier II Feed Rate and Emissions Screening Limits For Metals

A. 40 CFR 266, Appendix I, July 1, 2008, is hereby incorporated by reference.

### Appendix B. Tier I Feed Rate Screening Limits for Total Chlorine

A. 40 CFR 266, Appendix II, July 1, 2008, is hereby incorporated by reference.

### Appendix C. Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride

A. 40 CFR 266, Appendix III, July 1, 2008, is hereby incorporated by reference.

### Appendix D. Reference Air Concentrations

A. 40 CFR 266, Appendix IV, July 1, 2008, is hereby incorporated by reference, except that in regulations incorporated thereby, references to 40 CFR 261, Appendix VIII and 266, Appendix V shall mean LAC 33:V.3105, Table 1 and LAC 33:V.3099.Appendix E, respectively.

### Appendix E. Risk-Specific Doses ($10^{-5}$)

A. 40 CFR 266, Appendix V, July 1, 2008, is hereby incorporated by reference.

### Appendix F. Stack Plume Rise [Estimated Plume Rise (in Meters) Based on Stack Exit Flow Rate and Gas Temperature]

A. 40 CFR 266, Appendix VI, July 1, 2008, is hereby incorporated by reference.

### Appendix G. Health-Based Limits for Exclusion of Waste-Derived Residues

A. 40 CFR 266, Appendix VII, July 1, 2008, is hereby incorporated by reference, except that in regulations incorporated thereby, 40 CFR 261, Appendix VIII, 266.112(b)(1) and (b)(2)(i), and 268.43 shall mean LAC 33:V.3105, Table 1, 3025.B.1 and B.2.a, and LAC 33:V.2299.Appendix, Table 2, respectively.

### Appendix H. Organic Compounds for Which Residues Must Be Analyzed

A. 40 CFR 266, Appendix VIII, July 1, 2008, is hereby incorporated by reference.

### Appendix I. Methods Manual for Compliance with the BIF Regulations

A. 40 CFR 266, Appendix IX, July 1, 2008, is hereby incorporated by reference, except as follows.

1. 40 CFR 261, Appendix VIII, 266.103, 266.103(b), 266.103(b)(3), 266.103(c), 266.103(c)(1), 266.103(c)(3)(ii), 266.103(c)(7), 266.103(d), 266.106, 266.112, 266.112(b)(1) and (b)(2)(i), 268.43, and 266.Subpart H shall mean LAC 33:V.3105, Table 1, 3007, 3007.B, 3007.B.3, 3007.C, 3007.C.1, 3007.C.3.b, 3007.C.7, 3007.D, 3013, 3025, 3025.B.1 and B.2.a, LAC 33:V.2299.Appendix, Table 2, and Chapter 30, respectively.

2. Terms within the incorporated Appendix shall be the terms adopted by reference except that *director*, *administrator*, *EPA regional office*, and *EPA regional office or the appropriate enforcement agency* shall mean *administrative authority*.

3. *Environmental Protection Agency* and *EPA* shall mean *administrative authority*, except when referring to an EPA method, protocol, file, performance audit sample, handbook, manual, document, program, default value, or default assumption.

B. Federal statutes and regulations that are cited in 40 CFR 266, Appendix IX that are not specifically adopted by reference shall be used as guidance in interpreting the federal regulations in 40 CFR 266, Appendix IX.

### Appendix J. Lead-Bearing Materials That May Be Processed in Exempt Lead Smelters

A. 40 CFR 266, Appendix XI, July 1, 2008, is hereby incorporated by reference.

### Appendix K. Nickel or Chromium-Bearing Materials That May Be Processed in Exempt Nickel-Chromium Recovery Furnaces

A. 40 CFR 266, Appendix XII, July 1, 2008, is hereby incorporated by reference, except that the footnote should be deleted.

### Appendix L. Mercury-Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units

A. 40 CFR 266, Appendix XIII, July 1, 2008, is hereby incorporated by reference, except that in regulations incorporated thereby, 40 CFR 261, Appendix VIII shall mean LAC 33:V.3105, Table 1.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 22:827 (September 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:300 (March 2001), LR 27:2231 (December 2001), LR 28:996 (May 2002), LR 29:700 (May 2003), LR 30:751 (April 2004), amended by the Office of Environmental Assessment, LR 31:919 (April 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 32:603 (April 2006), LR 33:640 (April 2007), LR 34:866 (May 2008), LR 35:1109 (June 2009).

# Chapter 31. Incinerators

## §3101. Purpose

A. To ensure necessary combustion and air pollution control to treat waste listed in the permit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §3103. General Requirements

A. The operator of a hazardous waste incinerator shall secure a permit from the Office of Environmental Services.

[Comment: The permit application must also include the information required in LAC 33:V.3115.]

B. The operator shall provide the administrative authority with an acceptable set of performance standards, principally the composition of flue gases, provisions for shutdown, and an operations warranty from the operator certifying that the equipment and operation satisfy the purposes of the permit, as detailed in this Chapter.

C. Incoming waste monitoring is governed by LAC 33:V.1527.

D. An air monitoring system in the exhaust is required which will permit the required department evaluation.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2484 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2464 (October 2005), LR 33:2114 (October 2007).

## §3105. Applicability

A. These regulations apply to owners and operators of facilities that incinerate hazardous waste. All permit conditions, compliance orders, compliance schedules, and other requirements of the permit required shall be obtained pursuant to LAC 33:V.Subpart 1 and any other requirements pursuant to the regulations of the Louisiana Air Control Law (R.S. 30:2051 et seq.). The regulations in this Chapter apply to owners or operators of facilities that incinerate hazardous waste, except as LAC 33:V.1501.C provides otherwise.

B. Integration of the MACT Standards

1. Except as provided by Paragraphs B.2-4 of this Section, the standards of this Subsection do not apply to a new hazardous waste incineration unit that becomes subject to RCRA permit requirements after October 12, 2005, or no longer apply when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, by conducting a comprehensive performance test and submitting to the administrative authority a notification of compliance under 40 CFR 63.1207(j) and 63.1210(d) documenting compliance with the requirements of 40 CFR Part 63, Subpart EEE. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of LAC 33:V.Chapters 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 35, and 37 will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

2. The MACT standards do not replace the closure requirements of LAC 33:V.3121 or the applicable requirements of LAC 33:V.Chapters 15, 17 (Subchapters B and C), 33, 35, and 37.

3. The particulate matter standard of LAC 33:V.3111.A.4 remains in effect for incinerators that elect to comply with the alternative to the particulate matter standard of 40 CFR 63.1206(b)(14) and 63.1219(e).

4. The following requirements remain in effect for startup, shutdown, and malfunction events if the owner or operator elects to comply with LAC 33:V.2001.A.1.a to minimize emissions of toxic compounds from these events:

a. LAC 33:V.3117.A, requiring that an incinerator operate in accordance with operating requirements specified in the permit; and

b. LAC 33:V.3117.C, requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes.

C. The administrative authority, in establishing permit conditions in the application, must exempt the applicant from all requirements of this Chapter except waste analyses (LAC 33:V.3107) and closure (LAC 33:V.3121) if he finds the waste to be burned is:

1. listed as a hazardous waste solely because it is ignitable or corrosive or both as described in LAC 33:V.4903.B and C; or

2. listed as a hazardous waste because it is reactive for characteristics other than:

a. when mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;

b. it is a cyanide or sulfide-bearing waste which when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapors or fumes in a quantity to present a danger to human health or the environment and will not be burned when other hazardous wastes are present in the combustion zone; or

3. it is a hazardous waste solely because it possesses the characteristics of ignitability, corrosivity, or both, as

determined by the test for characteristics of hazardous waste under LAC 33:V.Chapter 49; or

4. a hazardous waste solely because it possesses any of the reactivity characteristics as defined below and will not be burned when other hazardous wastes are present in the combustion zone:

a. it reacts violently with water;

b. it forms potentially explosive mixtures with water;

c. it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

d. it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure;

e. it is a *forbidden explosive* as defined in LAC 33:V.Subpart 2, Chapter 101 or a *Class A explosive* as defined in LAC 33:V.Subpart 2, Chapter 101, or a *Class B explosive* as defined in LAC 33:V.Subpart 2, Chapter 101; or

f. it is normally unstable and readily undergoes violent change without detonating; and

5. if the waste analysis shows that the waste contains none of the hazardous constituents listed in Table 1 which would reasonably be expected to be in the waste.

D. If the waste to be burned is one which is described in LAC 33:V.3105.B above and contains insignificant concentrations of the hazardous constituents listed in Table 1 then the administrative authority may, in establishing permit conditions, exempt the applicant from all requirements of this Section except waste analyses (LAC 33:V.3107) and closure (LAC 33:V.3121) unless he finds that the waste will pose a threat to human health and the environment when burned in an incinerator.

E. The owner or operator of an incinerator may conduct trial burns subject only to the requirements of LAC 33:V.3115.

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| A2213 | Ethanimidothioic acid,2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester | 30558-43-1 | U394 |
| Acetonitrile | Same | 75-05-8 | U003 |
| Acetophenone | Ethanone,1-phenyl- | 98-86-2 | U004 |
| 2-Acetylaminefluarone | Acetamide,N-9H-fluoren-2-yl- | 53-96-3 | U005 |
| Acetyl chloride | Same | 75-36-5 | U006 |
| 1-Acetyl-2-thiourea | Acetamide,N-(amino-thioxomethyl)- | 591-08-2 | P002 |
| Acrolein | 2-Propenal | 107-02-8 | P003 |
| Acrylamide | 2-Propenamide | 79-06-1 | U007 |
| Acrylonitrile | 2-Propenenitrile | 107-13-1 | U009 |
| Aflatoxins | Same | 1402-68-2 | |
| Aldicarb | Propanal,2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl] oxime | 116-06-3 | P070 |
| Aldicarb sulfone | Propanal, 2-methyl-2- (methylsulfonyl)-, O-[(methylamino)carbonyl] oxime | 1646-88-4 | P203 |
| Aldrin | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- | 309-00-2 | P004 |
| Allyl alcohol | 2-Propen-1-ol | 107-18-6 | P005 |
| Allyl chloride | 1-Propene, 3-chloro | 107-05-1 | P005 |
| Aluminum phosphide | Same | 20859-73-8 | P006 |
| 4-Aminobiphenyl | [1,1'-Biphenyl]-4-amine | 92-67-1 | |
| 5-(Aminomethyl)-3-isoxazolol | 3(2H)-Isoxazolone, 5-(aminomethyl)- | 2763-96-4 | P007 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| 4-Aminopyridine | 4-Pyridinamine | 504-24-5 | P008 |
| Amitrole | 1H-1,2,4-Triazol-3-amine | 61-82-5 | U011 |
| Ammonium vanadate | Vanadic acid, ammonium salt | 7803-55-6 | P119 |
| Aniline | Benzenamine | 62-53-3 | U012 |
| o-Anisidine (2-methoxyaniline) | Benzenamine, 2-Methoxy- | 90-04-0 | |
| Antimony | Same | 7440-36-0 | |
| Antimony compounds, N.O.S.[1] | | | |
| Aramite | Sulfurous acid, 2-chloroethyl2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester | 140-57-8 | |
| Arsenic | Same | 7440-38-2 | |
| Arsenic compounds, N.O.S.[1] | | | |
| Arsenic acid | Arsenic acid $H_3AsO_4$ | 7778-39-4 | P010 |
| Arsenic pentoxide | Arsenic oxide $As_2O_5$ | 1303-28-2 | P011 |
| Arsenic trioxide | Arsenic oxide $As_2O_3$ | 1327-53-3 | P012 |
| Auramine | Benzenamine, 4,4'- carbonimidoylbis[N,N-dimethyl | 492-80-8 | U014 |
| Azaserine | L-Serine, diazoacetate (ester) | 115-02-6 | U015 |
| Barban | Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester | 101-27-9 | U280 |
| Barium | Same | 7440-39-3 | |
| Barium compounds, N.O.S.[1] | | | |
| Barium cyanide | Same | 542-62-1 | P013 |
| Bendiocarb | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate | 22781-23-3 | U278 |
| Benomyl | Carbamic acid, [1- [(butylamino) carbonyl]- 1H-benzimidazol-2-yl] -, methyl ester | 17804-35-2 | U271 |
| Benz[c]acridine | Same | 225-51-4 | U016 |
| Benz[a]anthracene | Same | 56-55-3 | U018 |
| Benzal chloride | Benzene,(dichloromethyl)- | 98-87-3 | U017 |
| Benzene | Same | 71-43-2 | U019 |
| Benzenearsonic acid | Arsonic acid, phenyl- | 98-05-5 | |
| Benzidine | [1,1'-Biphenyl]-4,4'-diamine | 92-87-5 | U021 |
| Benzo[b]fluoranthene | Benz[e]acephenanthrylene | 205-99-2 | |
| Benzo[j]fluoranthene | Same | 205-82-3 | |
| Benzo(k)fluoranthene | Same | 207-08-9 | |
| Benzo[a]pyrene | Same | 50-32-8 | U022 |
| p-Benzoquinone | 2,5-Cyclohexadiene-1,4-dione | 106-51-4 | U197 |
| Benzotrichloride | Benzene, (trichloromethyl)- | 98-07-7 | U023 |
| Benzyl chloride | Benzene, (chloromethyl)- | 100-44-7 | P028 |
| Beryllium Powder | Same | 7440-41-7 | P015 |
| Beryllium compounds, N.O.S.[1] | | | |

| Table 1. Hazardous Constituents | | | |
|---|---|---|---|
| **Common Name** | **Chemical Abstracts Name** | **Chemical Abstracts Number** | **Hazardous Waste Number** |
| Bis (pentamethylene)- thiuram tetrasulfide | Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis- | 120-54-7 | U400 |
| Bromoacetone | 2-Propanone, 1-bromo- | 598-31-2 | P017 |
| Bromoform | Methane, tribromo- | 75-25-2 | U225 |
| 4-Bromophenyl phenyl ether | Benzene,1-bromo-4-phenoxy- | 101-55-3 | U030 |
| Brucine | Strychnidin-10-one,2,3-dimethoxy- | 357-57-3 | P018 |
| Butyl benzyl phthalate | 1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester | 85-68-7 | |
| Butylate | Carbamothioic acid, bis (2-methylpropyl)-, S-ethyl ester | 2008-41-5 | U392 |
| Cacodylic acid | Arsinic acid, dimethyl- | 75-60-5 | U136 |
| Cadmium | Same | 7440-43-9 | |
| Cadmium compounds, N.O.S.[1] | | | |
| Calcium chromate | Chromic acid $H_2CrO_4$, calcium salt | 13765-19-0 | U032 |
| Calcium cyanide | Calcium cyanide $Ca(CN)_2$ | 592-01-8 | P021 |
| Carbaryl | 1-Naphthalenol, methylcarbamate | 63-25-2 | U279 |
| Carbendazim | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester | 10605-21-7 | U372 |
| Carbofuran | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate | 1563-66-2 | P127 |
| Carbofuran phenol | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- | 1563-38-8 | U367 |
| Carbon disulfide | Same | 75-15-0 | P022 |
| Carbon oxyfluoride | Carbonic difluoride | 353-50-4 | U033 |
| Carbon tetrachloride | Methane, tetrachloro- | 56-23-5 | U211 |
| Carbosulfan | Carbamic acid, [(dibutylamino) thio] methyl-, 2,3-dihydro-2,2- dimethyl-7- benzofuranyl ester | 55285-14-8 | P189 |
| Chloral | Acetaldehyde, trichloro- | 75-87-6 | U034 |
| Chlorambucil | Benzenebutanoic acid, 4-[bis(2-chloroethyl) amino]- | 305-03-3 | U035 |
| Chlordane | 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octa-chloro-2,3,3a,4,7,7a-hexahydro- | 57-74-9 | U036 |
| Chlordane (alpha and gamma isomers) | | | U036 |
| Chlorinated benzenes, N.O.S.[1] | | | |
| Chlorinated ethane, N.O.S.[1] | | | |
| Chlorinated fluorocarbons, N.O.S.[1] | | | |
| Chlorinated naphthalene, N.O.S.[1] | | | |
| Chlorinated phenol, N.O.S.[1] | | | |
| Chlornaphazin | Naphthalenamine,N,N'-bis(2-chloroethyl)- | 494-03-1 | U026 |
| Chloroacetaldehyde | Acetaldehyde, chloro- | 107-20-0 | P023 |
| Chloroalkyl ethers, N.O.S.[1] | | | |
| p-Chloroaniline | Benzenamine, 4-chloro- | 106-47-8 | P024 |
| Chlorobenzene | Benzene, chloro- | 108-90-7 | U037 |
| Chlorobenzilate | Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alphahydroxy-, ethyl ester | 510-15-6 | U038 |
| p-Chloro-m-cresol | Phenol, 4-chloro-3-methyl- | 59-50-7 | U039 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| 2-Chloroethyl vinyl ether | Ethene, (2-chloroethoxy)- | 110-75-8 | U042 |
| Chloroform | Methane, trichloro- | 67-66-3 | U044 |
| Chloromethyl methyl ether | Methane, chloromethoxy- | 107-30-2 | U046 |
| beta-Chloronaphthalene | Naphthalene, 2-chloro- | 91-58-7 | U047 |
| o-Chlorophenol | Phenol, 2-chloro- | 95-57-8 | U048 |
| 1-(o-Chlorophenyl) thiourea | Thiourea, (2-chlorophenyl) | 5344-82-1 | P026 |
| Chloroprene | 1,3-Butadiene, 2-chloro- | 126-99-8 | |
| 3-Chloropropionitrile | Propanenitrile, 3-chloro- | 542-76-7 | P027 |
| Chromium | Same | 7440-47-3 | |
| Chromium compounds, N.O.S.[1] | | | |
| Chrysene | Same | 218-01-9 | U050 |
| Citrus red No.2 | 2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]- | 6358-53-8 | |
| Coal tar creosote | Same | 8007-45-2 | |
| Copper cyanide | Copper cyanide CuCN | 544-92-3 | P029 |
| Copper dimethyl- dithiocarbamate | Copper, bis(dimethylcarbamodithioato-S,S')-, | 137-29-1 | U393 |
| Creosote | Same | | U051 |
| p-Cresidine | 2-Methoxy-5-methylbenzenamine | 120-71-8 | |
| Cresol (cresylic acid) | Phenol, methyl- | 1319-77-3 | U052 |
| Crotonaldehyde | 2-Butenal | 4170-30-3 | U053 |
| m-Cumenyl methyl- carbamate | Phenol, 3-(methylethyl)-, methyl carbamate | 64-00-6 | P202 |
| Cyanides (soluble salts and complexes), N.O.S.[1] | | | P030 |
| Cyanogen | Ethanedinitrile | 460-19-5 | P031 |
| Cyanogen bromide | Cyanogen bromide (CN)Br | 506-68-3 | U246 |
| Cyanogen chloride | Cyanogen chloride (CN)Cl | 506-77-4 | P033 |
| Cycasin | beta-D-Glucopyranoside, (methyl-ONN-azoxy) methyl | 14901-08-7 | |
| Cycloate | Carbamothioic acid, cyclohexylethyl-, S-ethyl ester | 1134-23-2 | U386 |
| 2-Cyclohexyl-4,6-dinitrophenol | Phenol, 2-cyclohexyl-4,6-dinitro- | 131-89-5 | P034 |
| Cyclophosphamide | 2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-,2-oxide | 50-18-0 | U058 |
| 2,4-D | Acetic acid, (2,4-dichlorophenoxy)- | 94-75-7 | U240 |
| 2,4-D, salts, esters | | | U240 |
| Daunomycin | 5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl) oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-,(8S-cis)- | 20830-81-3 | U059 |
| Dazomet | 2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl | 533-74-4 | U366 |
| DDD | Benzene, 1,1'-(2,2-dichloroethylidene) bis[4-chloro- | 72-54-8 | U060 |
| DDE | Benzene, 1,1'-(dichloroethenylidene) bis[4-chloro- | 72-55-9 | |
| DDT | Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro- | 50-29-3 | U061 |

| Table 1. Hazardous Constituents | | | |
|---|---|---|---|
| **Common Name** | **Chemical Abstracts Name** | **Chemical Abstracts Number** | **Hazardous Waste Number** |
| Diallate | Carbamothioic acid, bis (1-methylethyl)-, S- (2,3-dichloro-2-propenyl) ester | 2303-16-4 | U062 |
| Dibenz[a,h]acridine | Same | 226-36-8 | |
| Dibenz[a,j]acridine | Same | 224-42-0 | |
| Dibenz(a,h)anthracene | Same | 53-70-3 | U063 |
| 7H-Dibenzo[c,g] carbazole | Same | 194-59-2 | |
| Dibenzo[a,e]pyrene | Naphtho[1,2,3,4-def] chrysene | 192-65-4 | |
| Dibenzo[a,h]pyrene | Dibenzo[b,def] chrysene | 189-64-0 | |
| Dibenzo[a,i]pyrene | Benzo[rst]pentaphene | 189-55-9 | U064 |
| 1,2-Dibromo-3- chloropropane | Propane, 1,2-dibromo-3- chloro- | 96-12-8 | U066 |
| Dibutyl phthalate | 1,2-Benzenedicarboxylic acid, dibutyl ester | 84-74-2 | U069 |
| o-Dichlorobenzene | Benzene, 1,2-dichloro- | 95-50-1 | U070 |
| m-Dichlorobenzene | Benzene, 1,3-dichloro- | 541-73-1 | U071 |
| p-Dichlorobenzene | Benzene, 1,4-dichloro- | 106-46-7 | U072 |
| Dichlorobenzene, N.O.S.[1] | Benzene, dichloro- | 25321-22-6 | |
| 3,3'-Dichlorobenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- | 91-94-1 | U073 |
| 1,4-Dichloro-2-butene | 2-Butene, 1,4-dichloro- | 764-41-0 | U074 |
| Dichlorodifluoro-methane | Methane, dichlorodifluoro- | 75-71-8 | U075 |
| Dichloroethylene, N.O.S.[1] | Dichloroethylene | 25323-30-2 | |
| 1,1-Dichloroethylene | Ethene, 1,1-dichloro- | 75-35-4 | U078 |
| 1,2-Dichloroethylene | Ethene, 1,2-dichloro-, (E)- | 156-60-5 | U079 |
| Dichloroethyl ether | Ethane, 1,1'oxybis [2-chloro- | 111-44-4 | U025 |
| Dichloroisopropyl ether | Propane, 2,2'-oxybis [2-chloro- | 108-60-1 | U027 |
| Dichloromethoxy ethane | Ethane, 1,1'-[methylene-bis(oxy)]bis[2-chloro- | 111-91-1 | U024 |
| Dichloromethyl ether | Methane, oxybis[chloro- | 542-88-1 | P016 |
| 2,4-Dichlorophenol | Phenol, 2,4-dichloro- | 120-83-2 | U081 |
| 2,6-Dichlorophenol | Phenol, 2,6-dichloro- | 87-65-0 | U082 |
| Dichlorophenylarsine | Arsonous dichloride, phenyl- | 696-28-6 | P036 |
| Dichloropropane, N.O.S[1] | Propane, dichloro- | 26638-19-7 | |
| Dichloropropanol, N.O.S.[1] | Propanol dichloro- | 26545-73-3 | |
| Dichloropropene, N.O.S.[1] | 1-Propene, dichloro- | 26952-23-8 | |
| 1,3-Dichloropropene | 1-Propene, 1,3-dichloro- | 542-75-6 | U084 |
| Dieldrin | 2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro,(1aalpha,2beta, 2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- | 60-57-1 | P037 |
| 1,2:3,4-Diepoxybutane | 2,2'-Bioxirane | 1464-53-5 | U085 |
| Diethylarsine | Arsine, diethyl- | 692-42-2 | P038 |
| Diethylene glycol, dicarbamate | Ethanol, 2,2'-oxybis-, dicarbamate | 5952-26-1 | U395 |
| 1,4-Diethyleneoxide | 1,4-Dioxane | 123-91-1 | U108 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| Diethylhexyl phthalate | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester | 117-81-7 | U028 |
| N,N'-Diethylhydrazine | Hydrazine, 1,2-diethyl- | 1615-80-1 | U086 |
| O,O-Diethyl S-methyl dithiophosphate | Phosphorodithioic acid, O,O-diethyl S-methyl ester | 3288-58-2 | U087 |
| Diethyl-p-nitrophenyl phosphate | Phosphoric acid, diethyl 4-nitrophenyl ester | 311-45-5 | P041 |
| Diethyl phthalate | 1,2-Benzenedicarboxylic acid, diethyl ester | 84-66-2 | U088 |
| O,O-Diethyl O-pyrazinyl phosphorothioate | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester | 297-97-2 | P040 |
| Diethylstilbesterol | Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)- | 56-53-1 | U089 |
| Dihydrosafrole | 1,3-Benzodioxole, 5-propyl- | 94-58-6 | U090 |
| Diisopropylfluorophosphate (DFP) | Phosphorofluoridic acid,bis(1-methylethyl) ester | 55-91-4 | P043 |
| Dimethoate | Phosphorodithioic acid,O,O-dimethylS-[2-(methylamino)-2-oxoethyl]ester | 60-51-5 | P044 |
| 3,3'-Dimethoxybenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- | 119-90-4 | U091 |
| p-Dimethylaminoazobenzene | Benzenamine, N,N-dimethyl-4-(phenylazo)- | 60-11-7 | U093 |
| 2,4-Dimethylaniline (2,4-xylidine) | Benzenamine, 2,4-dimethyl- | 95-68-1 | |
| 7,12-Dimethylbenz[a]anthracene | Benz[a]anthracene, 7,12-dimethyl- | 57-97-6 | U094 |
| 3,3'-Dimethylbenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl- | 119-93-7 | U095 |
| Dimethylcarbamoyl chloride | Carbamic chloride, dimethyl- | 79-44-7 | U097 |
| 1,1-Dimethylhydrazine | Hydrazine, 1,1-dimethyl- | 57-14-7 | U098 |
| 1,2-Dimethylhydrazine | Hydrazine, 1,2-dimethyl- | 540-73-8 | U099 |
| alpha,alpha-Dimethyl-phenethylamine | Benzeneethanamine,alpha,alpha-dimethyl- | 122-09-8 | P046 |
| 2,4-Dimethylphenol | Phenol, 2,4-dimethyl- | 105-67-9 | U101 |
| Dimethyl phthalate | 1,2-Benzenedicarboxylic acid, dimethyl ester | 131-11-3 | U102 |
| Dimethyl sulfate | Sulfuric acid, dimethyl ester | 77-78-1 | U103 |
| Dimetilan | Carbamic acid, dimethyl-, 1-[(dimethylamino) carbonyl]-5-methyl-1H-pyrazol-3-yl ester | 644-64-4 | P191 |
| Dinitrobenzene, N.O.S.[1] | Benzene, dinitro- | 25154-54-5 | |
| 4,6-Dinitro-o-cresol | Phenol, 2-methyl-4,6-dinitro- | 534-52-1 | P047 |
| 4,6-Dinitro-o-cresol salts | | | P047 |
| 2,4-Dinitrophenol | Phenol, 2,4-dinitro- | 51-28-5 | P048 |
| 2,4-Dinitrotoluene | Benzene, 1-methyl-2, 4-dinitro- | 121-14-2 | U105 |
| 2,6-Dinitrotoluene | Benzene, 2-methyl-1,3-dinitro- | 606-20-2 | U106 |
| Dinoseb | Phenol, 2-(1-methylpropyl)-4,6-dinitro | 88-85-7 | P020 |
| Di-n-octyl phthalate | 1,2-Benzenedicarboxylic acid, dioctyl ester | 117-84-0 | U017 |
| Diphenylamine | Benzenamine, N-phenyl- | 122-39-4 | |
| 1,2-Diphenylhydrazine | Hydrazine, 1,2-diphenyl- | 122-66-7 | U109 |
| Di-n-propyl-nitrosamine | 1-Propanamine, N-nitroso-N-propyl- | 621-64-7 | U111 |
| Disulfiram | Thioperoxydicarbonic diamide, tetraethyl | 97-77-8 | U403 |
| Disulfoton | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester | 298-04-4 | P039 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| Dithiobiuret | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ | 541-53-7 | P049 |
| Endosulfan | 6,9-Methano-2,4,3-benzo-dioxathiepin,6,7,8,9,10, 10-hexachloro-1,5,5a,6, 9,9a-hexahydro-, 3-oxide | 115-29-7 | P050 |
| Endothall | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid | 145-73-3 | P088 |
| Endrin | 2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6, 9,9-hexachloro-1a,2,2a, 3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha, 6alpha,6abeta,7beta,7aalpha)- | 72-20-8 | P051 |
| Endrin metabolites | | | P051 |
| Epichlorohydrin | Oxirane, (chloromethyl)- | 106-89-8 | U041 |
| Epinephrine | 1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino) ethyl]- ,(R)- | 51-43-4 | P042 |
| EPTC | Carbamothioic acid, dipropyl-, S-ethyl ester | 759-94-4 | U390 |
| Ethyl carbamate (urethane) | Carbamic acid, ethyl ester | 51-79-6 | U238 |
| Ethyl cyanide | Propanenitrile | 107-12-0 | P101 |
| Ethylenebisdithio-carbamic acid | Carbamodithioic acid, 1,2-ethanediylbis- | 111-54-6 | U114 |
| Ethylenebisdithio-carbamic acid, salts, and esters | | | U114 |
| Ethylene dibromide | Ethane, 1,2-dibromo- | 106-93-4 | U067 |
| Ethylene dichloride | Ethane, 1,2-dichloro- | 107-06-2 | U077 |
| Ethylene glycol monoethyl ether | Ethanol, 2-ethoxy- | 110-80-5 | U359 |
| Ethyleneimine | Aziridine | 151-56-4 | P054 |
| Ethylene oxide | Oxirane | 75-21-8 | U115 |
| Ethylenethiourea | 2-Imidazolidinethione | 96-45-7 | U116 |
| Ethylidene dichloride | Ethane, 1,1-dichloro- | 75-34-3 | U076 |
| Ethyl methacrylate | 2-Propenoic acid,2-methyl-, ethyl ester | 97-63-2 | U118 |
| Ethyl methanesulfonate | Methanesulfonic acid, ethyl ester | 62-50-0 | U119 |
| Ethyl Ziram | Zinc, bis(diethylcarbamodithioato-S,S')- | 14324-55-1 | |
| Famphur | Phosphorothioic acid,O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester | 52-85-7 | P097 |
| Ferbam | Iron, tris(dimethylcarbamodithioato-S,S')-, | 14484-64-1 | U396 |
| Fluoranthene | Same | 206-44-0 | U120 |
| Fluorine | Same | 7782-41-4 | P056 |
| Fluoroacetamide | Acetamide, 2-fluoro- | 640-19-7 | P057 |
| Fluoroacetic acid, sodium salt | Acetic acid, fluoro-, sodium salt | 62-74-8 | P058 |
| Formaldehyde | Same | 50-00-0 | U122 |
| Formetanate hydrochloride | Methanimidamide N,N-dimethyl- N'-[3-[[(methyl-amino) carbonyl]oxy] phenyl]-, monohydro-chloride | 23422-53-9 | P198 |
| Formic acid | Same | 64-18-6 | U123 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| Formparanate | Methanimidamide N,N-dimethyl- N'-[2-methyl-4-[[(methylamino) carbonyl]oxy] phenyl]- | 17702-57-7 | P197 |
| Glycidylaldehyde | Oxiranecarboxyaldehyde | 765-34-4 | U126 |
| Halomethanes, N.O.S.[1] | | | |
| Heptachlor | 4,7-Methano-1H-indene, 1, 4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- | 76-44-8 | P059 |
| Heptachlor epoxide | 2,5-Methano-2H-indeno [1,2-b]oxirene,2,3,4,5,6,7, 7-heptachloro-1a,1b,5, 5a,6,6a-hexa- hydro-, (1aalpha,1bbeta,2alpha, 5alpha,5abeta,6beta,6aalpha)- | 1024-57-3 | |
| Heptachlor epoxide (alpha, beta, and gamma isomers) | | | |
| Heptachlorobenzofurans | | | |
| Heptachlorobenzo-p-dioxins | | | |
| Hexachlorobenzene | Benzene, hexachloro- | 118-74-1 | U127 |
| Hexachlorobutadiene | 1,3-Butadiene, 1,1,2,3, 4,4-hexachloro- | 87-68-3 | U128 |
| Hexachlorocyclopentadiene | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- | 77-47-4 | U130 |
| Hexachlorodibenzo-p-dioxins | | | |
| Hexachlorodibenzofurans | | | |
| Hexachloroethane | Ethane, hexachloro- | 67-72-1 | U131 |
| Hexachlorophene | Phenol,2,2'-methylenebis [3,4,6-trichloro- | 70-30-4 | U132 |
| Hexachloropropene | 1-Propene, 1,1,2,3,3,3-hexachloro- | 1888-71-7 | U243 |
| Hexaethyl tetraphosphate | Tetraphosphoric acid, hexaethyl ester | 757-58-4 | P062 |
| Hydrazine | Same | 302-01-2 | U133 |
| Hydrogen cyanide | Hydrocyanic acid | 74-90-8 | P063 |
| Hydrogen fluoride | Hydrofluoric acid | 7664-39-3 | U134 |
| Hydrogen sulfide | Hydrogen sulfide $H_2S$ | 7783-06-4 | U135 |
| 3-Iodo-2-propynyl n-butylcarbamate | Carbamic acid, butyl-, 3-iodo-2-propynyl ester | 55406-53-6 | U375 |
| Indeno[1,2,3-cd] pyrene | Same | 193-39-5 | U137 |
| Isobutyl alcohol | 1-Propanol, 2-methyl- | 78-83-1 | U140 |
| Isodrin | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5beta,8beta,8abeta)- | 465-73-6 | P060 |
| Isolan | Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H- pyrazol-5-yl ester | 119-38-0 | P192 |
| Isosafrole | 1,3-Benzodioxole, 5-(1-propenyl)- | 120-58-1 | U141 |
| Kepone | 1,3,4-Metheno-2H-cyclo-buta[cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro- | 143-50-0 | U142 |

| Table 1. Hazardous Constituents | | | |
|---|---|---|---|
| **Common Name** | **Chemical Abstracts Name** | **Chemical Abstracts Number** | **Hazardous Waste Number** |
| Lasiocarpine | 2-Butenoic acid, 2-methyl-,7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5, 7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]- | 303-34-4 | U143 |
| Lead | Same | 7439-92-1 | |
| Lead compounds, N.O.S.[1] | | | |
| Lead acetate | Acetic acid, lead(2+) salt | 301-04-2 | U144 |
| Lead phosphate | Phosphoric acid, lead(2+) salt(2:3) | 7446-27-7 | U145 |
| Lead subacetate | Lead,bis(acetato-O) tetrahydroxytri- | 1335-32-6 | U146 |
| Lindane | Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- | 58-89-9 | U129 |
| Maleic anhydride | 2,5-Furandione | 108-31-6 | U147 |
| Maleic hydrazide | 3,6-Pyridazinedione, 1,2-dihydro- | 123-33-1 | U148 |
| Malononitrile | Propanedinitrile | 109-77-3 | U149 |
| Manganese dimethyldithiocarbamate | Manganese, bis(dimethyl- carbamodithioato-S,S')- | 15339-36-3 | P196 |
| Melphalan | L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]- | 148-82-3 | U150 |
| Mercury | Same | 7439-97-6 | U151 |
| Mercury compounds, N.O.S.[1] | | | |
| Mercury fulminate | Fulminic acid, mercury (2+) salt | 628-86-4 | P065 |
| Metam Sodium | Carbamodithioic acid, methyl-, monosodium salt | 137-42-8 | U384 |
| Methacrylonitrile | Propenenitrile, 2-methyl- | 126-98-7 | U152 |
| Methapyrilene | 1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- | 91-80-5 | U155 |
| Methiocarb | Phenol, (3,5-dimethyl-4- (methylthio)-, methylcarbamate | 2032-65-7 | P199 |
| Methomyl | Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester | 16752-77-5 | P066 |
| Methoxychlor | Benezene, 1,1'-(2,2,2-trichloroethylidene)bis [4-methoxy- | 72-43-5 | U247 |
| Methyl bromide | Methane, bromo- | 74-83-9 | U029 |
| Methyl chloride | Methane, chloro- | 74-87-3 | U045 |
| Methyl chlorocarbonate | Carbonochloridic acid, methyl ester | 79-22-1 | U156 |
| Methyl chloroform | Ethane, 1,1,1-trichloro- | 71-55-6 | U226 |
| 3-Methylcholanthrene | Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- | 56-49-5 | U157 |
| 4,4'-Methylenebis (2-chloraniline) | Benzenamine, 4,4'-methylenebis[2-chloro- | 101-14-4 | U158 |
| Methylene bromide | Methane, dibromo- | 74-95-3 | U068 |
| Methylene chloride | Methane, dichloro- | 75-09-2 | U080 |
| Methyl ethyl ketone (MEK) | 2-Butanone | 78-93-3 | U159 |
| Methyl ethyl ketone peroxide | 2-Butanone, peroxide | 1338-23-4 | U160 |
| Methyl hydrazine | Hydrazine, methyl- | 60-34-4 | P068 |
| Methyl iodide | Methane, iodo- | 74-88-4 | U138 |
| Methyl isocyanate | Methane, isocyanato- | 624-83-9 | P064 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| 2-Methyllactonitrile | Propanenitrile, 2-hydroxy-2-methyl- | 75-86-5 | P069 |
| Methyl methacrylate | 2-Propenoic acid, 2-methyl-, methyl ester | 80-62-6 | U162 |
| Methyl methane-sulfonate | Methanesulfonic acid, methyl ester | 66-27-3 | |
| Methyl parathion | Phosphorothioic acid,O,O-dimethyl O-(4-nitrophenyl) ester | 298-00-0 | P071 |
| Methylthiouracil | 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- | 56-04-2 | U164 |
| Metolcarb | Carbamic acid, methyl-, 3-methylphenyl ester | 1129-41-5 | P190 |
| Mexacarbate | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) | 315-18-4 | P128 |
| Mitomycin C | Azirino [2',3':3,4]pyrrolo [1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy] methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balpha)]- | 50-07-7 | U010 |
| MNNG | Guanidine, N-methyl-N'-nitro-N-nitroso- | 70-25-7 | U163 |
| Molinate | 1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester | 2212-67-1 | U365 |
| Mustard gas | Ethane, 1,1'-thiobis[2-chloro- | 505-60-2 | |
| Naphthalene | Same | 91-20-3 | U165 |
| 1,4,Naphthoquinone | 1,4-Naphthalenedione | 130-15-4 | U166 |
| alpha-Naphthylamine | 1-Naphthalenamine | 134-32-7 | U167 |
| beta-Naphthylamine | 2-Naphthalenamine | 91-59-8 | U168 |
| alpha-Naphthyl-thiourea | Thiourea, 1-naphthalenyl- | 86-88-4 | P072 |
| Nickel | Same | 7440-02-0 | |
| Nickel compounds, N.O.S.[1] | | | |
| Nickel carbonyl | Nickel carbonyl $Ni(CO)_4$, (T-4)- | 13463-39-3 | P073 |
| Nickel cyanide | Nickel cyanide $Ni(CN)_2$ | 557-19-7 | P074 |
| Nicotine | Pyridine, 3-(1-methyl-2- pyrrolidinyl)-, (S)- | 54-11-5 | P075 |
| Nicotine salts | | | P075 |
| Nitric oxide | Nitric oxide NO | 10102-43-9 | P076 |
| p-Nitroaniline | Benezenamine, 4-nitro | 100-01-6 | P077 |
| Nitrobenzene | Benzene, nitro- | 98-95-3 | U169 |
| Nitrogen dioxide | Nitrogen oxide $NO_2$ | 10102-44-0 | P078 |
| Nitrogen mustard | Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl- | 51-75-2 | |
| Nitrogen mustard, hydrochloride salt | | | |
| Nitrogen mustard N-oxide | Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide | 126-85-2 | |
| Nitrogen mustard, N-oxide, hydrochloride salt | | | |
| Nitroglycerine | 1,2,3-Propanetriol, trinitrate | 55-63-0 | P081 |
| p-Nitrophenol | Phenol, 4-nitro- | 100-02-7 | U170 |
| 2-Nitropropane | Propane, 2-nitro- | 79-46-9 | U171 |

| Table 1. Hazardous Constituents | | | |
|---|---|---|---|
| **Common Name** | **Chemical Abstracts Name** | **Chemical Abstracts Number** | **Hazardous Waste Number** |
| Nitrosamines, N.O.S.[1] | | 35576-91-1 | |
| N-Nitrosodi-n-butylamine | 1-Butanamine, N-butyl-N-nitroso- | 924-16-3 | U172 |
| N-Nitrosodiethanolamine | Ethanol, 2,2'-(nitroso-imino)bis- | 1116-54-7 | U173 |
| N-Nitrosodiethylamine | Ethanamine, N-ethyl-N-nitroso- | 55-18-5 | U174 |
| N-Nitroso-dimethylamine | Methanamine, N-methyl-N-nitroso- | 62-75-9 | P082 |
| N-Nitroso-N-ethylurea | Urea, N-ethyl-N-nitroso- | 759-73-9 | U176 |
| N-Nitrosomethylethylamine | Ethanamine, N-methyl-N-nitroso- | 10595-95-6 | |
| N-Nitroso-N-methylurea | Urea, N-methyl-N-nitroso- | 684-93-5 | U177 |
| N-Nitroso-N-methyl-urethane | Carbamic acid, methyl-nitroso-, ethyl ester | 615-53-2 | U178 |
| N-Nitrosomethylvinyl-amine | Vinylamine, N-methyl-N-nitroso- | 4549-40-0 | P084 |
| N-Nitrosomorpholine | Morpholine, 4-nitroso- | 59-89-2 | |
| N-Nitrosonornicotine | Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)- | 16543-55-8 | |
| N-Nitrosopiperidine | Piperidine, 1-nitroso- | 100-75-4 | U179 |
| N-Nitrosopyrrolidine | Pyrrolidine, 1-nitroso- | 930-55-2 | U180 |
| N-Nitrososarcosine | Glycine, N-methyl-N-nitroso- | 13256-22-9 | |
| 5-Nitro-o-toluidine | Benzenamine, 2-methyl-5-nitro- | 99-55-8 | U181 |
| Octachlorodibenzo-p-dioxin (OCDD) | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin | 3268-87-9 | |
| Octachlorodibenzofuran (OCDF) | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran | 39001-02-0 | |
| Octamethylpyrophosphoramide | Diphosphoramide,octamethyl- | 152-16-9 | P085 |
| Osmium tetroxide | Osmium oxide $OsO_4$, -(T-4)- | 20816-12-0 | P087 |
| Oxamyl | Ethanimidothioc acid, 2- (dimethylamino)-N-[[(methyl-amino) carbonyl]oxy]-2- oxo-, methyl ester | 23135-22-0 | P194 |
| Paraldehyde | 1,3,5-Trioxane, 2,4,6-trimethyl- | 123-63-7 | U182 |
| Parathion | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester | 56-38-2 | P089 |
| Pebulate | Carbamothioic acid, butylethyl-, S-propyl ester | 1114-71-2 | U391 |
| Pentachlorobenzene | Benzene, pentachloro- | 608-93-5 | U183 |
| Pentachlorodibenzo-p-dioxins | | | |
| Pentachlorodibenzo-furans | | | |
| Pentachloroethane | Ethane, pentachloro- | 76-01-7 | U184 |
| Pentachloronitro-benzene (PCNB) | Benzene, Pentachloronitro- | 82-68-8 | U185 |
| Pentachlorophenol | Phenol, pentachloro- | 87-86-5 | See F027 |
| Phenacetin | Acetamide, N-(4-ethoxyphenyl)- | 62-44-2 | U187 |
| Phenol | Same | 108-95-2 | U188 |
| Phenylenediamine | Benezenediamine | 25265-76-3 | |
| 1,2-Phenylenediamine | 1,2-Benezenediamine | 95-54-5 | |
| 1,3-Phenylenediamine | 1,3-Benezenediamine | 108-45-2 | |
| Phenylmercury acetate | Mercury, (acetato-O) phenyl- | 62-38-4 | P092 |
| Phenylthiourea | Thiourea, phenyl- | 103-85-5 | P093 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| Phosgene | Carbonic dichloride | 75-44-5 | P095 |
| Phosphine | Same | 7803-51-2 | P096 |
| Phorate | Phosphorodithioic acid,O,O-diethyl S-[(ethylthio)methyl]ester | 298-02-2 | P094 |
| Phthalic acid esters, N.O.S.[1] | | | |
| Phthalic anhydride | 1,3-Isobenzofurandione | 85-44-9 | U190 |
| Physostigmine | Pyrrolo[2,3-b] indol-5-01, 1,2,3,3a,8,8a- hexahydro-1,3a, 8-trimethyl-, methylcarbamate (ester), (3aS-cis)- | 57-47-6 | P204 |
| Physostigmine salicylate | Benzoic acid, 2-hydroxy-, compd. with (3aS-cis) - 1,2,3,3a,8,8a-hexa-hydro-1,3a,8-tri-methylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1) | 57-64-7 | P188 |
| 2-Picoline | Pyridine, 2-methyl- | 109-06-8 | U191 |
| Polychlorinated biphenyls, N.O.S.[1] | | | |
| Potassium cyanide | Potassium cyanide K(CN) | 151-50-8 | P098 |
| Potassium dimethyldithiocarbamate | Carbamodithioic acid, dimethyl, potassium salt | 128-03-0 | U383 |
| Potassium n-methyldithiocarbamate | Carbamodithioic acid, methyl-monopotassium salt | 137-41-7 | U377 |
| Potassium pentachlorophenate | Pentachlorophenol, potassium salt | 7778736 | None |
| Potassium silver cyanide | Argentate(1-), bis(cyano-C)-,potassium | 506-61-6 | P099 |
| Promecarb | Phenol, 3-methyl-5- (1-methylethyl)-, methyl carbamate | 2631-37-0 | P201 |
| Pronamide | Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)- | 23950-58-5 | U192 |
| 1,3-Propane sultone | 1,2-Oxathiolane,2,2-dioxide | 1120-71-4 | U193 |
| n-Propylamine | 1-Propanamine | 107-10-8 | U194 |
| Propargyl alcohol | 2-Propyn-1-ol | 107-19-7 | P102 |
| Propham | Carbamic acid, phenyl-, 1-methylethyl ester | 122-42-9 | U373 |
| Propoxur | Phenol, 2-(1- methylethoxy)-, methylcarbamate | 114-26-1 | U411 |
| Propylene dichloride | Propane, 1,2-dichloro- | 78-87-5 | U083 |
| 1,2-Propylenimine | Aziridine, 2-methyl- | 75-55-8 | P067 |
| Propylthiouracil | 4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo- | 51-52-5 | |
| Prosulfocarb | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester | 52888-80-9 | U387 |
| Pyridine | Same | 110-86-1 | U196 |
| Reserpine | Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-s-methyl ester, (3beta,16beta,17alpha,18beta,20alpha)- | 50-55-5 | U200 |
| Resorcinol | 1,3-Benzenediol | 108-46-3 | U201 |
| Saccharin | 1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide | 81-07-2 | U202 |
| Saccharin salts | | | U202 |
| Safrole | 1,3-Benzodioxole,5-(2-propenyl)- | 94-59-7 | U203 |
| Selenium | Same | 7782-49-2 | |
| Selenium compounds, N.O.S.[1] | | | |

| Table 1. Hazardous Constituents | | | |
|---|---|---|---|
| **Common Name** | **Chemical Abstracts Name** | **Chemical Abstracts Number** | **Hazardous Waste Number** |
| Selenium dioxide | Selenious acid | 7783-00-8 | U204 |
| Selenium sulfide | Selenium sulfide $SeS_2$ | 7488-56-4 | U205 |
| Selenium, tetrakis (dimethyl-dithiocarbamate | Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid | 144-34-3 | U376 |
| Selenourea | Same | 630-10-4 | P103 |
| Silver | Same | 7440-22-4 | |
| Silver compounds, N.O.S.[1] | | | |
| Silver cyanide | Silver cyanide Ag(CN) | 506-64-9 | P104 |
| Silvex (2,4,5-TP) | Propanoic acid 2-(2,4,5-trichloro-phenoxy)- | 93-72-1 | See F027 |
| Sodium cyanide | Sodium cyanide Na(CN) | 143-33-9 | P106 |
| Sodium dibutyldithiocarbamate | Carbamodithioic acid, dibutyl, sodium salt | 136-30-1 | U379 |
| Sodium diethyldithiocarbamate | Carbamodithioic acid, diethyl-, sodium salt | 148-18-5 | U381 |
| Sodium dimethyldithiocarbamate | Carbamodithioic acid, dimethyl-, sodium salt | 128-04-1 | U382 |
| Sodium pentachlorophenate | Pentachlorophenol, sodium salt | 131522 | None |
| Streptozotocin | D-Glucose, 2-deoxy- 2-[[(methylnitrosoamino)carbonyl] amino]- | 18883-66-4 | U206 |
| Strychnine | Strychnidin-10-one | 57-24-9 | P108 |
| Strychnine salts | | | P108 |
| Sulfallate | Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester | 95-06-7 | U277 |
| TCDD | Dibenzo[b,e][1,4] dioxin, 2,3,7,8-tetrachloro- | 1746-01-6 | |
| Tetrabutylthiuram disulfide | Thioperoxydicarbonic diamide, tetrabutyl | 1634-02-2 | U402 |
| Tetrabutylthiuram monosulfide | Bis (dimethylthiocarbamoyl) sulfide | 97-74-5 | U401 |
| 1,2,4,5-Tetrachlorobenzene | Benzene, 1,2,4,5-tetrachloro- | 95-94-3 | U207 |
| Tetrachlorodibenzo-p-dioxins | | | |
| Tetrachlorodibenzo-furans | | | |
| Tetrachloroethane, N.O.S.[1] | Ethane, tetrachloro-, N.O.S. | 25322-20-7 | |
| 1,1,1,2-Tetrachloroethane | Ethane, 1,1,1,2-tetrachloro- | 630-20-6 | U208 |
| 1,1,2,2-Tetrachloroethane | Ethane, 1,1,2,2-tetrachloro- | 79-34-5 | U209 |
| Tetrachloroethylene | Ethene, tetrachloro- | 127-18-4 | U210 |
| 2,3,4,6-Tetrachlorophenol | Phenol, 2,3,4,6-tetrachloro- | 58-90-2 | See F027 |
| 2,3,4,6-Tetrachlorophenol, potassium salt | Same | 53535276 | None |
| 2,3,4,6-Tetrachlorophenol, sodium salt | Same | 25567559 | None |
| Tetraethyldithiopyrophosphate | Thiodiphosphoric acid, tetraethyl ester | 3689-24-5 | P109 |
| Tetraethyl lead | Plumbane, tetraethyl- | 78-00-2 | P110 |
| Tetraethyl pyrophosphate | Diphosphoric acid, tetraethyl ester | 107-49-3 | P111 |
| Tetranitromethane | Methane, tetranitro- | 509-14-8 | P112 |
| Thallium | Same | 7440-28-0 | |
| Thallium compounds, N.O.S.[1] | | | |
| Thallic oxide | Thallium oxide $Tl_2O_3$ | 1314-32-5 | P113 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| Thallium(I) acetate | Acetic acid, thallium(1+) salt | 563-68-8 | U214 |
| Thallium(I) carbonate | Carbonic acid, dithallium(1+) salt | 6533-73-9 | U215 |
| Thallium(I) chloride | Thallium chloride TlCl | 7791-12-0 | U216 |
| Thallium(I) nitrate | Nitric acid, thallium(1+) salt | 10102-45-1 | U217 |
| Thallium selenite | Selenious acid, dithallium(1+) salt | 12039-52-0 | P114 |
| Thallium(I) sulfate | Sulfuric acid, dithallium(1+) salt | 7446-18-6 | P115 |
| Thioacetamide | Ethanethioamide | 62-55-5 | U218 |
| Thiodicarb | Ethanimidothioic acid, N,N'-[thiobis [(methylimino) carbonyloxy]] bis-, dimethyl ester | 59669-26-0 | U410 |
| Thiofanox | 2-Butanone, 3,3-dimethyl-1- (methylthio)-, O-[(methylamino) carbonyl] oxime | 39196-18-4 | P045 |
| Thiomethanol | Methanethiol | 74-93-1 | U153 |
| Thiophanate-methyl | Carbamic acid,[1, 2-phyenylenebis (imino-carbonothioyl)] bis-, dimethyl ester | 23564-05-8 | U409 |
| Thiophenol | Benzenethiol | 108-98-5 | P014 |
| Thiosemicarbazide | Hydrazinecarbothioamide | 79-19-6 | P116 |
| Thiourea | Same | 62-56-6 | U219 |
| Thiram | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl- | 137-26-8 | U244 |
| Tirpate | 1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl] oxime | 26419-73-8 | P185 |
| Toluene | Benzene, methyl- | 108-88-3 | U220 |
| Toluenediamine | Benzenediamine,ar-methyl- | 25376-45-8 | U221 |
| Toluene-2,4-diamine | 1,3-Benzenediamine,4-methyl- | 95-80-7 | |
| Toluene-2,6-diamine | 1,3-Benzenediamine,2-methyl- | 823-40-5 | |
| Toluene-3,4-diamine | 1,2-Benzenediamine,4-methyl- | 496-72-0 | |
| Toluene diisocyanate | Benzene, 1,3-diisocyanatomethyl- | 26471-62-5 | U223 |
| o-Toluidine | Benzenamine, 2-methyl- | 95-53-4 | U328 |
| o-Toluidine hydrochloride | Benzenamine 2-methyl-, hydrochloride | 636-21-5 | U222 |
| p-Toluidine | Benzenamine, 4-methyl- | 106-49-0 | U353 |
| Toxaphene | Same | 8001-35-2 | P123 |
| Triallate | Carbamothioic acid, bis (1-methylethyl)-, S-(2,3,3-trichloro-2- propenyl) ester | 2303-17-5 | U389 |
| 1,2,4-Trichlorobenzene | Benzene, 1,2,4-trichloro- | 120-82-1 | |
| 1,1,2-Trichloroethane | Ethane, 1,1,2-trichloro- | 79-00-5 | U227 |
| Trichloroethylene | Ethene, trichloro- | 79-01-6 | U228 |
| Trichloromethanethiol | Methanethiol, trichloro- | 75-70-7 | P118 |
| Trichloromonofluoromethane | Methane, trichlorofluoro- | 75-69-4 | U121 |
| 2,4,5-Trichlorophenol | Phenol, 2,4,5-trichloro- | 95-95-4 | See F027 |
| 2,4,6-Trichlorophenol | Phenol, 2,4,6-trichloro- | 88-06-2 | See F027 |
| 2,4,5-T | Acetic acid, (2,4,5-trichloro-phenoxy)- | 93-76-5 | See F027 |

**Table 1. Hazardous Constituents**

| Common Name | Chemical Abstracts Name | Chemical Abstracts Number | Hazardous Waste Number |
|---|---|---|---|
| Trichloropropane, N.O.S.[1] | | 25735-29-9 | |
| 1,2,3-Trichloropropane | Propane, 1,2,3-trichloro- | 96-18-4 | |
| Triethylamine | Ethanamine, N,N-diethyl- | 121-44-8 | U404 |
| O,O,O-Triethyl phosphorothioate | Phosphorothioic acid, O,O,O-triethyl ester | 126-68-1 | |
| 1,3,5-Trinitrobenzene | Benzene, 1,3,5-trinitro- | 99-35-4 | U234 |
| Tris(1-aziridinyl) phosphine sulfide | Aziridine, 1,1',1"-phosphinothio-ylidynetris- | 52-24-4 | |
| Tris(2,3-dibromopropyl) phosphate | 1-Propanol, 2,3-dibromo-, phospate (3:1) | 126-72-7 | U235 |
| Trypan blue | 2,7-Naphthalene-disulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]-bis[5-amino-4-hydroxy-, tetrasodium salt | 72-57-1 | U236 |
| Uracil mustard | 2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl) amino]- | 66-75-1 | U237 |
| Vanadium pentoxide | Vanadium oxide $V_2O_5$ | 1314-62-1 | P120 |
| Vernolate | Carbamothioic acid, dipropyl-, S-propyl ester | 1929-77-7 | U385 |
| Vinyl chloride | Ethene, chloro- | 75-01-4 | U043 |
| Warfarin | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, when present at concentrations less than 0.3% | 81-81-2 | U248 |
| Warfarin | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, when present at concentrations greater than 0.3% | 81-81-2 | P001 |
| Warfarin salts, when present at concentrations less than 0.3% | | | U248 |
| Warfarin salts, when present at concentrations greater than 0.3% | | | P001 |
| Zinc cyanide | Zinc cyanide $Zn(CN)_2$ | 557-21-1 | P121 |
| Zinc phosphide | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10% | 1314-84-7 | P122 |
| Zinc phosphide | Zinc phosphide $Zn_3P_2$, when present at concentrations of 10% or less | 1314-84-7 | U249 |
| Ziram | Zinc, bis(dimethylcarbamodithioato-S,S')-,(T-4)- | 137-30-4 | P205 |

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this table.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:1139 (December 1985), LR 13:433 (August 1987), LR 14:424 (July 1988), LR 15:737 (September 1989), LR 16:399 (May 1990), LR 18:1256 (November 1992), LR 18:1375 (December 1992), LR 20:1000 (September 1994), LR 21:944 (September 1995), LR 22:835 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:318 (February 1998), LR 24:681 (April 1998), LR 24:1741 (September 1998), LR 25:479 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:301 (March 2001), LR 28:1004 (May 2002), LR 29:323 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 32:830 (May 2006), LR 34:629 (April 2008), LR 34:1898 (September 2008), LR 34:2396 (November 2008), LR 35:1880 (September 2009), LR 35:2350 (November 2009).

## §3107. Waste Analysis

A. As a portion of the trial burn plan required by LAC 33:V.3115 or with the permit application, the owner or operator must have included an analysis of the waste feed sufficient to provide all information required by LAC 33:V.529 and 3115.B. Owners or operators of new hazardous waste incinerators must provide the information required by LAC 33:V.3115 to the greatest extent possible.

B. Throughout normal operation the owner or operator must conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limits specified in his permit (under LAC 33:V.3117.B).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 20:1109 (October 1994).

## §3109. Principal Organic Hazardous Constituents (POHCs)

A. Principal organic hazardous constituents (POHCs) in the waste feed must be treated to the extent required by the performance standard of LAC 33:V.3111.

B. One or more POHCs will be specified in the facility's permit from among those constituents listed in LAC 33:V.3105, Table 1 for each waste feed to be burned. This specification will be based on the degree of difficulty of incineration of the organic constituents in the waste, and on their concentration or mass in the waste feed, considering the results of waste analyses and trial burns, or alternative data submitted with the facility's permit application. Organic constituents which represent the greatest degree of difficulty of incineration will be those most likely to be designated as POHCs. Constituents are more likely to be designated as POHCs if they are present in large quantities or concentrations in the waste.

C. Trial POHCs will be designated for performance of trial burns in accordance with the procedure specified in LAC 33:V.3115 for obtaining trial burn permits.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §3111. Performance Standards

A. An incinerator burning hazardous waste must be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under LAC 33:V.3117, it will meet the following performance standards.

1. Except as provided in this Paragraph, an incinerator burning hazardous waste must achieve a destruction and removal efficiency (DRE) of 99.99 percent for each POHC designated in its permit for each waste feed. DRE is determined for each POHC from the following equation.

$$DRE = \frac{(W_{in} - W_{out})}{W_{in}} \times 100\%$$

where:

$W_{in}$ = mass feed rate of one principal organic hazardous constituent (POHC) in the waste stream feeding the incinerator, and

$W_{out}$ = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

2. An incinerator burning hazardous waste F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency (DRE) of 99.9999 percent for each principal organic hazardous constituent (POHC) designated (under LAC 33:V.3109) in its permit. This performance must be demonstrated on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in Paragraph A.1 of this Section.

3. An incinerator burning hazardous waste and producing stack emissions of more than 1.8 kilograms per hour (4 pounds per hour) of hydrogen chloride (HCl) must control HCl emissions such that the rate of emission is no greater than the larger of either 1.8 kilograms per hour or 1 percent of the HCl in the stack gas prior to entering any pollution control equipment.

4. An incinerator burning hazardous waste must not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) when corrected for the amount of oxygen in the stack gas according to the following formula. This correction procedure is to be used by all hazardous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities, the administrative authority will select an appropriate correction procedure, to be specified in the facility permit.

$$P_c = P_m \times \frac{14}{21 - Y}$$

where:

$P_c$ = corrected concentration of particulate matter
$P_m$ = measured concentration of particulate matter
Y = measured concentration of oxygen in the stack gas, using the Orsat method for oxygen analysis of dry flue gas, presented in 40 CFR Part 60, Appendix A, incorporated by reference in LAC 33:III.3003

B. For purposes of permit enforcement, compliance with the operating requirements specified in the permit under LAC 33:V.3117 will be regarded as in compliance with this Part. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of this Section may be "information" justifying modification, revocation, or reissuance of a permit under LAC 33:V.3115.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990), LR 20:1000 (September 1994), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1000 (June 2008), LR 34:1898 (September 2008).

## §3113. Hazardous Waste Permits

A. The owner or operator of a hazardous waste incinerator may burn only hazardous wastes specified in his permit and only under operating conditions specified in LAC 33:V.3117 except:

1. in approved trial burns as specified in LAC 33:V.3115; or

2. under exemptions stated in LAC 33:V.3105.B.

B. Other hazardous waste may be burned only after operating conditions have been specified in a new permit or a permit modification as applicable. Operating requirements for new hazardous wastes may be based on either trial burn results or alternate data included in the permit application under LAC 33:V.3115.

C. The permit for a new hazardous waste incinerator must establish appropriate conditions for each of the applicable requirements of this Chapter, including, but not limited to allowable waste feeds and operating conditions necessary to meet the requirements of LAC 33:V.3117, sufficient to comply with the following standards:

1. for the period beginning with the initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish operating conditions required in this Part, not to exceed a duration of 720 hours operating time for treatment of hazardous waste, the operating requirements must be those most likely to ensure compliance with the performance standards of LAC 33:V.3111, based on the administrative authority's engineering judgment. The administrative authority may extend the duration of this period once, for up to 720 additional hours, when good cause for the extension is demonstrated by the applicant;

2. for the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the performance standards of LAC 33:V.3111 and must be in accordance with the approved trial burn plan;

3. for the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the administrative authority, the operating requirements must be those most likely to ensure compliance with the performance standards of LAC 33:V.3111 based on the administrative authority's judgment; and

4. for the remaining duration of the permit, the operating requirements must be those demonstrated, in a trial burn or by alternative data specified in LAC 33:V.3115 as sufficient to ensure compliance with the performance standards of LAC 33:V.3111.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §3115. Incinerator Permits for New or Modified Facilities

A. Conditions. For the purposes of determining operational readiness following completion of physical construction, the administrative authority must establish permit conditions, including but not limited to allowable waste feeds and operating conditions, in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operation readiness sufficient to conduct a trial burn, not to exceed 720 hours operating time for treatment of hazardous waste. The administrative authority may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to LAC 33:V.321.

1. Applicants must submit a statement in the permit application which suggests the conditions necessary to operate in compliance with the performance standard of LAC 33:V.3111 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in LAC 33:V.3117.

2. The administrative authority will review this statement and any other relevant information submitted with the permit application and specify requirements for this period sufficient to meet the performance standards of LAC 33:V.3111 based on his engineering judgment.

B. For the purpose of determining feasibility of compliance with the performance standards of LAC 33:V.3111 and of determining adequate operating conditions under LAC 33:V.3117, the administrative authority must establish conditions in the permit for a new hazardous waste incinerator to be effective during the trial burn. Applicants must propose a trial burn plan which includes the following information:

1. an analysis of each waste or mixture of wastes to be burned which includes:

a. heat value of the waste in the form and composition in which it will be burned;

b. viscosity (if applicable), or description of physical form of the waste; and

c. an identification of any hazardous, organic constituents listed in LAC 33:V.3105, Table 1, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in LAC 33:V.3105, Table 1 that would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified, and the basis for their exclusion stated. The waste analysis must rely on appropriate analytical techniques;

d. an approximate quantification of the hazardous constituents identified in the waste, within the precision produced by appropriate analytical methods;

2. a detailed engineering description of the incinerator for which the permit is sought including:

a. manufacturer's name and model number of incinerator (if available);

b. type of incinerator;

c. linear dimensions of the incinerator unit including the cross sectional area of combustion chamber;

d. description of the auxiliary fuel system (type/feed);

e. capacity of prime mover;

f. description of automatic waste feed cut-off system(s);

g. stack gas monitoring and pollution control equipment;

h. nozzle and burner design;

i. construction materials; and

j. location and description of temperature, pressure, and flow indicating and control devices;

3. a detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;

4. a detailed test schedule for each waste for which the trial burn is planned including date(s), duration, quantity of waste to be burned, and other factors relevant to the administrative authority's decision under this Section;

5. a detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator;

6. a description of, and planned operating conditions for, any emission control equipment which will be used;

7. procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction; and

8. such other information as the administrative authority reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this Subsection and the criteria in LAC 33:V.3115.B.11;

9. the administrative authority, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this Section;

10. based on the waste analysis data in the trial burn plan, the administrative authority will specify as trial Principal Organic Hazardous Constituents (POHCs), those constituents for which destruction and removal efficiencies must be calculated during the trial burn. These trial POHCs will be specified by the administrative authority based on his estimate of the difficulty of incineration of the constituents identified in the waste analysis, their concentration or mass in the waste feed, and, for wastes listed in LAC 33:V.Chapter 49 and LAC 33:V.3105, Table 1;

11. the administrative authority shall approve a trial burn plan if he finds that:

a. the trial burn is likely to determine whether the incinerator performance standard required by LAC 33:V.3111 can be met;

b. the trial burn itself will not present an imminent hazard to human health or the environment;

c. the trial burn will help the administrative authority to determine operating requirements to be specified in LAC 33:V.3117; and

d. the information sought in this Section cannot reasonably be developed through other means;

12. the administrative authority must send a notice to all persons on the facility mailing list, as set forth in LAC 33:V.717.A.1.e, and to the appropriate units of state and local government, as set forth in LAC 33:V.717.A.1.b, announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the administrative authority has issued such notice:

a. this notice must be mailed within a reasonable time period before the scheduled trial burn. An additional

notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the permitting agency;

b. this notice must contain:

i. the name and telephone number of the applicant's contact person;

ii. the name and telephone number of the permitting agency's contact office;

iii. the location where the approved trial burn plan and any supporting documents can be reviewed and copied; and

iv. an expected time period for commencement and completion of the trial burn;

13. during, or immediately after, each approved trial burn the applicant must make the following determinations when a DRE trial burn is required under LAC 33:V.3009.A:

a. a quantitative analysis of the trial POHCs in the waste feed;

b. a quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial POHCs, oxygen ($O_2$) and hydrogen chloride (HCl);

c. a quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial POHCs;

d. a computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in LAC 33:V.3111;

e. if the HCl emission rate exceeds 1.8 kilograms of HCl per hour (4 pounds per hour), a computation of HCl removal efficiency in accordance with LAC 33:V.3111;

f. a computation of particulate emissions, in accordance with LAC 33:V.3111;

g. an identification of sources of fugitive emissions and their means of control;

h. a measurement of average, maximum, and minimum temperatures and combustion gas velocity;

i. a continuous measurement of carbon monoxide (CO) in the exhaust gas; and

j. such other information as the administrative authority may specify as necessary to ensure that the trial burn will determine compliance with the performance standards in LAC 33:V.3111 and to establish the operating conditions required by LAC 33:V.3117 as necessary to meet that performance standard;

14. the applicant must submit to the Office of Environmental Services a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and must submit the results of all the determinations required in Paragraph B.13 of this Section. This submission shall be made within 90 days of completion of the trial burn, or later if approved by the administrative authority;

15. all data collected during any trial burn must be submitted to the Office of Environmental Services following the completion of the trial burn;

16. all submissions required by this Subsection must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under LAC 33:V.507 and 509;

17. based on the results of the trial burn, the administrative authority shall set the operating requirements in the final permit according to LAC 33:V.3117. The permit modification shall proceed according to LAC 33:V.321.C.

C. For the purposes of allowing operation of a new hazardous waste incinerator, following completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the administrative authority may establish permit conditions, including, but not limited to, allowable waste feeds and operating conditions sufficient to meet the requirements of LAC 33:V.3117, in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to complete sample analysis, data computation and submission of the trial burn results by the applicant, and modification of the facility permit by the administrative authority.

1. Applicants must submit a statement in the permit application, which identifies the conditions necessary to operate in compliance with the performance standards of LAC 33:V.3111 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates and the operating parameters in LAC 33:V.3117.

2. The administrative authority will review this statement and any other relevant information submitted with the permit application and specify those requirements for this period most likely to meet the performance standards of LAC 33:V.3111 based on his engineering judgment.

D. For the purposes of determining feasibility of compliance with the performance standards of LAC 33:V.3111 and of determining adequate operating conditions under LAC 33:V.3117, the applicant for a permit for an existing hazardous waste incinerator must prepare and submit to the Office of Environmental Services a trial burn plan and perform a trial burn in accordance with LAC 33:V.529.B and Paragraphs B.1-11 and 13-16 of this Section or, instead, submit other information as specified in LAC 33:V.529.C. The administrative authority must announce his or her intention to approve the trial burn plan in accordance with the timing and distribution requirements of Paragraph B.12 of this Section. The contents of the notice must include: the name and telephone number of a contact person at the facility; the name and telephone number of a contact office at the permitting agency; the location where the trial burn plan and any supporting documents can be reviewed and copied; and a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for agency approval of the plan and the time period during which the trial burn would be conducted.

Applicants submitting information under LAC 33:V.529.A are exempt from compliance with LAC 33:V.3111 and 3117 and, therefore, are exempt from the requirements to conduct a trial burn. Applicants who submit trial burn plans and receive approval before submission of a permit application must complete the trial burn and submit the results, specified in Paragraph B.13 of this Section, with Part II of the permit application. If completion of this process conflicts with the date set for submission of the Part II application, the applicant must contact the administrative authority to establish a later date for submission of the Part II application or the trial burn results. Trial burn results must be submitted prior to issuance of a permit. When the applicant submits a trial burn plan with Part II of the permit application, the administrative authority will specify a time period prior to permit issuance in which the trial burn must be conducted and the results submitted.

E. When an owner or operator of a hazardous waste incineration unit becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122 (i.e., by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR 63.1207(j) and 63.1210(d) documenting compliance with all applicable requirements of 40 CFR Part 63, Subpart EEE), the requirements of this Section do not apply, except those provisions the administrative authority determines are necessary to ensure compliance with LAC 33:V.3117.A and C if the owner or operator elects to comply with LAC 33:V.2001.A.1.a to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the administrative authority may apply the provisions of this Section, on a case-by-case basis, for purposes of information collection in accordance with LAC 33:V.303.Q-R and 311.E-F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:614 (July 1990), LR 18:1256 (November 1992), LR 22:828, 835 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:683 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2484 (November 2000), LR 27:302 (March 2001), LR 29:324 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2464 (October 2005), LR 33:2115 (October 2007), LR 34:630 (April 2008), LR 34:1016 (June 2008).

## §3117. Operating Requirements

A. An incinerator must be operated in accordance with operating requirements specified in the permit. These will be specified on a case-by-case basis as those demonstrated (in a trial burn or in alternative data as specified in LAC 33:V.3115 and included with a facility's permit application) to be sufficient to comply with the performance standards of LAC 33:V.3111.

B. Each set of operating requirements will specify the composition of the waste feed (including acceptable variations in the physical or chemical properties of the waste feed which will not affect compliance with the performance requirement of LAC 33:V.3111) to which the operating requirements apply. For each such waste feed, the permit will specify acceptable operating limits including the following conditions:

1. carbon monoxide (CO) level in the stack exhaust gas;

2. waste feed rate;

3. combustion temperature;

4. an appropriate indicator or combustion gas velocity;

5. allowable variations in incinerator system design or operating procedures; and

6. such other operating requirements as are necessary to ensure that the performance standards of LAC 33:V.3111 are met.

C. During start-up and shut-down of an incinerator, hazardous waste (except wastes exempted in accordance with LAC 33:V.3105 must not be fed into the incinerator unless the incinerator is operating within the conditions of operation (temperature, air feed rate, etc.) specified in the permit.

D. Fugitive emissions from the combustion zone must be controlled by:

1. keeping the combustion zone totally sealed against fugitive emissions;

2. maintaining a combustion zone pressure lower than atmospheric pressure; or

3. an alternate means of control demonstrated (with the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

E. An incinerator must be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits established under LAC 33:V.3117.B.

F. An incinerator must cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §3119. Monitoring and Inspections

A. The owner or operator must monitor, as a minimum, the following while incinerating hazardous waste:

1. combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the facility permit must be monitored on a continuous basis;

2. CO must be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere; and

3. upon request by the administrative authority, sampling and analysis of the waste and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the performance standards of LAC 33:V.3111.

B. The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) must be subjected to thorough visual inspection, at least daily, for leaks, spills, fugitive emissions, and signs of tampering.

C. The emergency waste feed cutoff system and associated alarms must be tested at least weekly to verify operability, unless the applicant demonstrates to the administrative authority that weekly inspections will unduly restrict or upset operations, and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted at least monthly.

D. This monitoring and inspection data must be recorded and the records must be placed in the operating record as required by LAC 33:V.1529 and maintained in the operating record for five years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1000 (June 2008).

### §3121. Closure

A. At closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site. At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with LAC 33:V.109.*Hazardous Waste*.6, that the residue removed from the incinerator is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with applicable requirements of LAC 33:V.Chapters 9-43.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

## Chapter 32. Miscellaneous Units

### §3201. Applicability

A. The requirements in this Chapter apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as LAC 33:V.1501 provides otherwise.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:399 (May 1990).

### §3203. Environmental Performance Standards

A miscellaneous unit must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions must include those requirements of LAC 33:V.Chapters 3, 5, 7, 17, 19, 21, 23, 25, 27, 29, 31, 4301.F, H, 4302, 4303 and 4305, all other applicable requirements of LAC 33:V.Subpart 1, and of 40 CFR 63 Subpart EEE and 40 CFR 146 that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to:

A. prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the groundwater or subsurface environment, considering:

1. the volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;

2. the hydrologic and geologic characteristics of the unit and the surrounding area;

3. the existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater;

4. the quantity and direction of groundwater flow;

5. the proximity to and withdrawal rates of current and potential groundwater users;

6. the patterns of land use in the region;

7. the potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;

8. the potential for health risks caused by human exposure to waste constituents; and

9. the potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

B. prevention of any releases that may have adverse effects on human health or the environment due to migration

of waste constituents in surface water or wetlands or on the soil surface, considering:

1. the volume and physical and chemical characteristics of the waste in the unit;

2. the effectiveness and reliability of containing, confining, and collecting systems and structures in preventing migration;

3. the hydrologic characteristics of the unit and the surrounding area, including the topography of the land around the unit;

4. the patterns of precipitation in the region;

5. the quantity, quality, and direction of groundwater flow;

6. the proximity of the unit to surface waters;

7. the current and potential uses of nearby surface waters and any water quality standards established for those surface waters;

8. the existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;

9. the patterns of land use in the region;

10. the potential for health risks caused by human exposure to waste constituents; and

11. the potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

C. prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering:

1. the volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols, and particulates;

2. the effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;

3. the operating characteristics of the unit;

4. the atmospheric, meteorologic, and topographic characteristics of the unit and the surrounding area;

5. the existing quality of the air, including other sources of contamination and their cumulative impact on the air;

6. the potential for health risks caused by human exposure to waste constituents; and

7. the potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:399 (May 1990), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1742 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:302 (March 2001).

## §3205. Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action

A. Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with LAC 33:V.1509, 1511.D, 1516.D, 1529.D-E, 3203, and 3322, as well as meet any additional requirements needed to protect human health and the environment as specified in the permit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:399 (May 1990), amended LR 18:1256 (November 1992).

## §3207. Closure and Post-Closure Care

A. A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with LAC 33:V.3203 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or groundwater that cannot be completely removed or decontaminated during closure, then that unit must also meet the requirements of LAC 33:V.3203 during post-closure care. The post-closure plan under LAC 33:V.3523 must specify the procedures that will be used to satisfy this requirement.

B. For a miscellaneous unit that is not a disposal unit, at closure the owner or operator must remove or decontaminate all waste residues, contaminated system components (liners, etc.), contaminated subsoils, structures, and equipment contaminated with waste and leachate and manage them as hazardous waste unless LAC 33:V.109.*Hazardous Waste*.5 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for miscellaneous units must meet all of the requirements specified in LAC 33:V.Chapters 35 and 37.

C. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection B of this Section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must either:

1. close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (LAC 33:V.2521); in addition, for the purposes of closure, post-closure, and financial responsibility, such a miscellaneous unit is then considered to be a landfill and the owner or operator must meet all of the requirements for landfills specified in LAC 33:V.Chapters 35 and 37; or

2. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:399 (May 1990), amended LR 18:1256 (November 1992), amended by the Office of the Secretary, LR 24:2246 (December 1998).

# Chapter 33. Groundwater Protection

## §3301. Applicability

A. Except as provided in LAC 33:V.3301.C, the regulations in this Chapter apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in LAC 33:V.3301.B for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units.

B. All solid waste management units must comply with the requirements in LAC 33:V.3322. A surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after July 26, 1982 (hereinafter referred to as a *regulated unit*) must comply with the requirements of LAC 33:V.3303-LAC 33:V.3321 in lieu of LAC 33:V.3322 for purposes of detecting, characterizing and responding to releases to the uppermost aquifer. The financial responsibility requirements of LAC 33:V.3322 apply to regulated units.

C. The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under this Chapter if:

1. the owner or operator is exempted under LAC 33:V.1501; or

2. he operates a unit which the administrative authority finds:

a. is an engineered structure;

b. does not receive or contain liquid waste or waste containing free liquids;

c. is designed and operated to exclude liquid, precipitation, and other run-on and run-off;

d. has both inner and outer layers of containment enclosing the waste;

e. has a leak detection system built into each containment layer;

f. the owner or operator will provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and post-closure care periods; and

g. to a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the post-closure care period;

3. the administrative authority finds, pursuant to LAC 33:V.2719.D, that the treatment zone of a land treatment unit that qualifies as a regulated unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of LAC 33:V.2711 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under LAC 33:V.3301.C can only relieve an owner or operator of responsibility to meet the requirements of this Chapter during the post-closure care period; or

4. the administrative authority finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the post-closure care period specified under LAC 33:V.3521. This demonstration must be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator must base any predictions made under LAC 33:V.3301.C on assumptions that maximize the rate of liquid migration;

5. he designs and operates a pile in compliance with LAC 33:V.2301.C.

D. The regulations under this Chapter apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the regulations in this Subpart:

1. do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;

2. apply during the post-closure care period under LAC 33:V.Chapter 35.Subchapter B post-closure requirements if the owner or operator is conducting a detection monitoring program under LAC 33:V.3317;

3. apply during the compliance period under LAC 33:V.3313 if the owner or operator is conducting a compliance monitoring program under LAC 33:V.3319 or a corrective action program under LAC 33:V.3321.

E. Regulations in this Chapter may apply to miscellaneous units when necessary to comply with LAC 33:V.3203-3207.

F. The regulations of this Chapter apply to all owners and operators subject to the requirements of LAC 33:V.305.H when the department issues either a post-closure permit or an *enforceable document* (as defined

in LAC 33:V.305.H) at the facility. When the department issues an enforceable document, references in this Chapter to *in the permit* mean *in the enforceable document*.

G. The administrative authority may replace all or part of the requirements of this Chapter applying to a regulated unit with alternative requirements for groundwater monitoring and corrective action for releases to groundwater set out in the permit (or in an *enforceable document* as defined in LAC 33:V.305.H) where the administrative authority determines that:

1. the regulated unit is situated among solid waste management units (or areas of concern), a release has occurred, and both the regulated unit and one or more solid waste management unit(s) (or areas of concern) are likely to have contributed to the release; and

2. it is not necessary to apply the groundwater monitoring and corrective action requirements of this Chapter because alternative requirements will protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 10:496 (July 1984), LR 16:399 (May 1990), LR 18:1256 (November 1992), LR 20:1000 (September 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:480 (March 1999).

## §3303. Required Programs

A. Owners and operators subject to this Chapter must conduct a monitoring and response program as follows.

1. Whenever hazardous constituents under LAC 33:V.3307 from a regulated unit are detected at the compliance point under LAC 33:V.3311, the owner or operator must institute a compliance monitoring program under LAC 33:V.3319. *Detected* is defined as statistically significant evidence of contamination as described in LAC 33:V.3317.F.

2. Whenever the groundwater protection standard under LAC 33:V.3305 is exceeded, the owner or operator must institute a corrective action program under LAC 33:V.3321. *Exceeded* is defined as statistically significant evidence of increased contamination as described in LAC 33:V.3319.D.

3. Whenever hazardous constituents under LAC 33:V.3307 from a regulated unit exceed concentration limits under LAC 33:V.3309 in groundwater between the compliance point under LAC 33:V.3311 and the downgradient facility property boundary, the owner or operator must institute a corrective action program under LAC 33:V.3321.

4. In all other cases, the owner or operator must institute a detection monitoring program under LAC 33:V.3317.

B. The administrative authority will specify in the facility permit the specific elements of the monitoring and response program. The administrative authority may include one or more of the programs identified in LAC 33:V.3303.A in the facility permit as may be necessary to protect human health and the environment. The administrative authority will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the administrative authority will consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

C. In addition, all permitted facilities where pre-existing groundwater contamination continues to be present shall be required to institute compliance monitoring as required in LAC 33:V.3319 of this Chapter and corrective action programs as required in LAC 33:V.3321 of this Chapter. In no case shall free phase or mobile hazardous constituents be unmitigated. Hazardous constituents shall be isolated, reduced or stabilized consistent with the application of good engineering practices and best practical technology.

D. All permits for facilities with pre-existing groundwater contamination shall contain a permit condition containing the concentration limits of hazardous constituents established consistent with LAC 33:V.3305, 3307, and 3309. In no case shall other than background concentration limits be listed in the initial permit. Compliance with corrective action programs required in LAC 33:V.3303, 3319, and 3321 will constitute a permitted variance. Corrective action programs shall be reviewed annually and may be based on predictive computer modeling. Alternate concentrations provided in LAC 33:V.3309.A or B may be set by permit amendment should the original concentration limits be unattainable within 36 months.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 10:496 (July 1984), LR 16:614 (July 1990), LR 18:1256 (November 1992).

## §3305. Groundwater Protection Standard

A. The owner or operator must comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under LAC 33:V.3307 *detected* (as defined in LAC 33:V.3303.A.1) in the groundwater from a regulated unit do not exceed the concentration limits under LAC 33:V.3309 in the uppermost aquifer underlying the waste management area beyond the point of compliance under LAC 33:V.3311 during the compliance period under LAC 33:V.3313. The administrative authority will establish this groundwater protection standard in the facility permit when hazardous constituents have been *detected* (as defined in LAC 33:V.3303.A.1) in the groundwater.

B. The groundwater monitoring system shall consist of necessary wells, at least one hydraulically upgradient, to

monitor groundwater moving toward the facility, and all the necessary number of wells downgradient to monitor groundwater leaving the facility. The wells shall be located to intercept contamination at the earliest possible occurrence. Well locations and completion depths must be selected to assure that all probable contaminant flow-paths are monitored. The wells shall be cased, and the casings shall be adequately sealed so that contaminants cannot be introduced from the surface or from one aquifer to another within the well bore, and so that only one water bearing sand is sampled per well. The entire groundwater monitoring system must be approved by the administrative authority.

C. The owner or operator of the facility shall develop and adhere to a groundwater sampling and analysis plan, and shall immediately advise the department when significant changes in groundwater quality are determined and verified.

D. Leachate

1. The leachate monitoring system shall contain a method and device to secure samples, and determine leakage at two locations in each unit where the system is required as follows:

a. at the low point inside the barrier (liner) encased in sand, or other porous material, ensuring that leachate from all contents will percolate to the low point. Provision for pumping out all leachate which gathers inside this barrier shall be made; and

b. at a low point under the barrier (liner) and encased in a porous layer over a dense (at least 3 feet of clay at 1 x $10^{-7}$ cm/sec) underlayment, or natural soil, to verify the integrity of the liner.

2. The system shall permit sampling from an accessible surface location.

3. An equivalent system acceptable to the administrative authority may be installed in existing facilities.

E. Air. Installed, or available portable air monitoring devices shall be located at all sites involving: incineration, landfill, or treatment facilities. An installed air monitoring system (triangular grid) with continuous recording shall be installed at all commercial sites.

F. Sampling. Samples shall be taken from all required monitoring systems before waste is introduced (for new sites) to provide adequate base-line data. Sampling shall be done quarterly, and complete records shall be maintained at the site for examination by the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 10:496 (July 1984), LR 16:614 (July 1990).

## §3307. Hazardous Constituents

A. The administrative authority will specify in the facility permit the hazardous constituents to which the groundwater protection standard of LAC 33:V.3305 applies. Hazardous constituents are constituents identified in LAC 33:V.3105, Table 1 that have been detected in groundwater in the uppermost aquifer underlying a regulated unit, and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the administrative authority has excluded them under LAC 33:V.3307.B.

B. The administrative authority upon sufficient demonstration by the permittee may exclude any LAC 33:V.3105, Table 1 constituents from the list of hazardous constituents specified in the facility permit if he finds that these constituents are not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the administrative authority will consider the following:

1. potential adverse effects on groundwater quality, considering:

a. the physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

b. the hydrogeological characteristics of the facility and surrounding land;

c. the quantity of groundwater and the direction of groundwater flow;

d. the proximity and withdrawal rates of groundwater users;

e. the current and future uses of groundwater in the area;

f. the existing quality of groundwater including other sources of contamination, and their cumulative impact on the groundwater quality;

g. the potential for health risks caused by human exposure to waste constituents;

h. the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

i. the persistence and permanence of the potential adverse effects; and

2. potential adverse effects on hydraulically-connected surface water quality, considering:

a. the volume and physical and chemical characteristics of the waste in the regulated unit;

b. the hydrogeological characteristics of the facility and surrounding land;

c. the quantity and quality of groundwater, and the direction of groundwater flow;

d. the patterns of rainfall in the region;

e. the proximity of the regulated unit to surface waters;

f. the current and future uses of surface waters and any waters in the area, and any water quality standards established for those surface waters;

g. the existing quality of surface water, including other sources of contamination, and the cumulative impact on surface water quality;

h. the potential for health risks caused by human exposure to waste constituents;

i. the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

j. the persistence and permanence of the potential adverse effects.

C. In making any determination under LAC 33:V.3307.B of this Section about the use of groundwater in the area around the facility, the administrative authority will consider any identification of underground sources of drinking water and exempted aquifers.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 10:496 (July 1984).

## §3309. Concentration Limits

A. The administrative authority will specify in the facility permit concentration limits in the groundwater for hazardous constituents established under LAC 33:V.3307. The concentration of a hazardous constituent:

1. must not exceed the background level of that constituent in the groundwater at the time that limit is specified in the permit; or

2. for any of the constituents listed in Table 1 of this Section, must not exceed the respective value given in that table if the background level of the constituent is below the value given; or

3. must not exceed an alternative limit established by the administrative authority under Subsection B of this Section.

**Table 1. Maximum Concentration of Constituents for Groundwater Protection**

| Constituent | Maximum Concentration[1] |
|---|---|
| Arsenic | 0.05 |
| Barium | 1.0 |
| Cadmium | 0.01 |
| Chromium | 0.05 |
| Lead | 0.05 |
| Mercury | 0.002 |
| Selenium | 0.01 |
| Silver | 0.05 |
| Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo-5, 8-demethano napthalene) | 0.0002 |
| Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer) | 0.004 |
| Methoxychlor (1,1,1-Trichloro-2, 2-bis) (p-methoxyphenylethane) | 0.1 |
| Toxaphene ($C_{10}H_{10}Cl_6$, Technical chlorinated camphene, 67-69 percent chlorine) | 0.005 |
| 2,4-D (2,4-Dichlorophenoxyacetic acid) | 0.1 |
| 2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid) | 0.01 |

[1] Milligrams per liter

B. The administrative authority may establish an alternate concentration limit for a hazardous constituent if he finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. The establishment of such alternative concentration limits shall be in accordance with LAC 33:I.Chapter 13. In establishing alternate concentration limits, the administrative authority will consider the following factors:

1. potential adverse effects on groundwater quality, considering:

a. the physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

b. the hydrogeological characteristics of the facility and surrounding land;

c. the quantity of groundwater and the direction of groundwater flow;

d. the proximity and withdrawal rates of groundwater users;

e. the current and future uses of groundwater in the area;

f. the existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;

g. the potential for health risks caused by human exposure to waste constituents;

h. the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

i. the persistence and permanence of the potential adverse effects; and

2. potential adverse effects on hydraulically-connected surface water quality, considering:

a. the volume and physical and chemical characteristics of the waste in the regulated unit;

b. the hydrogeological characteristics of the facility and surrounding land;

c. the quantity and quality of groundwater and the direction of groundwater flow;

d. the patterns of rainfall in the region;

e. the proximity of the regulated unit to surface waters;

f. the current and future uses of surface waters in the area and any water quality standards established for those surface waters;

g. the existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

h. the potential for health risks caused by human exposure to waste constituents;

i. the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

j. the persistence and permanence of the potential adverse effects.

C. In making any determination under Subsection B of this Section about the use of groundwater in the area around the facility, the administrative authority will consider any identification of underground sources of drinking water and exempted aquifers identified in the permit application under LAC 33:V.Chapter 3. Any identification of underground sources of drinking water shall be in accordance with LAC 33:I.Chapter 13.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 10:496 (July 1984), LR 16:614 (July 1990), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:684 (April 1998), amended by the Office of the Secretary, LR 24:2247 (December 1998), repromulgated LR 25:25 (January 1999).

## §3311. Point of Compliance

A. The administrative authority will specify in the facility permit the point of compliance at which the groundwater protection standard of LAC 33:V.3305.A applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area or the delineated zone of contamination that extends down into the uppermost aquifer underlying the regulated units or the delineated zone of contamination.

B. The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.

1. The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.

2. If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §3313. Compliance Period

A. The administrative authority will specify in the facility permit the compliance period during which the groundwater protection standard of LAC 33:V.3305 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period).

B. The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of LAC 33:V.3319.

C. If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in Subsection A of this Section, the compliance period is extended until the owner or operator can demonstrate that the groundwater protection standard of LAC 33:V.3305 has not been exceeded for a period of three consecutive years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §3315. General Groundwater Monitoring Requirements

The owner or operator must comply with the following requirements for any groundwater monitoring program developed to satisfy LAC 33:V.3317, 3319, or 3321.

A. The groundwater monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that fulfill the following requirements.

1. The samples must represent the quality of background groundwater that has not been affected by leakage from a regulated unit. A determination of background groundwater quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

a. hydrogeologic conditions do not allow the owner or operator to determine which wells are hydraulically upgradient; and

b. sampling at other wells will provide an indication of background groundwater quality that is representative or more representative than that provided by the upgradient wells.

2. The samples must represent the quality of water passing the point of compliance.

3. The samples must allow for the *detection* (as defined in LAC 33:V.3303.A.1) of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer.

B. If a facility contains more than one regulated unit, separate groundwater monitoring systems are not required for each regulated unit, if provisions for sampling the groundwater in the uppermost aquifer will enable detection and measurement at the compliance point for hazardous constituents for the regulated units.

C. All monitoring wells must be cased in a manner that maintains the integrity of the monitoring-well bore hole. This casing must be screened or perforated, and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

D. The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of groundwater quality below the waste management area. At a minimum, the program must include procedures and techniques for:

1. sample collection;

2. sample preservation and shipment;

3. analytical procedures; and

4. chain of custody control.

E. The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling, and that accurately measure hazardous constituents in groundwater samples.

F. The groundwater monitoring program must include a determination of the groundwater surface elevation each time groundwater is sampled.

G. In detection monitoring or where appropriate in compliance monitoring, data on each indicator parameter and on each hazardous constituent specified in the permit will be collected from background wells and wells at the compliance point(s). The number and kinds of samples collected to establish background shall be appropriate for the form of statistical test employed, following generally accepted statistical principles. The sample size shall be as large as necessary to ensure with reasonable confidence that a contaminant release to groundwater from a facility will be detected. The owner or operator will determine an appropriate sampling procedure and interval for each hazardous constituent listed in the facility permit which shall be specified in the unit permit upon approval by the administrative authority. This sampling procedure shall be:

1. a sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained, by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants; or

2. an alternate sampling procedure proposed by the owner or operator and approved by the administrative authority.

H. The owner or operator will specify one of the following statistical methods to be used in evaluating groundwater monitoring data for each indicator parameter and hazardous constituent that, upon approval by the administrative authority, will be specified in the unit permit. The statistical test chosen shall be conducted separately for each indicator parameter and hazardous constituent in each well. Where practical quantification limits (PQLs) are used in any of the following statistical procedures to comply with LAC 33:V.3315.I.5, the PQL must be proposed by the owner or operator and approved by the administrative authority. Use of any of the following statistical methods must be protective of human health and the environment and must comply with the performance standards outlined in LAC 33:V.3315.I.

1. A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

2. An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

3. A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

4. A control chart approach that gives control limits for each constituent.

5. Another statistical test method submitted by the owner or operator and approved by the administrative authority.

I. Any statistical method chosen under LAC 33:V.3315.H for specification in the unit permit shall

comply with the following performance standards, as appropriate.

1. The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

2. If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experimentwise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

3. If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be proposed by the owner or operator and approved by the administrative authority if he or she finds it to be protective of human health and the environment.

4. If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be proposed by the owner or operator and approved by the administrative authority if he or she finds these parameters to be protective of human health and the environment. These parameters will be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

5. The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantification limit (PQL) approved by the administrative authority under LAC 33:V.3315.H that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

6. If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

J. Groundwater monitoring data collected in accordance with LAC 33:V.3315.G including actual levels of constituents must be maintained in the facility operating record. The administrative authority will specify in the permit when the data must be submitted for review.

K. The groundwater monitoring program must ensure that the permittee maintains records from all required groundwater monitoring wells and associated groundwater surface elevations for the active life of the facility, including the operating, closure, and post-closure care periods.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:614 (July 1990), amended by the Office of the Secretary, Legal Affairs Division LR 34:630 (April 2008).

## §3317. Detection Monitoring Program

An owner or operator required to establish a detection monitoring program under this Subpart must, at a minimum, discharge the following responsibilities.

A. The owner or operator must monitor for indicator parameters (e.g., specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in groundwater. The authority will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

1. the types, quantities, and concentrations of constituents in wastes managed at the regulated unit;

2. the mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;

3. the detectability of indicator parameters, waste constituents, and reaction products in groundwater; and

4. the concentrations or values, and coefficients of variation of proposed monitoring parameters or constituents in the groundwater background.

B. The owner or operator must install a groundwater monitoring system at the compliance point as specified under LAC 33:V.3311. The groundwater monitoring system must comply with LAC 33:V.3315.A.2, B, and C.

C. The owner or operator must conduct a groundwater monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to LAC 33:V.3317.A in accordance with LAC 33:V.3315.G. The owner or operator must maintain a record of groundwater analytical data as measured and in a form necessary for the determination of statistical significance under LAC 33:V.3315.H.

D. The administrative authority will specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit under Subsection A of this Section in accordance with LAC 33:V.3315.G.

E. The owner or operator must use procedures and methods for sampling and analysis that meet the requirements of LAC 33:V.3315.D and E.

F. The owner or operator must determine whether there is statistically significant evidence of contamination for any chemical parameter or hazardous constituent specified in the permit pursuant to LAC 33:V.3317.A at a frequency specified under LAC 33:V.3317.D.

1. In determining whether statistically significant evidence of contamination exists, the owner or operator must use the method(s) specified in the permit under LAC 33:V.3315.H. These method(s) must compare data collected at the compliance point(s) to the background groundwater quality data.

2. The owner or operator must determine whether there is statistically significant evidence of contamination at each monitoring well at the compliance point within a reasonable period of time after completion of sampling. The administrative authority will specify in the facility permit what period is reasonable, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of groundwater samples.

G. If the owner or operator determines pursuant to LAC 33:V.3317.F that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to LAC 33:V.3317.A at any monitoring well at the compliance point, he or she must do the following.

1. Notify the administrative authority of this finding in writing within seven days. The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination.

2. Immediately sample the groundwater in all monitoring wells and determine whether constituents listed in LAC 33:V.3325, Table 4 are present, and if so, in what concentrations. However, the administrative authority, on a discretionary basis, may allow sampling for a site-specific subset of constituents from LAC 33:V.3325, Table 4 and other representative/related waste constituents.

3. For any LAC 33:V.3325 compounds found in the analysis pursuant to Paragraph G.2 of this Section, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the administrative authority and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds found pursuant to Paragraph G.2 of this Section, the hazardous constituents found during this initial LAC 33:V.3325, Table 4 analysis will form the basis for compliance monitoring.

4. Within 90 days, submit to the Office of Environmental Services an application for a permit modification to establish a compliance monitoring program meeting the requirements of LAC 33:V.3319. The application must include the following information:

a. an identification of the concentration of any LAC 33:V.3325, Table 4 constituent detected in the groundwater at each monitoring well at the compliance point;

b. any proposed changes to the groundwater monitoring system at the facility necessary to meet the requirements of LAC 33:V.3319;

c. any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of LAC 33:V.3319;

d. for each hazardous constituent *detected* (as defined in LAC 33:V.3301.A.1) at the compliance point, a proposed concentration limit under LAC 33:V.3309.A.3.a or b, or a notice of intent to seek an alternate concentration limit under LAC 33:V.3309.B.

5. Within 180 days, submit to the Office of Environmental Services:

a. all data necessary to justify an alternate concentration limit sought under LAC 33:V.3309.B; and

b. an engineering feasibility plan for a corrective action program necessary to meet the requirement of LAC 33:V.3321, unless:

i. all hazardous constituents identified under LAC 33:V.3317.G.2 are listed in LAC 33:V.3309.A.3, Table 1, and their concentrations do not exceed the respective values given in that table; or

ii. the owner or operator has sought an alternate concentration limit under LAC 33:V.3309.B for every hazardous constituent identified under LAC 33:V.3317.G.2.

6. If the owner or operator determines, pursuant to LAC 33:V.3317.F, that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to LAC 33:V.3317.A at any monitoring well at the compliance point, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the groundwater. The owner or operator may make a demonstration under this Paragraph in addition to, or in lieu of, submitting a permit modification application under LAC 33:V.3317.G.4; however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in LAC 33:V.3317.G.4 unless the demonstration made under this Paragraph successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this Paragraph, the owner or operator must:

a. notify the Office of Environmental Services in writing within seven days of determining statistically significant evidence of contamination at the compliance point that he or she intends to make a demonstration under this Paragraph;

b. within 90 days, submit a report to the Office of Environmental Services that demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;

c. within 90 days, submit to the administrative authority an application for a permit modification to make any appropriate changes to the detection monitoring program facility; and

d. continue to monitor in accordance with the detection monitoring program established under this Section.

H. If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this Section, he or she must, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:280 (April 1984), LR 10:496 (July 1984), LR 16:399 (May 1990), LR 16:614 (July 1990), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2485 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2464 (October 2005), LR 33:2115 (October 2007), LR 34:1000 (June 2008).

## §3319. Compliance Monitoring Program

An owner or operator required to establish a compliance monitoring program under this Chapter must, at a minimum, discharge the following responsibilities.

A. The owner or operator must monitor the groundwater to determine whether regulated units are in compliance with the groundwater protection standard under LAC 33:V.3305. The administrative authority will specify the groundwater protection standard in the facility permit, including:

1. a list of the hazardous constituents identified under LAC 33:V.3307;

2. concentration limits under LAC 33:V.3309 for each of those hazardous constituents;

3. the compliance point under LAC 33:V.3311; and

4. the compliance period under LAC 33:V.3313.

B. The owner or operator must install a groundwater monitoring system at the compliance point as specified under LAC 33:V.3311. The groundwater monitoring system must comply with LAC 33:V.3315.A.2, B, and C.

C. The administrative authority will specify the sampling procedures and statistical methods appropriate for the constituents and the facility, consistent with LAC 33:V.3315.G and H.

1. The owner or operator must conduct a sampling program for each chemical parameter or hazardous constituent in accordance with LAC 33:V.3315.G.

2. The owner or operator must record groundwater analytical data as measured and in the form necessary for the determination of statistical significance under LAC 33:V.3315.H for the compliance period of the facility.

D. The owner or operator must determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in the permit, pursuant to LAC 33:V.3319.A at a frequency specified under LAC 33:V.3319.F.

1. In determining whether statistically significant evidence of increased contamination exists, the owner or operator must use the method(s) specified in the permit under LAC 33:V.3315.H. The method(s) must compare data collected at the compliance point(s) to a concentration limit developed in accordance with LAC 33:V.3309.

2. The owner or operator must determine whether there is statistically significant evidence of increased contamination at each monitoring well at the compliance point within a reasonable period after completion of sampling. The administrative authority will specify that period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of groundwater samples.

E. The owner or operator must determine the groundwater flow rate and direction in the uppermost aquifer at least annually.

F. The administrative authority will specify the frequencies for collecting samples and conducting statistical tests to determine statistically significant evidence of increased contamination in accordance with LAC 33:V.3315.G.

G. Annually, the owner or operator must determine whether additional hazardous constituents listed in LAC 33:V.3325, Table 4 that could possibly be present, but are not on the detection monitoring list in the permit, are actually present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in LAC 33:V.3317.F. To accomplish this, the owner or operator must consult with the administrative authority to determine, on a case-by-case basis, which sample collection event during the year will involve enhanced sampling, the number of monitoring wells at the compliance point to undergo enhanced sampling, the number of samples to be collected from each of these monitoring wells, and the specific constituents from LAC 33:V.3325, Table 4 for which these samples must be analyzed. If the enhanced sampling event indicates that LAC 33:V.3325, Table 4 constituents that are not already identified in the permit as monitoring constituents are present in the groundwater, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the administrative authority, and repeat the analysis. If the second analysis confirms the presence of new constituents, the owner or operator must report the concentrations of these additional constituents to the administrative authority within seven days after the completion of the second analysis and add them to the

monitoring list. If the owner or operator chooses not to resample, then he or she must report the concentrations of these additional constituents to the administrative authority within seven days after completion of the initial analysis and add them to the monitoring list.

H. If the owner or operator determines, pursuant to LAC 33:V.3319.D, that any concentration limits under LAC 33:V.3309 are being exceeded at any monitoring well at the point of compliance, he or she must:

1. notify the Office of Environmental Services of this finding in writing within seven days. The notification must indicate what concentration limits have been exceeded; and

2. submit to the Office of Environmental Services an application for a permit modification to establish a corrective action program meeting the requirements of LAC 33:V.3321 within 180 days, or within 90 days if an engineering feasibility study has been previously submitted to the administrative authority under LAC 33:V.3317.G.5. The application must at a minimum include the following information:

a. a detailed description of corrective actions that will achieve compliance with the groundwater protection standard specified in the permit under LAC 33:V.3319.A; and

b. a plan for a groundwater monitoring program that will demonstrate the effectiveness of the corrective action. Such a groundwater monitoring program may be based on a compliance monitoring program developed to meet the requirements of this Section.

I. If the owner or operator determines, pursuant to LAC 33:V.3319.D, that the groundwater concentration limits under this Section are being exceeded at any monitoring well at the point of compliance, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the groundwater. In making a demonstration under this Subsection, the owner or operator must:

1. notify the Office of Environmental Services in writing within seven days that he intends to make a demonstration under this Paragraph;

2. within 90 days, submit a report to the Office of Environmental Services that demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis or evaluation;

3. within 90 days, submit to the Office of Environmental Services an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility; and

4. continue to monitor in accord with the compliance monitoring program established under this Chapter.

J. If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of this Section, he must, within 90 days, submit to the Office of Environmental Services an application for a permit modification to make any appropriate changes to the program.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:399 (May 1990), LR 16:614 (July 1990), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2485 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2464 (October 2005), LR 33:2115 (October 2007), LR 34:630 (April 2008), LR 34:1000 (June 2008).

## §3321. Corrective Action Program

An owner or operator required to establish a corrective action program under this Subpart must, at a minimum, discharge the following responsibilities:

A. the owner or operator must take corrective action to ensure that regulated units are in compliance with the groundwater protection standard under LAC 33:V.3305. The administrative authority will specify the groundwater protection standard in the facility permit, including:

1. a list of the hazardous constituents identified under LAC 33:V.3307;

2. concentration limits under LAC 33:V.3309 for each of those hazardous constituents;

3. the compliance point under LAC 33:V.3311; and

4. the compliance period under LAC 33:V.3313;

B. the owner or operator must implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken;

C. the owner or operator must begin corrective action within a reasonable time period after the groundwater protection standard is exceeded. The administrative authority will specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will begin and such a requirement will operate in lieu of LAC 33:V.3319.I.2;

D. in conjunction with a corrective action program, the owner or operator must establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under LAC 33:V.3319 and must be as effective as that program in determining compliance with the groundwater protection standard under LAC 33:V.3305 and in determining the success of a corrective action program under LAC 33:V.3321.E, where appropriate;

E. in addition to the other requirements of this Section, the owner or operator must conduct a corrective action program to remove or treat in place any hazardous constituents under LAC 33:V.3307 that exceed concentration limits under LAC 33:V.3309 in groundwater:

1. between the compliance point under LAC 33:V.3311 and the downgradient facility property boundary; and

2. beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the administrative authority that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis;

3. corrective action measures under this Subsection must be initiated and completed within a reasonable period of time considering the extent of contamination;

4. corrective action measures under this Subsection may be terminated once the concentration of hazardous constituents under LAC 33:V.3307 is reduced to levels below their respective concentration limits under LAC 33:V.3309;

F. the owner or operator must continue corrective action measures during the compliance period to the extent necessary to ensure that the groundwater protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he must continue that corrective action for as long as necessary to achieve compliance with the groundwater protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if he can demonstrate, based on data from the groundwater monitoring program under LAC 33:V.3321.D, that the groundwater protection standard of LAC 33:V.3305 has not been exceeded for a period of three consecutive years;

G. the owner or operator must report in writing to the Office of Environmental Services on the effectiveness of the corrective action program. The owner or operator must submit these reports semiannually; and

H. if the owner or operator determines that the corrective action program no longer satisfies the requirements of this Section, he must, within 90 days, submit to the Office of Environmental Services an application for a permit modification to make any appropriate changes to the program.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:614 (July 1990), amended LR 17:658 (July 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2485 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2465 (October 2005), LR 33:2116 (October 2007).

## §3322. Corrective Action

A. The owner or operator of a facility seeking a permit for the treatment, storage, or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.

B. Corrective action will be specified in the permit in accordance with LAC 33:V.2601 and 3322. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.

C. The owner or operator must implement corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the administrative authority that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner or operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action must be provided.

D. Any risk-assessment-based corrective action must be protective of human health and the environment in accordance with LAC 33:I.Chapter 13.

E. This Section does not apply to remediation waste management sites unless they are part of a facility subject to a permit for treating, storing, or disposing of hazardous wastes that are not remediation wastes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:614 (July 1990), LR 20:1000 (September 1994), LR 21:266 (March 1995), amended by the Office of the Secretary, LR 24:2247 (December 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:287 (February 2000).

## §3323. Monitoring Well Abandonment and Sealing of Bore Holes

An owner or operator shall provide for the sealing of any vertical migration path resulting from exploratory boring and/or monitoring programs.

A. Any boring made in evaluating a site, monitoring, or other purpose related to the hazardous waste site shall be

completely filled with cement-bentonite, or other equivalent technology approved by the administrative authority. The hole shall be left open only as necessary to obtain core samples, water samples and establish the initial water level. If subsequent samples or water level readings are to be taken, the hole shall be completed as a well with suitable casing and sealing of the annulus between the hole and the casing.

B. When a monitoring well is to be abandoned, the owner or operator shall obtain approval for such abandonment. A request shall be made to the administrative authority, including the following information:

1. name and address of the facility;
2. well identification and exact location;
3. well construction data, including:
   a. well depth and intermediate stratification;
   b. screen length and material;
   c. casing size and material;
   d. sealing of the annulus; and
   e. other pertinent data;
4. reason for abandonment; and
5. proposed abandonment method, including sealing method and material proposed.

C. The administrative authority may accept the proposal or require modification as necessary to protect groundwater.

D. For any monitoring well which goes through or into a recognized potable water aquifer, and any well which the administrative authority feels could directly impact such aquifer, the owner or operator shall additionally complete and submit an abandonment report as required by the Water Resources Section of the Office of Public Works in the Department of Transportation and Development, or its successor agency.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:1256 (November 1992).

## §3325. Groundwater Monitoring List

Table 4 lists groundwater monitoring constituents.

**Table 4. Groundwater Monitoring List**

| Common Name[1] | CAS RN[2] | Chemical Abstracts Service Index Name[3] |
|---|---|---|
| Acenaphthene | 83-32-9 | Acenaphthylene, 1,2-dihydro- |
| Acenaphthylene | 208-96-8 | Acenaphthylene |
| Acetone | 67-64-1 | 2-Propanone |
| Acetophenone | 98-86-2 | Ethanone, 1-phenyl- |
| Acetonitrile; Methyl cyanide | 75-05-8 | Acetonitrile |
| 2-Acetylamino-fluorene; 2-AAF | 53-96-3 | Acetamide, N-9H-fluoren-2-yl- |
| Acrolein | 107-02-8 | 2-Propenal |
| Acrylonitrile | 107-13-1 | 2-Propenenitrile |

**Table 4. Groundwater Monitoring List**

| Common Name[1] | CAS RN[2] | Chemical Abstracts Service Index Name[3] |
|---|---|---|
| Aldrin | 309-00-2 | 1,4:5,8-Dimethano-naph-thalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8, 8a,-hexa-hydro (1α,4α, 4aβ,5β,8α,8aβ) |
| Allyl chloride | 107-05-1 | 1-Propene, 3-chloro- |
| 4-Amino-biphenyl | 92-67-1 | [1,1'-Biphenyl]-4-amine |
| Aniline | 62-53-3 | Benzenamine |
| Anthracene | 120-12-7 | Anthracene |
| Antimony | (Total) | Antimony |
| Aramite | 140-57-8 | Sulfurous acid,2-chloro-ethyl 2-[4-(1,1-di-methylethyl) phenoxy]-1-methyl-ethyl ester |
| Arsenic | (Total) | Arsenic |
| Barium | (Total) | Barium |
| Benzene | 71-43-2 | Benzene |
| Benzo[a]anthracene; Benzanthracene | 56-55-3 | Benz[a]anthracene |
| Benzo[b]-fluor-anthene | 205-99-2 | Benz[e]acephen-anthry-lene |
| Benzo[k]-fluor-anthene | 207-08-9 | Benzo[k]fluoranthene |
| Benzo[ghi]perylene | 191-24-2 | Benzo[ghi]perylene |
| Benzo[a]pyrene | 50-32-8 | Benzo[a]pyrene |
| Benzyl alcohol | 100-51-6 | Benzenemethanol |
| Beryllium | (Total) | Beryllium |
| alpha-BHC | 319-84-6 | Cyclohexane,1,2,3,4,5, 6-hexachloro-, (1α,2α,3β,4α,5β,6β) |
| beta-BHC | 319-85-7 | Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1α,2β,3α,4β,5α,6β)- |
| delta-BHC | 319-86-8 | Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1α,2α,3α, 4β,5α,6β)- |
| gamma-BHC; Lindane | 58-89-9 | Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1α,2α,3β,4α,5α,6β) |
| Bis(2-chloroethoxy) methane- | 111-91-1 | Ethane,1,1'-[methyl-enebis(oxy)]bis[2- chloro- |
| Bis(2-chloroethyl) ether | 111-44-4 | Ethane, 1,1'-oxybis[2- chloro- |
| Bis(2-chloro-1-methylethyl)ether; 2,2'-Dichlorodi- isopropyl ether | 108-60-1 | Propane, 2,2'-oxybis [1-chloro- |
| Bis(2-ethyl-hexyl) phthalate | 117-81-7 | 1,2-Benzenedicarboxylic acid,bis(2-ethylhexyl) ester |
| Bromodichloro- methane | 75-27-4 | Methane, bromodichloro- |
| Bromoform;Tri-bromomethane | 75-25-2 | Methane, tribromo- |
| 4-Bromophenyl-phenyl ether | 101-55-3 | Benzene,1-bromo-4- phenoxy- |
| Butyl benzyl phthalate;Benzyl butyl phthalate | 85-68-7 | 1,2-Benzenedicarboxylic acid, butyl phenyl- methyl ester |
| Cadmium | (Total) | Cadmium |
| Carbon disulfide | 75-15-0 | Carbon disulfide |
| Carbon tetrachloride | 56-23-5 | Methane, tetrachloro- |
| Chlordane | 57-74-9 | 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octa-chloro-2,3,3a,4,7,7a- hexahydro- |
| p-Chloroaniline | 106-47-8 | Benzenamine, 4 chloro- |
| Chlorobenzene | 108-90-7 | Benzene, chloro- |
| Chloro- benzilate | 510-15-6 | Benzeneacetic acid, 4-chloro-α -(4-chloro- phenyl)-α - hydroxy-, ethyl ester |
| p-Chloro- m-cresol | 59-50-7 | Phenol, 4-chloro-3- methyl- |
| Chloroethane; Ethyl chloride | 75-00-3 | Ethane, chloro- |
| Chloroform | 67-66-3 | Methane, trichloro- |
| 2-Chloro- naphthalene | 91-58-7 | Naphthalene, 2-chloro- |
| 2-Chlorophenol | 95-57-8 | Phenol, 2-chloro- |

| Table 4. Groundwater Monitoring List | | |
|---|---|---|
| **Common Name[1]** | **CAS RN[2]** | **Chemical Abstracts Service Index Name[3]** |
| 4-Chlorophenyl phenyl ether | 7005-72-3 | Benzene, 1-chloro-4- phenoxy- |
| Chloroprene | 126-99-8 | 1,3-Butadiene, 2-chloro- |
| Chromium | (Total) | Chromium |
| Chrysene | 218-01-9 | Chrysene |
| Cobalt | (Total) | Cobalt |
| Copper | (Total) | Copper |
| m-Cresol | 108-39-4 | Phenol, 3-methyl- |
| o-Cresol | 95-48-7 | Phenol, 2-methyl- |
| p-Cresol | 106-44-5 | Phenol, 4-methyl- |
| Cyanide | 57-12-5 | Cyanide |
| 2,4-D; 2,4-Di-chlorophenoxy-acetic acid | 94-75-7 | Acetic acid, (2,4-dichlorophenoxy)- |
| 4,4'-DDD | 72-54-8 | Benzene, 1,1'-(2,2-dichloroethylidene) bis[4-chloro- |
| 4,4'-DDE | 72-55-9 | Benzene, 1,1'-(dichloro-ethenylidene) bis[4- chloro- |
| 4,4'-DDT | 50-29-3 | Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro- |
| Diallate | 2303-16-4 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2- propenyl)ester |
| Dibenz[a,h] anthracene | 53-70-3 | Dibenz[a,h]anthracene |
| Dibenzofuran | 132-64-9 | Dibenzofuran |
| Dibromochloro- methane; Chlorodi- bromomethane | 124-48-1 | Methane, dibromo- chloro- |
| 1,2-Dibromo-3-chloropropane; DBCP | 96-12-8 | Propane, 1,2-dibromo- 3-chloro- |
| 1,2-Dibromoethane; Ethylene dibromide | 106-93-4 | Ethane, 1,2-dibromo- |
| Di-n-butyl phthalate | 84-74-2 | 1,2-Benzenedicarboxylic acid, dibutyl ester |
| o-Dichlorobenzene | 95-50-1 | Benzene, 1,2-dichloro- |
| m-Dichlorobenzene | 541-73-1 | Benzene, 1,3-dichloro- |
| p-Dichlorobenzene | 106-46-7 | Benzene, 1,4-dichloro- |
| 3,3'-Dichloro- benzidine | 91-94-1 | [1,1'-Biphenyl]4,4'- diamine, 3,3'-dichloro- |
| trans-1,4- Dichloro-2-butene | 110-57-6 | 2-Butene,1,4- dichloro-, (E)- |
| Dichlorodifluoro- methane | 75-71-8 | Methane, dichloro- difluoro- |
| 1,1-Dichloro-ethane | 75-34-3 | Ethane,1,1-dichloro- |
| 1,2-Dichloro-ethane; Ethylene dichloride | 107-06-2 | Ethane, 1,2-dichloro- |
| 1,1-Dichloro- ethylene; Vinylidene chloride | 75-35-4 | Ethene, 1,1-dichloro- |
| trans-1,2- Dichloroethylene | 156-60-5 | Ethene,1,2-dichloro-(E)- |
| 2,4-Dichlorophenol | 120-83-2 | Phenol, 2,4-dichloro- |
| 2,6-Dichlorophenol | 87-65-0 | Phenol, 2,6-dichloro- |
| 1,2-Dichloro-propane | 78-87-5 | Propane, 1,2- dichloro- |
| cis-1,3- Dichloro- propene | 10061-01-5 | 1-Propene, 1,3- dichloro-,(Z)- |
| trans-1,3- Dichloropropene | 10061-02-6 | 1-Propene, 1,3- dichloro-, (E)- |
| Dieldrin | 60-57-1 | 2,7:3,6-Dimethanonaphth [2,3-b]oxirene,3,4,5, 6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aα,2β,2aα,3β,6β,6aα,7β, 7aα)- |
| Diethyl phthalate | 84-66-2 | 1,2-Benzenedicarboxylic acid, diethyl ester |
| O,O-Diethyl O-2-pyrazinyl phosphorothioate; Thionazin | 297-97-2 | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester |
| Dimethoate | 60-51-5 | Phosphorodithioic acid, O,O-dimethyls-[2-(methylamino)-2-oxoethyl] ester |
| p-(Dimethyl-amino)azobenzene | 60-11-7 | Benzenamine, N,N-di-methyl-4- (phenylazo)- |
| 7,12-Dimethyl- benz[a] anthracene | 57-97-6 | Benz[a]anthracene, 7,12-dimethyl- |

| Table 4. Groundwater Monitoring List | | |
|---|---|---|
| **Common Name[1]** | **CAS RN[2]** | **Chemical Abstracts Service Index Name[3]** |
| 3,3'-Dimethyl- benzidine | 119-93-7 | [1,1'-Biphenyl]-4,4'- diamine, 3,3'-dimethyl- |
| alpha, alpha- Dimethyl-phenethylamine | 122-09-8 | Benzeneethanamine, α,α-dimethyl- |
| 2,4-Dimethyl- phenol | 105-67-9 | Phenol, 2,4-dimethyl- |
| Dimethyl phthalate | 131-11-3 | 1,2-Benzenedicarboxylic acid, dimethyl ester |
| m-Dinitrobenzene | 99-65-0 | Benzene, 1,3-dinitro- |
| 4,6-Dinitro-o- cresol | 534-52-1 | Phenol, 2-methyl-4,6- dinitro- |
| 2,4-Dinitrophenol | 51-28-5 | Phenol, 2,4-dinitro- |
| 2,4-Dinitro- toluene | 121-14-2 | Benzene, 1-methyl-2, 4-dinitro- |
| 2,6-Dinitro- toluene | 606-20-2 | Benzene, 2-methyl- 1,3-dinitro- |
| Dinoseb; DNBP; 2-sec-Butyl- 4,6-dinitrophenol | 88-85-7 | Phenol, 2-(1-methyl- propyl)-4,6-dinitro- |
| Di-n-octyl phthalate | 117-84-0 | 1,2-Benzenedicarboxylic acid, dioctyl ester |
| 1,4-Dioxane | 123-91-1 | 1,4-Dioxane |
| Diphenylamine | 122-39-4 | Benzenamine, N-phenyl- |
| Disulfoton | 298-04-4 | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester |
| Endosulfan I | 959-98-8 | 6,9-Methano-2,4,3-benzodioxathiepin 6,7,8, 9,10,10-hexachloro-1,5, 5a,6,9,9a-hexahydro-, 3-oxide, (3α,5aβ,6α,9α,9aβ)- |
| Endosulfan II | 33213-65-9 | 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexa-chloro-1,5,5a,6,9, 9a-hexahydro-, 3-oxide, (3α,5aα,6β,9α,9aα)- |
| Endosulfan sulfate | 1031-07-8 | 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexa-chloro-1,5,5a,6,9,9a- hexahydro-, 3,3-dioxide |
| Endrin | 72-20-8 | 2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aα,2β,2aβ, 3α,6α,6aβ, 7β,7aα)- |
| Endrin aldehyde | 7421-93-4 | 1,2,4-Methenocyclopenta[cd] pentalene- 5-carboxaldehyde, 2,2a,3,3,4,7-hexachloro-decahydro-,(1α,2β,2aβ, 4β,4aβ,5β,6aβ,6bβ,7R*)- |
| Ethylbenzene | 100-41-4 | Benzene, ethyl- |
| Ethyl methacrylate | 97-63-2 | 2-Propenoic acid, 2-methyl-, ethyl ester |
| Ethyl methane- sulfonate | 62-50-0 | Methanesulfonic acid, ethyl ester |
| Famphur | 52-85-7 | Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl]-O,O-di-methyl ester |
| Fluoranthene | 206-44-0 | Fluoranthene |
| Fluorene | 86-73-7 | 9H-Fluorene |
| Heptachlor | 76-44-8 | 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-hepta-chloro-3a,4,7,7a-tetrahydro- |
| Heptachlor epoxide | 1024-57-3 | 2,5-Methano-2H-indeno [1,2-b]oxirene,2,3,4,5, 6,7,7-heptachloro-1a,1b,5,5a, 6,6ahexa-hydro-,(1aα,1bβ,2α, 5α,5aβ,6β,6aα) |
| Hexachlorobenzene | 118-74-1 | Benzene, hexachloro- |
| Hexachlorobutadiene | 87-68-3 | 1,3-Butadiene, 1,1,2,3,4,4-hexachloro- |

**Table 4. Groundwater Monitoring List**

| Common Name[1] | CAS RN[2] | Chemical Abstracts Service Index Name[3] |
|---|---|---|
| Hexachloro-cyclopentadiene | 77-47-4 | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- |
| Hexachloroethane | 67-72-1 | Ethane, hexachloro- |
| Hexachlorophene | 70-30-4 | Phenol,2,2'-methyl-enebis [3,4,6- tri-chloro- |
| Hexachloropropene | 1888-71-7 | 1-Propene,1,1,2,3,3,3-hexachloro |
| 2-Hexanone | 591-78-6 | 2-Hexanone |
| Indeno(1,2,3- cd) pyrene | 193-39-5 | Indeno[1,2,3-cd] pyrene |
| Isobutyl alcohol | 78-83-1 | 1-Propanol, 2-methyl- |
| Isodrin | 465-73-6 | 1,4,5,8-Dimethano-naphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro- (1α,4α,4aβ, 5β,8β,8aβ) - |
| Isophorone | 78-59-1 | 2-Cyclohexen-1-one,3,5,5-trimethyl- |
| Isosafrole | 120-58-1 | 1,3-Benzodioxole,5-(1-propenyl)- |
| Kepone | 143-50-0 | 1,3,4-Metheno-2H-cylo-buta-[cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a,5b,6-decachloroocta-hydro- |
| Lead | (Total) | Lead |
| Mercury | (Total) | Mercury |
| Methacrylonitrile | 126-98-7 | 2-Propenenitrile, 2-methyl- |
| Methapyrilene | 91-80-5 | 1,2,Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- |
| Methoxychlor | 72-43-5 | Benzene,1,1'-(2,2,2, trichloroethylidene) bis[4-methoxy- |
| Methyl bromide; Bromomethane | 74-83-9 | Methane, bromo- |
| Methyl chloride; Chloromethane | 74-87-3 | Methane, chloro- |
| 3-Methyl-cholanthrene | 56-49-5 | Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- |
| Methylene bromide; Dibromomethane | 74-95-3 | Methane, dibromo- |
| Methylene chloride; Dichloromethane | 75-09-2 | Methane, dichloro- |
| Methyl ethyl ketone; MEK | 78-93-3 | 2-Butanone |
| Methyl iodide; Iodomethane | 74-88-4 | Methane, iodo- |
| Methylmethacrylate | 80-62-6 | 2-Propenoic acid, 2- methyl-, methyl ester |
| Methyl methanesulfonate | 66-27-3 | Methanesulfonic acid, methyl ester |
| 2-Methyl-naphthalene | 91-57-6 | Naphthalene, 2-methyl- |
| Methyl parathion; Parathion methyl | 298-00-0 | Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl)ester |
| 4-Methyl-2- pentanone; Methylisobutyl ketone | 108-10-1 | 2-Pentanone, 4-methyl |
| Naphthalene | 91-20-3 | Naphthalene |
| 1,4-Naphthoquinone | 130-15-4 | 1,4-Naphthalene-dione |
| 1-Naphthylamine | 134-32-7 | 1-Naphthalenamine |
| 2-Naphthylamine | 91-59-8 | 2-Naphthalenamine |
| Nickel | (Total) | Nickel |
| o-Nitroaniline | 88-74-4 | Benzenamine, 2-nitro- |
| m-Nitroaniline | 99-09-2 | Benzenamine, 3-nitro- |
| p-Nitroaniline | 100-01-6 | Benzenamine, 4-nitro- |
| Nitrobenzene | 98-95-3 | Benzene, nitro- |
| o-Nitrophenol | 88-75-5 | Phenol, 2-nitro- |
| p-Nitrophenol | 100-02-7 | Phenol, 4-nitro- |
| 4-Nitroquinoline, 1-oxide | 56-57-5 | Quinoline, 4-nitro-, 1-oxide |
| N-Nitrosodi-n- butylamine | 924-16-3 | 1-Butanamine, N-butyl-N-nitroso |
| N-Nitroso- diethylamine | 55-18-5 | Ethanamine, N-ethyl- N-nitroso |

**Table 4. Groundwater Monitoring List**

| Common Name[1] | CAS RN[2] | Chemical Abstracts Service Index Name[3] |
|---|---|---|
| N-Nitroso- dimethylamine | 62-75-9 | Methanamine, N- methyl-N-nitroso- |
| N-Nitroso- diphenylamine | 86-30-6 | Benzenamine, N-nitroso-N-phenyl- |
| N-Nitrosodipropyl-amine;Di-n-propyl-nitrosamine | 621-64-7 | 1-Propanamine, N-nitroso-N-propyl- |
| N-Nitrosom-ethylethylamine | 10595-95-6 | Ethanamine, N-methyl- N-nitroso- |
| N-Nitrosomor- pholine | 59-89-2 | Morpholine, 4-nitroso- |
| N-Nitrosopiperi-dine | 100-75-4 | Piperidine, 1- nitroso- |
| N-Nitrosopyrroli-dine | 930-55-2 | Pyrrolidine, 1- nitroso- |
| 5-Nitro-o- toluidine | 99-55-8 | Benzenamine,2-methyl-5-nitro- |
| Parathion | 56-38-2 | Phosphorothioic acid, O,O-diethyl-O-(4-nitro-phenyl) ester |
| Polychlorinated biphenyls; PCBs | See Note 4 | 1,1'-Biphenyl, chloro derivatives |
| Polychlorinated dibenzo-p-dioxins; PCDDs | See Note 5 | Dibenzo[b,e][1,4]dioxin, chloro derivatives |
| Polychlorinated dibenzofurans; PCDFs | See Note 6 | Dibenzofuran, chloro derivatives |
| Pentachlorobenzene | 608-93-5 | Benzene, pentachloro- |
| Pentachloroethane | 76-01-7 | Ethane, pentachloro- |
| Pentachloro- nitrobenzene | 82-68-8 | Benzene, pentachloro- nitro- |
| Pentachlorophenol | 87-86-5 | Phenol, pentachloro- |
| Phenacetin | 62-44-2 | Acetamide, N-(4-ethoxyphenyl) |
| Phenanthrene | 85-01-8 | Phenanthrene |
| Phenol | 108-95-2 | Phenol |
| p-Phenylenediamine | 106-50-3 | 1,4- Benzenediamine |
| Phorate | 298-02-2 | Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester |
| 2-Picoline | 109-06-8 | Pyridine, 2-methyl- |
| Pronamide | 23950-58-5 | Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-pro-pynyl)- |
| Propionitrile; Ethyl cyanide | 107-12-0 | Propanenitrile |
| Pyrene | 129-00-0 | Pyrene |
| Pyridine | 110-86-1 | Pyridine |
| Safrole | 94-59-7 | 1,3-Benzodioxole, 5- (2-propenyl)- |
| Selenium | (Total) | Selenium |
| Silver | (Total) | Silver |
| Silvex; 2,4,5-TP | 93-72-1 | Propanoic acid,2-(2,4, 5-trichlorophenoxy)- |
| Styrene | 100-42-5 | Benzene, ethenyl- |
| Sulfide | 18496-25-8 | Sulfide |
| 2,4,5-T; 2,4,5-, Trichlorophenoxy-acetic acid | 93-76-5 | Acetic acid, (2,4,5-trichlorophenoxy)- |
| 2,3,7,8-TCDD; 2,3,7,8-Tetra-chlorodibenzo-p-dioxin | 1746-01-6 | Dibenzo[b,e][1,4]dioxin 2,3,7,8-tetrachloro- |
| 1,2,4,5-Tetra- chlorobenzene | 95-94-3 | Benzene, 1,2,4,5-tetrachloro- |
| 1,1,1,2-Tetra- chloroethane | 630-20-6 | Ethane, 1,1,1,2- tetrachloro- |
| 1,1,2,2-Tetra- chloroethane | 79-34-5 | Ethane, 1,1,2,2- tetrachloro- |
| Tetrachloro- ethylene; Perchloroethylene; Tetrachloroethene | 127-18-4 | Ethene, tetrachloro- |
| 2,3,4,6-Tetra- chlorophenol | 58-90-2 | Phenol, 2,3,4,6- tetrachloro- |
| Tetraethyl dithio-pyrophosphate; Sulfotepp | 3689-24-5 | Thiodiphosphoric acid ($[(HO)_2P(S)]_2O$), tetraethyl ester |
| Thallium | (Total) | Thallium |
| Tin | (Total) | Tin |
| Toluene | 108-88-3 | Benzene, methyl- |
| o-Toluidine | 95-53-4 | Benzenamine, 2-methyl- |
| Toxaphene | 8001-35-2 | Toxaphene |
| 1,2,4-Tri-chlorobenzene | 120-82-1 | Benzene, 1,2,4-trichloro- |

| Table 4. Groundwater Monitoring List | | |
|---|---|---|
| **Common Name[1]** | **CAS RN[2]** | **Chemical Abstracts Service Index Name[3]** |
| 1,1,1-Tri-chloroethane; Methylchloroform | 71-55-6 | Ethane, 1,1,1-trichloro- |
| 1,1,2-Tri- chloroethane | 79-00-5 | Ethane, 1,1,2-trichloro- |
| Trichloro- ethylene; Trichloroethene | 79-01-6 | Ethene, trichloro- |
| Trichlorofluoro-methane | 75-69-4 | Methane, trichlorofluoro- |
| 2,4,5-Tri- chlorophenol | 95-95-4 | Phenol, 2,4,5-trichloro- |
| 2,4,6-Tri- chlorophenol | 88-06-2 | Phenol, 2,4,6-trichloro- |
| 1,2,3-Tri- chloropropane | 96-18-4 | Propane, 1,2,3-tri-chloro- |
| O,O,O-Triethyl phosphorothioate | 126-68-1 | Phosphorothioic acid, O,O,O-triethyl ester |
| sym-Trinitro- benzene | 99-35-4 | Benzene, 1,3,5- trinitro |
| Vanadium | (Total) | Vanadium |
| Vinyl acetate | 108-05-4 | Acetic acid, ethenyl ester |
| Vinyl chloride | 75-01-4 | Ethene, chloro- |
| Xylene (total) | 1330-20-7 | Benzene, dimethyl- |
| Zinc | (Total) | Zinc |

[1] Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[2] Chemical Abstracts Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[3] CAS index names are those used in the ninth Cumulative Index.

[4] Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor-1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5).

[5] This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins.

[6] This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:399 (May 1990), amended LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1742 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 32:1848 (October 2006), LR 34:1016 (June 2008).

# Chapter 35. Closure and Post-Closure

## §3501. Applicability

A. Closure and post-closure procedures ensure protection of the public and ecology against leakage of hazardous wastes to the environment from closed facilities which formerly stored, treated, and/or disposed of such wastes.

B. Except as LAC 33:V.1501 provides otherwise, LAC 33:V.3503-3517 (which concern closure) apply to all hazardous waste facilities in operation or under construction as of the effective date of LAC 33:V.Subpart 1 and to all hazardous waste facilities permitted under LAC 33:V.Subpart 1, as applicable.

C. LAC 33:V.3519, 3521, 3523, 3525 and 3527 (post-closure care) apply to the owners and operators of:

1. all hazardous waste disposal facilities;

2. waste piles, surface impoundments, or any facility from which the owner or operator intends to remove waste at closure, to the extent that these sections are made applicable to such facilities in LAC 33:V.2315 and 2911;

3. tank systems that are required under LAC 33:V.1915 to meet the requirements for landfills; and

4. containment buildings that are required under LAC 33:V.1803 to meet the requirements for landfills.

D. The administrative authority may replace all or part of the requirements of this Chapter (and the unit-specific standards referenced in LAC 33:V.3507.A.3 applying to a regulated unit), with alternative requirements set out in a permit or in an *enforceable document* (as defined in LAC 33:V.305.H), where the administrative authority determines that:

1. the regulated unit is situated among solid waste management units (or areas of concern), a release has occurred, and both the regulated unit and one or more solid waste management unit(s) (or areas of concern) are likely to have contributed to the release; and

2. it is not necessary to apply the closure requirements of this Chapter (and those referenced herein) because the alternative requirements will protect human health and the environment and will satisfy the closure performance standard of LAC 33:V.3507.A.1 and 2.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 13:651 (November 1987), LR 16:614 (July 1990), LR 18:1256 (November 1992), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1108 (June 1998), LR 24:1742 (September 1998), LR 25:480 (March 1999).

## §3503. Notification of Intention to Close a Facility

A. At least 180 days prior to closure, the operator must notify the Office of Environmental Services of intention to close and supply the following information:

1. date of planned closure;

2. requested changes, if any, in the closure plan submitted with the permit application, which take advantage of new technology, unforeseen situations, and other requests which improve the safety of the closed facility;

3. closure schedule and estimated costs of each phase of the closure plan; and

4. request for release of closure funds in amounts and times as required by the closure schedules.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by

the Office of Environmental Assessment, Environmental Planning Division, LR 26:2486 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2465 (October 2005), LR 33:2116 (October 2007).

# Subchapter A. Closure Requirements

## §3505. Closure Procedures

A. If closure methods are unchanged from the plan approved with the permit, the administrative authority will acknowledge receipt of the notification to close and prepare appropriate documents which will be executed upon completion and acceptance of each phase of the closure plan so that funds can be released.

B. If the request is made to change the closure plan, the operator will submit revisions to the plan to the Office of Environmental Services, supported by necessary scientific and engineering data to permit evaluation by the department, and the procedures established in permit process will be followed in evaluating and approving the requested changes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2486 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2465 (October 2005), LR 33:2116 (October 2007).

## §3507. Closure Performance Standards

A. In accordance with LAC 33:V.3509, the owner or operator must close his facility in a manner that:

1. minimizes the need for further maintenance; and

2. controls, minimizes, or eliminates, to the extent necessary to prevent threats to human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the groundwater, surface waters, or to the atmosphere; and

3. complies with closure requirements of this Chapter, including, but not limited to, the requirements of LAC 33:V.1803, 1911, 1915, 2117, 2315, 2521, 2719, 2911, 3121, and 3203-3207.

B. As a means of satisfying the closure requirements of Paragraph A.2 of this Section, the owner or operator may demonstrate an alternative risk-assessment-based closure in accordance with LAC 33:I.Chapter 13.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:399 (May 1990), LR 18:1256 (November 1992), LR 21:266 (March 1995), amended by the Office of the Secretary, LR 24:2247 (December 1998).

## §3509. Closure Financial Responsibility

A. The operator shall submit, with the permit application, a closure plan which provides the estimated cost of closure, and post-closure monitoring including long-term monitoring devices, and the number of years of estimated operation before closure, and which is designed to minimize the need for future maintenance and to ensure against leakage or escape of hazardous waste.

B. The operator shall create a "closure fund" under the requirements in LAC 33:V.Chapters 35 and 37.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §3511. Closure Plan; Amendment of Plan

A. Written Plan

1. The owner or operator of a hazardous waste management facility must have a written closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous waste at partial or final closure are required by LAC 33:V.2911.D and 2315.C to have contingent closure plans. The plan must be submitted with the permit application, in accordance with LAC 33:V.517.M and approved by the administrative authority as part of the permit issuance procedures under LAC 33:V.Chapters 3 and 7. In accordance with LAC 33:V.311, the approved closure plan will become a condition of any hazardous waste permit.

2. The administrative authority's approval of the plan must ensure that the approved closure plan is consistent with LAC 33:V.3507, 3511-3517, and the applicable requirements of LAC 33:V.Chapter 33, 1803, 1911, 1915, 2117, 2315, 2521, 2719, 2911, 3121, and 3203. Until final closure is completed and certified in accordance with LAC 33:V.3517, a copy of the approved plan and all approved revisions must be furnished to the administrative authority upon request, including request by mail.

B. Content of Plan. The plan must identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The closure plan must include, at least:

1. a description of how each hazardous waste management unit at the facility will be closed in accordance with LAC 33:V.3507;

2. a description of how final closure of the facility will be conducted in accordance with LAC 33:V.3507. The description must identify the maximum extent of the operations which will be unclosed during the active life of the facility; and

3. an estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial closures and final closure, including, but not limited to, methods for removing, transporting, treating, storing, or

disposing of all hazardous wastes, and identification of the type(s) of the off-site hazardous waste management units to be used, if applicable; and

4. a detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard;

5. a detailed description of other activities necessary during the closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, groundwater monitoring, leachate collection, and run-on and run-off control;

6. a schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure (for example, in the case of a landfill, unit estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover must be included); and

7. for facilities that use trust funds to establish financial assurance LAC 33:V.3707 and 3711 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure; and

8. for facilities where the administrative authority has applied alternative requirements at a regulated unit under LAC 33:V.3301.G, 3501.D, and/or 3701.D, either the alternative requirements applying to the regulated unit or a reference to the enforceable document containing those alternative requirements.

C. Amendment of Plan. The owner or operator must submit to the Office of Environmental Services a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in LAC 33:V.Chapters 3 and 7. The written notification or request must include a copy of the amended closure plan for review or approval by the administrative authority.

1. The owner or operator may submit a written notification or request to the Office of Environmental Services for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility.

2. The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved closure plan whenever:

a. changes in operating plans or facility design affect the closure plan; or

b. there is a change in the expected year of closure, if applicable; or

c. in conducting partial or final closure activities, unexpected events require a modification of the approved closure plan.

3. The owner or operator must submit to the Office of Environmental Services a written request for a permit modification including a copy of the amended closure plan for approval at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred that has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator must request a permit modification no later than 30 days after the unexpected event. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to prepare a contingent closure plan under LAC 33:V.2911.D or 2315.D must submit an amended closure plan to the Office of Environmental Services no later than 60 days from the date that the owner or operator or administrative authority determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of LAC 33:V.2521, or no later than 30 days from that date if the determination is made during partial closure or final closure. The administrative authority will approve, disapprove, or modify this amended plan in accordance with the procedures in LAC 33:V.Chapters 3 and 7. In accordance with LAC 33:V.311, the approved closure plan will become a condition of any hazardous waste permit issued.

4. The administrative authority may request modifications to the plan under the conditions described in LAC 33:V.3511.A.2. The owner or operator must submit the modified plan within 60 days of the administrative authority's request, or within 30 days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the administrative authority will be approved in LAC 33:V.Chapters 3 and 7.

5. The owner or operator requests the administrative authority to apply alternative requirements to a regulated unit under LAC 33:V.3301.G, 3501.D, and/or 3701.D.

D. Notification of Partial Closure and Final Closure

1. The owner or operator must notify the Office of Environmental Services in writing at least 60 days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, land treatment or landfill unit, or final closure of a facility with such a unit. The owner or operator must notify the Office of Environmental Services in writing at least 45 days prior to the date on which he expects to begin final closure of a facility with only treatment or storage tanks, container storage, or incinerator units to be closed. The owner or operator must notify the Office of Environmental Services in writing at least 45 days prior to

the date on which he expects to begin partial or final closure of a boiler or industrial furnace, whichever is earlier.

2. The date when he or she "expects to begin closure" must be one of the following:

a. no later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous waste. If the owner or operator of a hazardous waste management unit can demonstrate to the administrative authority that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he or she has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the administrative authority may approve an extension to this one-year limit;

b. for units meeting the requirements of LAC 33:V.3513.D, no later than 30 days after the date on which the hazardous waste management unit receives the known final volume of non-hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional non-hazardous wastes, no later than one year after the date on which the unit received the most recent volume of non-hazardous wastes. If the owner or operator can demonstrate to the administrative authority that the hazardous waste management unit has the capacity to receive additional non-hazardous wastes and he or she has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the administrative authority may approve an extension to this one-year limit.

3. If the facility's permit is terminated, or if the facility is otherwise ordered, by judicial decree or final order under R.S. 30:2025, to cease receiving hazardous wastes or to close, then the requirements of this Paragraph do not apply. However, the owner or operator must close the facility in accordance with the deadlines established in LAC 33:V.3513.

E. Removal of Wastes and Decontamination or Dismantling of Equipment. Nothing in this Section shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 14:791 (November 1988), LR 16:399 (May 1990), LR 16:614 (July 1990), LR 17:478 (May 1991), LR 18:1256 (November 1992), LR 18:1375 (December 1992), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:480 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2486 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2465 (October 2005), LR 33:2116 (October 2007).

## §3513. Closure; Time Allowed for Closure

A. Within 90 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator receives administrative authority allowance pursuant to LAC 33:V.3513.D and complies with all applicable requirements in LAC 33:V.3513.D and E, at a hazardous waste management unit or facility, the owner or operator must treat, remove from the facility or unit, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The administrative authority may approve a longer period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

1. the activities required to comply with this Paragraph will, of necessity, take longer than 90 days to complete, or

2. the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator receives administrative authority allowance pursuant to LAC 33:V.3513.D and complies with LAC 33:V.3513.D and E, and there is a reasonable likelihood that he or another person will recommence operation of the site, as provided in LAC 33:V.321; and

3. closure of the facility would be incompatible with continued operation of the site; and

4. the owner or operator has taken and will continue to take all steps to prevent threats to human health and the environment.

B. The owner or operator must complete partial and final closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in LAC 33:V.3513.D and E, at the hazardous waste management unit or facility. The administrative authority may approve an extension to the closure period if the owner or operator complies with all applicable requirements for requesting a permit modification and demonstrates that:

1. the partial or final closure activities will, of necessity, take longer than 180 days to complete; or

2. the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes or has the capacity to receive non-hazardous wastes if the owner or operator complies with LAC 33:V.3513.D and E; and

3. there is a reasonable likelihood that he or another person will recommence operation of the hazardous waste

management unit within one year, as provided in LAC 33:V.321; and

4. closure of the facility would be incompatible with continued operation of the site; and

5. he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed, but inactive hazardous waste management unit including compliance with all applicable permit conditions.

C. The demonstrations referred to in LAC 33:V.3513.A and B must be made as follows:

1. the demonstrations in Subsection A must be made at least 30 days prior to the expiration of the 90-day period in Subsection A; and

2. the demonstration in LAC 33:V.3513.B must be made at least 30 days prior to the expiration of the 180-day period in LAC 33:V.3513.B, unless the owner or operator is otherwise subject to the deadlines in LAC 33:V.3513.D.

D. The administrative authority may allow an owner or operator to receive only non-hazardous wastes in a landfill, land treatment, or surface impoundment unit after the final receipt of hazardous wastes at that unit if the following conditions are met.

1. The owner or operator requests a permit modification in compliance with all applicable requirements in LAC 33:V.Chapters 1, 3, 5, 7, 27, 31, and 43, and in the permit modification request demonstrates that:

a. the unit has the existing design capacity as indicated on the Part I application to receive non-hazardous wastes;

b. there is a reasonable likelihood that the owner or operator or another person will receive non-hazardous wastes in the unit within one year after the final receipt of hazardous wastes;

c. the nonhazardous wastes will not be incompatible with any remaining wastes in the unit, or with the facility design and operating requirements of the unit or facility under LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, and 37;

d. closure of the hazardous waste management unit would be incompatible with continued operation of the unit or facility; and

e. the owner or operator is operating and will continue to operate in compliance with all applicable permit requirements.

2. The request to modify the permit includes an amended waste analysis plan, groundwater monitoring and response program, human exposure assessment required under LAC 33:V.503.A, and closure and post-closure plans, and updated cost estimates and demonstrations of financial assurance for closure and post-closure care as necessary and appropriate to reflect any changes due to the presence of hazardous constituents in the non-hazardous wastes and changes in closure activities, including the expected year of closure if applicable under LAC 33:V.3511.B.7, as a result of the receipt of non-hazardous wastes following the final receipt of hazardous wastes.

3. The request to modify the permit includes revisions, as necessary and appropriate, to affected conditions of the permit to account for the receipt of non-hazardous wastes following receipt of the final volume of hazardous wastes.

4. The request to modify the permit and the demonstrations referred to in LAC 33:V.3513.D.1 and 2 are submitted to the administrative authority no later than 120 days prior to the date on which the owner or operator of the facility receives the known final volume of hazardous wastes at the unit, or no later than 90 days after the effective date of this rule, whichever is later.

E. In addition to the requirements in LAC 33:V.3513.D, an owner or operator of a hazardous waste surface impoundment that is not in compliance with the liner and leachate collection system requirements in LAC 33:V.Chapter 29 must do the following.

1. Submit to the Office of Environmental Services, with the request to modify the permit:

a. a contingent corrective measures plan, unless a corrective action plan has already been submitted under LAC 33:V.3319; and

b. a plan for removing hazardous wastes in compliance with LAC 33:V.3513.E.2.

2. Remove all hazardous wastes from the unit by removing all hazardous liquids and removing all hazardous sludges to the extent practicable without impairing the integrity of the liner(s), if any.

3. Removal of hazardous wastes must be completed no later than 90 days after the final receipt of hazardous wastes. The administrative authority may approve an extension to this deadline if the owner or operator demonstrates that the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete and that an extension will not pose a threat to human health and the environment.

4. If a release that is a statistically significant increase (or decrease in the case of pH) over background values for detection monitoring parameters or constituents specified in the permit or that exceeds the facility's groundwater protection standard at the point of compliance, if applicable, is detected in accordance with the requirements in LAC 33:V.Chapter 33, the owner or operator of the unit:

a. must implement corrective measures in accordance with the approved contingent corrective measures plan required by LAC 33:V.3513.E.1 no later than one year after detection of the release or approval of the contingent corrective measures plan, whichever is later;

b. may continue to receive wastes at the unit following detection of the release only if the approved corrective measures plan includes a demonstration that

continued receipt of wastes will not impede corrective action; and

c. may be required by the administrative authority to implement corrective measures in less than one year or to cease the receipt of wastes until corrective measures have been implemented if necessary to protect human health and the environment.

5. During the period of corrective action, the owner or operator shall provide semiannual reports to the administrative authority that describe the progress of the corrective action program, compile all groundwater monitoring data, and evaluate the effect of the continued receipt of non-hazardous wastes on the effectiveness of the corrective action.

6. The administrative authority may require the owner or operator to commence closure of the unit if the owner or operator fails to implement corrective action measures in accordance with the approved contingent corrective measures plan within one year as required in LAC 33:V.3513.E.4, or fails to make substantial progress in implementing corrective action and achieving the facility's groundwater protection standard or background levels if the facility has not yet established a groundwater protection standard.

7. If the owner or operator fails to implement corrective measures as required in LAC 33:V.3513.E.4, or if the administrative authority determines that substantial progress has not been made pursuant to LAC 33:V.3513.E.6, he or she shall do the following.

a. The administrative authority will notify the owner or operator in writing that the owner or operator must begin closure in accordance with the deadlines in LAC 33:V.3513.A and B, and provide a detailed statement of reasons for this determination.

b. The administrative authority will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the decision no later than 20 days after the date of the notice.

c. If the administrative authority receives no written comments, the decision will become final five days after the close of the comment period. The administrative authority will notify the owner or operator that the decision is final, and that a revised closure plan, if necessary, must be submitted within 15 days of the final notice, and that closure must begin in accordance with the deadlines in LAC 33:V.3513.A and B.

d. If the administrative authority receives written comments on the decision, he or she shall make a final decision within 30 days after the end of the comment period, and provide the owner or operator in writing and the public through a newspaper notice with a detailed statement of reasons for the final decision. If the administrative authority determines that substantial progress has not been made, closure must be initiated in accordance with the deadlines in LAC 33:V.3513.A and B.

e. The final determinations made by the administrative authority under LAC 33:V.3513.E.7.c and d are not subject to administrative appeal.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 17:478 (May 1991), LR 20:1000 (September 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2486 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2466 (October 2005), LR 33:2117 (October 2007).

## §3515. Disposal or Decontamination of Equipment, Structures and Soils

A. During the partial and final closure periods, all contaminated equipment, structures, and soils must be properly disposed of or decontaminated, unless otherwise specified in LAC 33:V.1803, 1915, 2315, 2521, 2719, 2809, and 2911, or under the authority of LAC 33:V.3203 and 3207. By removing any hazardous waste or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that waste in accordance with all applicable requirements of LAC 33:V.Chapter 11.

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HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:399 (May 1990), LR 16:614 (July 1990), amended by the Office of the Secretary, LR 24:2248 (December 1998).

## §3517. Certification of Closure

A. Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of the completion of final closure, the owner or operator must submit to the Office of Environmental Services, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent, qualified professional engineer. Documentation supporting the independent professional engineer's certification must be furnished to the administrative authority upon request until he releases the owner or operator from the financial assurance requirements for closure under LAC 33:V.3707.

B. Survey Plat. No later than the submission of the certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Office of Environmental Services a survey plat indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The

plat filed with the local zoning authority, or the authority with jurisdiction over local land use, must contain a note, prominently displayed, that states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable regulations of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2487 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2466 (October 2005), LR 33:2117 (October 2007), LR 34:630 (April 2008), LR 34:1001 (June 2008).

## Subchapter B. Post-Closure Requirements

### §3519. Post-Closure Procedures

A. Any proposed transfer of ownership of the property shall be reported to the administrative authority at least 60 days prior to execution of such sale.

B. The administrative authority must approve any new owner. Criteria for approval includes agreement to land use restrictions necessary to protect public health and financial responsibility covering liability due to change in land use.

C. The administrative authority will conduct an annual evaluation of the site for the period of post-closure.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §3521. Post-Closure Care and Use of Property

A. Length of Post-Closure

1. Post-closure care for each hazardous waste management unit subject to the requirements of LAC 33:V.3519-3527 must continue for at least 30 years after the date of completing closure of that unit and must consist of at least the following:

a. monitoring and reporting in accordance with the requirements of LAC 33:V.Chapters 23, 25, 27, 29, 32 and 33; and

b. maintenance and monitoring of waste containment systems in accordance with the requirements of LAC 33:V.Chapters 23, 25, 27, 29, 32 and 33.

2. Any time preceding partial closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular unit, the administrative authority may, in accordance with the permit modification procedures in LAC 33:V.321:

a. shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if he finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or groundwater monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure); or

b. extend the post-closure care period applicable to the hazardous waste management unit or facility if he finds that the extended period is necessary to protect human health and the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

3. The owner or operator may elect to demonstrate a shortened post-closure care period meets the requirements of Subparagraph A.2.a of this Section by using risk assessment methodology. The risk assessment must demonstrate that the shortened post-closure care period is protective of human health and the environment in accordance with LAC 33:I.Chapter 13.

B. The administrative authority may require, at partial and final closure, continuation of any of the security requirements of LAC 33:V.1507 during part or all of the post-closure period when:

1. hazardous wastes may remain exposed after completion of partial or final closure; or

2. access by the public or domestic livestock may pose a hazard to human health.

C. Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring systems, unless the administrative authority finds that the disturbance:

1. is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

2. is necessary to reduce a threat to human health or the environment.

D. All post-closure care activities must be in accordance with the provisions of the approved post-closure plan as specified in LAC 33:V.3525.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:399 (May 1990), amended by Office of the Secretary, LR 24:2248 (December 1998).

### §3523. Post-Closure Plan, Amendment of Plan

A. Written Plan. The owner or operator of a hazardous waste disposal unit must have a written post-closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or

decontaminate the hazardous wastes at partial or final closure are required by LAC 33:V.2911.D and 2315.C to have contingent post-closure plans. Owners or operators of surface impoundments and waste piles not otherwise required to prepare contingent post-closure plans under LAC 33:V.2315.C and 2911.D must submit a post-closure plan to the Office of Environmental Services within 90 days from the date that the owner or operator or administrative authority determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of LAC 33:V.3519-3527. The plan must be submitted with the permit application, in accordance with LAC 33:V.517.P, and approved by the administrative authority as part of the permit issuance procedures under these regulations. In accordance with LAC 33:V.311 the approved post-closure plan will become a condition of any hazardous waste permit issued.

B. For each hazardous waste management unit subject to the requirements of this Section, the post-closure plan must identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:

1. a description of the planned monitoring activities and frequencies at which they will be performed to comply with LAC 33:V.Chapters 23, 25, 27, 29, 32 and 33 during the post-closure care period; and

2. a description of the planned maintenance activities, and frequencies at which they will be performed, to ensure:

a. the integrity of the cap and final cover or other containment systems in accordance with the requirements of LAC 33:V.Chapters 23, 25, 27, 29, 32 and 33; and

b. the functioning of the monitoring equipment in accordance with the requirements of LAC 33:V.Chapters 23, 25, 27, 29, 32, and 33;

3. the name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period; and

4. for facilities where the administrative authority has applied alternative requirements at a regulated unit under LAC 33:V.3301.G, 3501.D, and/or 3701.D, either the alternative requirements that apply to the regulated unit or a reference to the enforceable document containing those requirements.

C. Until final closure of the facility, a copy of the approved post-closure plan must be furnished to the administrative authority upon request, including request by mail. After final closure has been certified, the person or office specified in Paragraph B.3 of this Section must keep the approved post-closure plan during the remainder of the post-closure period.

D. Amendment of Plan. The owner or operator must submit to the Office of Environmental Services a written notification of or request for a permit modification to authorize a change in the approved post-closure plan in accordance with the applicable requirements of LAC 33:V.Chapters 3 and 7. The written notification or request must include a copy of the amended post-closure plan for review or approval by the administrative authority.

1. The owner or operator may submit a written notification or request to the Office of Environmental Services for a permit modification to amend the post-closure plan at any time during the active life of the facility or during the post-closure care period.

2. The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan whenever:

a. changes in operating plans or facility design affect the approved post-closure plan; or

b. there is a change in the expected year of final closure, if applicable; or

c. events which occur during the active life of the facility, including partial and final closures, affect the approved post-closure plan; or

d. the owner or operator requests the administrative authority to apply alternative requirements to a regulated unit under LAC 33:V.3301.G, 3501.D, and/or 3701.D.

3. The owner or operator must submit a written request for a permit modification at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred that has affected the post-closure plan. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at a closure and is not otherwise required to submit a contingent post-closure plan under LAC 33:V.2911.D and 2315.C must submit a post-closure plan to the Office of Environmental Services no later than 90 days after the date that the owner or operator or administrative authority determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of LAC 33:V.2521. The administrative authority will approve, disapprove, or modify this plan in accordance with the procedures in LAC 33:V.Chapters 3 and 7. In accordance with LAC 33:V.311, the approved post-closure plan will become a permit condition.

4. The administrative authority may request modifications to the plan under the conditions described in LAC 33:V.3523.D.2. The owner or operator must submit the modified plan no later than 60 days after the administrative authority's request or no later than 90 days if the unit is a surface impoundment or waste pile not previously required to prepare a contingent post-closure plan. Any modifications requested by the administrative authority will be approved, disapproved, or modified in accordance with the procedures in LAC 33:V.Chapters 3 and 7.

E. Certification of Completion of Post-Closure Care. No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Office of Environmental Services, by registered mail, a certification

that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and an independent engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the administrative authority upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under LAC 33:V.3711.I.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 14:791 (November 1988), LR 16:399 (May 1990), LR 16:614 (July 1990), LR 18:1256 (November 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:480 (March 1999), repromulgated LR 25:856 (May 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2487 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2466 (October 2005), LR 33:2117 (October 2007), LR 34:631 (April 2008).

## §3525. Post-Closure Notices

A. No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Office of Environmental Services a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed of before January 12, 1981, the owner or operator must identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.

B. Within 60 days of certification of closure of the first hazardous waste disposal unit and within 60 days of certification of closure of the last hazardous waste disposal unit, the owner or operator must:

1. record, in accordance with state law, a notation on the deed to the facility property or on some other instrument which is normally examined during the title search—that will in perpetuity notify any potential purchaser of the property that:

a. the land has been used to manage hazardous wastes; and

b. its use is restricted under LAC 33:V.Chapter 35; and

c. the survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by LAC 33:V.3517 and this Section have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the administrative authority; and

2. submit a certification, signed by the owner or operator, that he has recorded the notation specified in Paragraph B.1 of this Section, including a copy of the document in which the notation has been placed, to the administrative authority.

C. If the owner or operator or any subsequent owner or operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, he must request a modification to the post-closure permit in accordance with the applicable requirements in LAC 33:V.Chapters 3 and 7. The owner or operator must demonstrate that the removal of hazardous wastes will satisfy the criteria of LAC 33:V.3521. By removing hazardous waste, the owner or operator may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of this Chapter. If he is granted a permit modification or otherwise granted approval to conduct such removal activities, the owner or operator may request that the administrative authority approve either:

1. the removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

2. the addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 18:1256 (November 1992), LR 23:568 (May 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2488 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2467 (October 2005), LR 33:2118 (October 2007).

## §3527. Certification of Completion of Post-Closure Care

A. No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Office of Environmental Services, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and an independent, qualified professional engineer. Documentation supporting the independent professional engineer's certification must be furnished to the administrative authority upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under LAC 33:V.3711.I.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), amended by the Office of Environmental

Assessment, Environmental Planning Division, LR 26:2488 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2467 (October 2005), LR 33:2118 (October 2007), LR 34:1001 (June 2008).

# Chapter 37. Financial Requirements

## §3701. Applicability

A. The requirements of this Chapter apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this Part.

B. The requirements of LAC 33:V.3709 and 3711 apply only to owners and operators of:

1. disposal facilities;

2. piles and surface impoundments from which the owner or operator intends to remove the wastes at closure, to the extent that these sections are made applicable to such facilities in LAC 33:V.Chapters 23 and 29;

3. tank systems that are required under LAC 33:V.1915 to meet the requirements for landfills; and

4. containment buildings that are required under LAC 33:V.1803 to meet the requirements for landfills.

C. States and the federal government are exempt from the requirements of this Chapter.

[Comment: The permit application should include a description of the financial structure of the operating unit including capital structure, principal ownership, and insurance coverage for personal injury and property damage.]

D. The administrative authority may replace all or part of the requirements of this Chapter applying to a regulated unit with alternative requirements for financial assurance set out in the permit or in an *enforceable document* (as defined in LAC 33:V.305.H), where the administrative authority:

1. prescribes alternative requirements for the regulated unit under LAC 33:V.3301.G and/or 3501.D; and

2. determines that it is not necessary to apply the requirements of this Chapter because the alternative financial assurance requirements will protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:614 (July 1990), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:481 (March 1999).

## §3703. Definitions of Terms as Used in This Chapter

A. General Terms

1. *Closure Plan*—the plan for closure prepared in accordance with the requirements of LAC 33:V.Chapter 35.

2. *Current Closure Cost Estimate*—the most recent of the estimates prepared in accordance with LAC 33:V.3705.A-C.

3. *Current Post-Closure Cost Estimate*—the most recent of the estimates prepared in accordance with LAC 33:V.3709.A-C.

4. *Parent Corporation*—a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a subsidiary of the parent corporation.

5. *Post-Closure Plan*—the plan for the post-closure care prepared in accordance with the requirements of LAC 33:V.Chapter 35.

6. The following terms are used in the specifications for the financial tests for closure, post-closure care, and liability coverage. The definitions are intended to assist in the understanding of these regulations and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.

a. *Assets*—all existing and all probable future economic benefits obtained or controlled by a particular entity.

b. *Current Assets*—cash or other assets, or resources commonly identified as those which are reasonably expected to be realized in cash, or sold, or consumed during the normal operating cycle of the business.

c. *Current Liabilities*—obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

d. *Independently Audited*—refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

e. *Liabilities*—probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

f. *Net Working Capital*—current assets minus current liabilities.

g. *Net Worth*—total assets minus total liabilities and is equivalent to owner's equity.

h. *Tangible Net Worth*—the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

7. *Current Plugging and Abandonment Cost Estimates*—most recent cost estimates prepared in accordance with 40 CFR 144.62a, b, and c, required by the Office of Conservation, or any other substantially equivalent state program.

8. *Substantial Business Relationship*—the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A substantial business relationship must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a

currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the applicable administrative authority.

B. Insurance-Related Terms. In the liability insurance requirements the terms bodily injury and property damage shall have the meanings given these terms by applicable state law. However, these terms do not include those liabilities which, consistent with standard industry practices, are excluded from coverage in liability policies for bodily injury and property damage. The meanings of other terms used in the liability insurance requirements are to be consistent with their common meanings within the insurance industry. The definitions of several of the terms given below are intended to assist in the understanding of these regulations and are not intended to limit their meaning in a way that conflicts with general insurance industry usage.

1. *Accidental Occurrence*—an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.

2. *Legal Defense Costs*—any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

3. *Nonsudden Accidental Occurrence*—an occurrence which takes place over time and involves continuous or repeated exposure.

4. *Sudden Accidental Occurrence*—an occurrence which is not continuous or repeated in nature.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 16:614 (July 1990), LR 18:723 (July 1992).

## Subchapter A. Closure Requirements

### §3705. Cost Estimate for Closure

A. The owner or operator must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in LAC 33:V.3503-3517 and applicable closure requirements in LAC 33:V.1803, 1915, 2117, 2315, 2521, 2719, 2911, 3121, and 3203-3207.

1. The estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see LAC 33:V.3511.B); and

2. The closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of owner or operator in LAC 33:V.3703.A. The owner or operator may use costs for on-site disposal if he can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.

3. The closure cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous wastes or non-hazardous wastes if applicable under LAC 33:V.3513.D, facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.

4. The owner or operator may not incorporate a zero cost for hazardous wastes or non-hazardous wastes if applicable under LAC 33:V.3513.D, that might have economic value.

B. During the active life of the facility, the owner or operator must adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with LAC 33:V.3707. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the administrative authority as specified in LAC 33:V.3707.F. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in LAC 33:V.3705.B.1 and 2. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

1. The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

2. Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

C. During the active life of the facility, the owner or operator must revise the closure cost estimate no later than 30 days after the administrative authority has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in LAC 33:V.3705.B.

D. The owner or operator must keep, at the facility during the operating life of the facility, the latest closure cost estimate prepared as specified in LAC 33:V.3705.A and C and, when this estimate has been adjusted as specified in LAC 33:V.3705.B, the latest adjusted closure cost estimate. The cost estimate must be available to the administrative authority by mail request also.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 16:399 (May 1990), LR 17:478 (May 1991), LR 18:723 (July 1992), LR 21:266 (March 1995).

## §3707. Financial Assurance for Closure

An owner or operator of each facility must establish financial assurance for closure of the facility. Under this Part, the owner or operator must choose from the options as specified in Subsections A-F of this Section, which choice the administrative authority must find acceptable based on the application and the circumstances.

A. Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Part by establishing a closure trust fund that conforms to the requirements of this Subpart, and submitting an originally signed duplicate of the trust agreement to the Office of Environmental Services. An owner or operator of a new facility must submit the originally signed duplicate of the trust agreement to the administrative authority at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in LAC 33:V.3719.A.1, and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see LAC 33:V.3719.A.2). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current closure cost estimate covered by the agreement.

3. Payments into the trust fund must be made annually by the owner or operator over the term of the initial permit, or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the "pay-in period." The payments into the closure trust fund must be made as follows.

a. For a new facility, the first payment must be made before the initial receipt of hazardous waste for treatment, storage, or disposal. A receipt from the trustee for this payment must be submitted by the owner or operator to the administrative authority before this initial receipt of hazardous waste. The first payment must be at least equal to the current closure cost estimate, except as provided in LAC 33:V.3707.G divided by the number of years in the pay-in period. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by this formula.

$$Next\ Payment = \frac{CE - CV}{Y}$$

where:

CE = current closure cost estimate;

CV = current value of the trust fund; and

Y = number of years remaining in the pay-in period.

b. If an owner or operator has previously established a trust fund as specified in LAC 33:V.4403.A and the value of that trust fund is less than the current closure cost estimate when a permit under these regulations is awarded for the facility, then the amount of the current closure cost estimate still to be paid into the trust fund must be paid in over the *pay-in period* as defined in LAC 33:V.3707.A.3. Payments must continue to be made no later than 30 days after each anniversary date of the first payment made. The amount of each payment must be determined by this formula.

$$Next\ Payment = \frac{CE - CV}{Y}$$

where:

CE = current closure cost estimate;

CV = current value of the trust fund; and

Y = number of years remaining in the pay-in period.

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in LAC 33:V.3707.A.3.

5. If the owner or operator establishes a closure trust fund after having used one or more alternate mechanisms specified in this Section or in LAC 33:V.4403, his first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to specifications of this Section and LAC 33:V.4403.A, as applicable.

6. After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this Section to cover the difference.

7. If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the Office of Environmental Services for release of the amount in excess of the current closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this Part for all or part of the trust fund, he may submit a written request to the Office of

Environmental Services for release of the amount in excess of the current closure cost estimate covered by the trust fund.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in LAC 33:V.3707.A.7 and A.8, the administrative authority will instruct the trustee to release to the owner or operator such funds as the administrative authority specifies in writing.

10. After beginning partial or final closure, an owner or operator, or any other person authorized to conduct partial or final closure may request reimbursements for partial or final closure expenditures by submitting itemized bills to the administrative authority. The owner or operator may request reimbursement for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its operating life. Within 60 days after receiving bills for partial or final closure activities, the administrative authority will instruct the trustee to make reimbursements in those amounts as the administrative authority specifies in writing, if the administrative authority determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the administrative authority has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with this Section, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the administrative authority does not instruct the trustee to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

11. The administrative authority will agree to termination of the trust when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3707.I.

B. Surety Bond Guaranteeing Payment into a Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Part by obtaining a surety bond that conforms to the requirements of this Paragraph and submitting the bond to the Office of Environmental Services. An owner or operator of a new facility must submit the bond to the administrative authority at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury, and approved by the administrative authority.

2. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.B.

3. The owner or operator who uses a surety bond to satisfy the requirements of this Part must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements specified in LAC 33:V.3707.A except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the surety bond; and

b. until the standby trust fund is funded pursuant to the requirements of this Part, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.3707.A;

ii. updating of Schedule A of the trust agreement to show current closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The bond must guarantee that the owner or operator will:

a. fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin final closure is issued by the administrative authority, or court of competent jurisdiction; or

c. provide alternate financial assurance as specified in this Part and obtain the administrative authority's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the administrative authority of a notice of cancellation of the bond from the surety.

5. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the current closure cost estimate, except as provided in LAC 33:V.3707.G.

7. Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the

amount of the current closure cost estimate following written approval by the administrative authority.

8. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator, and to the administrative authority. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts.

9. The owner or operator may cancel the bond if the administrative authority has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this Part.

C. Surety Bond Guaranteeing Performance of Closure

1. An owner or operator may satisfy the requirements of this Section by obtaining a surety bond that conforms to the requirements of this Subsection and submitting the bond to the Office of Environmental Services. An owner or operator of a new facility must submit the bond to the administrative authority at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury, and approved by the administrative authority.

2. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.C.

3. The owner or operator who uses a surety bond to satisfy the requirements of this Section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust must meet the requirements specified in Subsection A of this Section except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the surety bond; and

b. unless the standby trust fund is funded pursuant to the requirements of this Section, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.3707.A;

ii. updating of Schedule A of the trust agreement (for example, see LAC 33:V.Chapter 37) to show current closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The bond must guarantee that the owner or operator will:

a. perform final closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; or

b. provide alternate financial assurance as specified in this Part, and obtain the administrative authority's written approval of the assurance provided, within 90 days after receipt of both the owner or operator, and the administrative authority of a notice of cancellation of the bond from the surety.

5. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final administrative determination by the administrative authority pursuant to R.S. 30:2025 that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform final closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.

6. The penal sum of the bond must be in an amount at least equal to the current closure cost estimate.

7. Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

8. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the administrative authority. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts.

9. The owner or operator may cancel the bond if the administrative authority has given prior written consent. The administrative authority will provide such written consent when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3707.I.

10. The surety will not be liable for deficiencies in the performance of closure by the owner or operator after the administrative authority releases the owner or operator from

the requirements of this Part in accordance with LAC 33:V.3707.I.

D. Closure Letter of Credit

1. An owner or operator may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this Subsection and submitting the letter to the Office of Environmental Services. An owner or operator of a new facility must submit the letter of credit to the administrative authority at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The letter of credit must be effective before the initial receipt of hazardous waste. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

2. The wording of the letter of credit must be identical to the wording specified in LAC 33:V.3719.D.

3. An owner or operator who uses a letter of credit to satisfy the requirements of this Section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the administrative authority will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements of the trust fund specified in LAC 33:V.3707.A, except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the letter of credit; and

b. unless the standby trust fund is funded pursuant to the requirements of this Section, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.3707.A;

ii. updating of Schedule A of the trust agreement (see LAC 33:V.3719.A) to show current closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA identification number, name, address, and the amount of funds assured for closure of the facility by the letter of credit.

5. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the administrative authority by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the administrative authority have received the notice, as evidenced by the return receipts.

6. The letter of credit must be issued in an amount at least equal to the current closure cost estimate, except as provided in Subsection G of this Section.

7. Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

8. Following a final administrative determination by the administrative authority pursuant to R.S. 30:2025 that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, the administrative authority may draw on the letter of credit.

9. If the owner or operator does not establish alternate financial assurance as specified in this Part, and obtain written approval of such alternate assurance from the administrative authority within 90 days after receipt by both the owner or operator and the administrative authority of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the administrative authority will draw on the letter of credit. The administrative authority may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the administrative authority will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this Part and obtain written approval of such assurance from the administrative authority.

10. The administrative authority will return the letter of credit to the issuing institution for termination when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3707.I.

E. Closure Insurance

1. An owner or operator may satisfy the requirements of this Part by obtaining closure insurance that conforms to the requirements of this Paragraph and submitting a certificate of such insurance to the Office of Environmental Services. An owner or operator of a new facility must submit

the certificate of insurance to the administrative authority at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance, or be eligible to provide insurance as an excess or surplus lines insurer, in one or more states, and authorized to transact business in Louisiana.

2. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.E.

3. The closure insurance policy must be issued for a face amount at least equal to the current closure cost estimate, except as provided in LAC 33:V.3707.G. The term *face amount* means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

4. The closure insurance policy must guarantee that funds will be available to close the facility whenever final closure occurs. The policy must also guarantee that once final closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the administrative authority to such party or parties as the administrative authority specifies.

5. After beginning partial or final closure, an owner or operator, or any other person authorized to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the administrative authority. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for closure activities, the administrative authority will instruct the insurer to make reimbursements in such amounts as the administrative authority specifies in writing, if the administrative authority determines that the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified. If the administrative authority has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with LAC 33:V.3707.I, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the administrative authority does not instruct the insurer to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

6. The owner or operator must maintain the policy in full force and effect until the administrative authority consents to termination of the policy by the owner or operator as specified in LAC 33:V.3707.E.10. Failure to pay the premium, without substitution of alternate financial assurance as specified in this Part, will constitute a significant violation of these regulations, warranting such remedy as the administrative authority deems necessary. Such violation will be deemed to begin upon receipt by the administrative authority of a notice of future cancellation, termination, or failure to renew, due to nonpayment of the premium, rather than upon the date of expiration.

7. Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

8. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the administrative authority. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the administrative authority and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

a. the administrative authority deems the facility abandoned; or

b. the permit is terminated or revoked, or a new permit is denied; or

c. closure is ordered by the administrative authority or a U.S. District Court or other court of competent jurisdiction; or

d. the owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

e. the premium due is paid.

9. Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

10. The administrative authority will give written consent to the owner or operator that he may terminate the insurance policy when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3707.I.

F. Financial Test and Corporate Guarantee for Closure

1. An owner or operator may satisfy the requirements of this Section by demonstrating that he passes a financial test as specified in this Section. To pass this test the owner or operator must meet the criteria of either of the following.

a. The owner or operator must have:

i. two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

ii. net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

b. The owner or operator must have:

i. a current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

ii. tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

2. The phrase *current closure and post-closure cost estimates* as used in Paragraph F.1 of this Section refers to the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (see LAC 33:V.3719.F). The phrase *current plugging and abandonment cost estimates* used in Paragraph F.1 of this Section refers to the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (40 CFR 144.70.f).

3. To demonstrate that he meets this test, the owner or operator must submit the following items to the Office of Environmental Services:

a. a letter signed by the owner's or operator's chief financial officer and worded as specified in LAC 33:V.3719.F; and

b. a copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

c. a special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

i. he has compared the data with the letter from the chief financial officer specified as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

ii. in connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

4. An owner or operator of a new facility must submit the items specified in Paragraph F.3 of this Section to the Office of Environmental Services at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal.

5. After the initial submission of items specified in Paragraph F.3 of this Section, the owner or operator must send updated information to the Office of Environmental Services within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in Paragraph F.3 of this Section.

6. If the owner or operator no longer meets the requirements of Paragraph F.1 of this Section, he must send notice to the Office of Environmental Services of intent to establish alternate financial assurance as specified in this Part. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

7. The administrative authority may, based on a reasonable belief that the owner or operator may no longer meet the requirements of LAC 33:V.3707.F.1, require reports of financial condition at any time from the owner or operator in addition to those specified in LAC 33:V.3707.F.3. If the administrative authority finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of LAC 33:V.3707.F.1, the owner or operator must provide alternate financial assurance as specified in this Part within 30 days after notification of such a finding.

8. The administrative authority may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see LAC 33:V.3707.F.3). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. Based on the application, the circumstances and the accessibility of the

applicant's assets, the administrative authority may disallow the use of this test. The owner or operator must provide alternate financial assurance as specified in this Part within 30 days after notification of the disallowance.

9. The owner or operator is no longer required to submit the items specified in LAC 33:V.3707.F.3 when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3707.I.

10. An owner or operator may meet the requirements of this Section by obtaining a written guarantee. The guarantor must be the direct or higher tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a substantial business relationship with the owner or operator. The guarantor must meet the requirements of LAC 33:V.3707.F.1-8 for owners or operators, and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in LAC 33:V.3719.H. A certified copy of the guarantee must accompany the items sent to the administrative authority as specified in LAC 33:V.3707.F.3. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a substantial business relationship with the owner or operator, this letter must describe this substantial business relationship and the value received in consideration of the guarantee. The terms of the corporate guarantee must provide that:

a. if the owner or operator fails to perform final closure of a facility covered by the guarantee in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in LAC 33:V.3707.A in the name of the owner or operator;

b. the guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator, and to the administrative authority. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts;

c. if the owner or operator fails to provide alternate financial assurance as specified in this Section and obtain the written approval of such alternate assurance from the administrative authority within 90 days after receipt by the owner or operator and the administrative authority of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the owner or operator.

G. Use of Multiple Financial Mechanisms. An owner or operator may satisfy the requirements of this Section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in Subsections A, B, D, and E of this Section, respectively, except that it is the combination of mechanisms, rather than the single mechanism, that must provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanism. A single trust fund may be established for two or more mechanisms. The administrative authority may use any or all of the mechanisms to provide for closure of the facility.

H. Use of a Financial Mechanism for Multiple Facilities. An owner or operator may use a financial assurance mechanism specified in this Section to meet the requirements of this Section for more than one facility. Evidence of financial assurance submitted to the administrative authority must include a list showing, for each facility, the EPA identification number, name, address, and the amount of funds for closure assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing the funds available through the mechanism for closure of any of the facilities covered by the mechanism, the administrative authority may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

I. Release of the Owner or Operator from the Requirements of this Section. Within 60 days after receiving certifications from the owner or operator and an independent, qualified professional engineer that final closure has been completed in accordance with the approved closure plan, and for facilities subject to LAC 33:V.3525, after receiving the certification required under LAC 33:V.3525.B.2, the administrative authority will notify the owner or operator in writing that he is no longer required by this Section to maintain financial assurance for final closure of the particular facility, unless the administrative authority has reason to believe that final closure has not been in accordance with the approved closure plan or that the owner or operator has failed to comply with the applicable requirements of LAC 33:V.3525. The administrative authority shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan or that the owner or operator has failed to comply with the applicable requirements of LAC 33:V.3525.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste

Division, LR 23:1511 (November 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2488 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2467 (October 2005), LR 33:2118 (October 2007), LR 34:1001 (June 2008).

# Subchapter B. Post-Closure Requirements

## §3709. Cost Estimate for Post-Closure Care

A. The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment unit, or landfill unit, or of a surface impoundment or waste pile required under LAC 33:V.2315 and 2911 to prepare a contingent closure and post-closure plan, must have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in LAC 33:V.3519, 3527, 2315, 2521, 2719, 2911, and 3207.

1. The post-closure cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in LAC 33:V.3703.)

2. The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under LAC 33:V.3523.

B. During the active life of the facility, the owner or operator must adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with LAC 33:V.3711. For owners or operators using the financial test or corporate guarantee, the post-closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before the submission of updated information to the administrative authority as specified in LAC 33:V.3711.F.5. The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its *Survey of Current Business* as specified in LAC 33:V.3709.B.1 and B.2. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

1. The first adjustment is made by multiplying the post-closure cost estimate by the inflation factor. The result is the adjusted post-closure cost estimate.

2. Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.

C. During the active life of the facility, the owner or operator must revise the post-closure cost estimate within 30 days after the administrative authority has approved the request to modify the post-closure plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate must be adjusted for inflation as specified in LAC 33:V.3709.B.

D. The owner or operator must keep the following at the facility during the operating life of the facility: the latest post-closure cost estimate prepared in accordance with LAC 33:V.3709.A and C and, when this estimate has been adjusted, the latest adjusted post-closure cost estimate.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 16:399 (May 1990).

## §3711. Financial Assurance for Post-Closure Care

The owner or operator of a hazardous waste management unit subject to the requirements of LAC 33:V.3709 must establish financial assurance for post-closure care in accordance with the approved post-closure plan for the facility 60 days prior to the initial receipt of hazardous waste or the effective date of the regulation, whichever is later. Under this Section, the owner or operator must choose from the options as specified in Subsections A-F of this Section, which choice the administrative authority must find acceptable based on the application and the circumstances.

A. Post-Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Part by establishing a post-closure trust fund that conforms to the requirements of this Paragraph and submitting an originally signed duplicate of the trust agreement to the Office of Environmental Services. An owner or operator of a new facility must submit the originally signed duplicate of the trust agreement to the administrative authority at least 60 days before the date on which hazardous waste is first received for disposal. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in LAC 33:V.3719.A.1, and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see LAC 33:V.3719.A.2). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current post-closure cost estimate covered by the agreement.

3. Payments into the trust fund must be made annually by the owner or operator over the term of the initial permit, or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the pay-in period. The payments into the post-closure trust fund must be made as follows.

a. For a new facility, the first payment must be made before the initial receipt of hazardous waste for disposal. A receipt from the trustee for this payment must be submitted by the owner or operator to the administrative authority before this initial receipt of hazardous waste. The first payment must be at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.3711.G, divided by the number of years in the pay-in period. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by this formula.

$$Next\ Payment = \frac{CE - CV}{Y}$$

where:

CE = current post-closure cost estimate;

CV = current value of the trust fund; and

Y = number of years remaining in the pay-in period.

b. If an owner or operator has previously established a trust fund as specified in LAC 33:V.4407.A, and the value of that trust fund is less than the current post-closure cost estimate when a permit under these regulations is awarded for the facility, the amount of the current post-closure cost estimate still to be paid into the fund must be paid in over the *pay-in period* as defined in LAC 33:V.3711.A.3. Payments must continue to be made no later than 30 days after each anniversary date of the first payment made. The amount of each payment must be determined by this formula.

$$Next\ Payment = \frac{CE - CV}{Y}$$

where:

CE = current post-closure cost estimate;

CV = current value of the trust fund; and

Y = the number of years remaining in the pay-in period.

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current post-closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in LAC 33:V.3711.A.3.

5. If the owner or operator establishes a post-closure trust fund after having used one or more alternate mechanisms specified in this Section or in LAC 33:V.4407, his first payment must be in at least the amount that the fund would contain if the trust fund were established initially and if annual payments were made according to specifications of this Subsection and LAC 33:V.4407, as applicable.

6. After the pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, must either deposit an amount into the fund so that the fund at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in this Part to cover the difference.

7. During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the Office of Environmental Services for release of the amount in excess of the current post-closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this Part for all or part of the trust fund, he may submit a written request to the Office of Environmental Services for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in LAC 33:V.3711.A.7 or 8, the administrative authority will instruct the trustee to release to the owner or operator such funds as the administrative authority specifies in writing.

10. During the period of post-closure care, the administrative authority may approve a release of funds if the owner or operator demonstrates to the administrative authority that the value of the trust fund exceeds the remaining cost of post-closure care.

11. An owner or operator, or any other person authorized to perform post-closure care, may request reimbursement for the post-closure expenditures by submitting itemized bills to the administrative authority. Within 60 days after receiving bills for post-closure activities, the administrative authority will instruct the trustee to make reimbursements in those amounts as the administrative authority specifies in writing, if the administrative authority determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the administrative authority does not instruct the trustee to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

12. The administrative authority will agree to termination of the trust when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Section in accordance with Subsection I of this Section.

B. Surety Bond Guaranteeing Payment into a Post-Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Section by obtaining a surety bond that conforms to the requirements of this Subsection and submitting the bond to the Office of Environmental Services. An owner or operator of a new facility must submit the bond to the administrative authority at least 60 days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury, and approved by the administrative authority.

2. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.B.

3. The owner or operator who uses a surety bond to satisfy the requirements of this Part must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements specified in LAC 33:V.3711.A except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the surety bond; and

b. until the standby trust fund is funded pursuant to the requirements of this Part, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.3711.A.3;

ii. updating of Schedule A of the trust agreement to show current post-closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The bond must guarantee that the owner or operator will:

a. fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin final closure issued by the administrative authority becomes final, or within 15 days after an order to begin final closure is issued by a U.S. district court or other court of competent jurisdiction; or

c. provide alternate financial assurance as specified in this Part, and obtain the administrative authority's written approval of the assurance provided within 90 days after receipt by both the owner or operator and the administrative authority of a notice of cancellation of the bond from the surety.

5. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.3711.G.

7. Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the administrative authority.

8. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator, and to the Office of Environmental Services. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts.

9. The owner or operator may cancel the bond if the administrative authority has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this Part.

C. Surety Bond Guaranteeing Performance of Post-Closure Care

1. An owner or operator of a facility that has been issued a standard permit may satisfy the requirements of this Section by obtaining a surety bond that conforms to the requirements of this Subsection and by submitting the bond to the Office of Environmental Services. An owner or operator of a new facility must submit the bond to the administrative authority at least 60 days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury, and approved by the administrative authority.

2. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.C.

3. The owner or operator who uses a surety bond to satisfy the requirements of this Part must also establish a standby trust fund. Under the terms of the bond, all

payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements specified in LAC 33:V.3711.A except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the surety bond; and

b. unless the standby trust fund is funded pursuant to the requirements of this Part, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.3711.A.3;

ii. updating of Schedule A of the trust agreement to show current post-closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The bond must guarantee that the owner or operator will:

a. perform post-closure care in accordance with the post-closure plan and other requirements of the permit for the facility; or

b. provide alternate financial assurance as specified in this Part, and obtain the administrative authority's written approval of the assurance provided, within 90 days of receipt by both the owner or operator, and the administrative authority of a notice of cancellation of the bond from the surety.

5. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final administrative determination by the administrative authority pursuant to R.S. 30:2025 that the owner or operator has failed to perform post-closure care in accordance with the post-closure plan and other permit requirements, under the terms of the bond the surety will perform post-closure care in accordance with the post-closure plan and other permit requirements, or will deposit the amount of the penal sum into the standby trust fund.

6. The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate.

7. Whenever the current post-closure cost estimate increases to an amount greater than the penal sum during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the administrative authority.

8. During the period of post-closure care, the administrative authority may approve a decrease in the penal sum if the owner or operator demonstrates to the administrative authority that the amount exceeds the remaining cost of post-closure care.

9. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Office of Environmental Services. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts.

10. The owner or operator may cancel the bond if the administrative authority has given prior written consent. The administrative authority will provide such written consent when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3711.I.

11. The surety will not be liable for deficiencies in the performance of post-closure care by the owner or operator after the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3711.I.

D. Post-Closure Letter of Credit

1. An owner or operator may satisfy the requirements of this Part by obtaining an irrevocable standby letter of credit that conforms to the requirements of this Paragraph and by submitting the letter to the Office of Environmental Services. An owner or operator of a new facility must submit the letter of credit to the administrative authority at least 60 days before the date on which hazardous waste is first received for disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

2. The wording of the letter of credit must be identical to the wording specified in LAC 33:V.3719.D.

3. An owner or operator who uses a letter of credit to satisfy the requirements of this Part must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the administrative authority will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements of the trust fund specified in LAC 33:V.3711.A, except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the letter of credit; and

b. unless the standby trust fund is funded pursuant to the requirements of this Part, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.3711.A.3;

ii. updating of Schedule A of the trust agreement to show current post-closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA identification number, name, address, and the amount of funds assured for post-closure care of the facility by the letter of credit.

5. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator, and the administrative authority by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator, and the administrative authority have received the notice, as evidenced by the return receipts.

6. The letter of credit must be issued in an amount at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.3711.G.

7. Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current post-closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the administrative authority.

8. During the period of post-closure care, the administrative authority may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the administrative authority that the amount exceeds the remaining cost of post-closure care.

9. Following a final administrative determination by the administrative authority pursuant to R.S. 30:2025 that the owner or operator has failed to perform post-closure care in accordance with the post-closure plan and other permit requirements, the administrative authority may draw on the letter of credit.

10. If the owner or operator does not establish alternate financial assurance as specified in this Part and obtain written approval of such alternate assurance from the administrative authority within 90 days after receipt by both the owner or operator and the Office of Environmental Services of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the administrative authority will draw on the letter of credit. The administrative authority may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the administrative authority will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this Part and obtain written approval of such assurance from the administrative authority.

11. The administrative authority will return the letter of credit to the issuing institution for termination when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3711.I.

E. Post-Closure Insurance

1. An owner or operator may satisfy the requirements of this Part by obtaining post-closure insurance that conforms to the requirements of this Paragraph and submitting a certificate of such insurance to the Office of Environmental Services. An owner or operator of a new facility must submit the certificate of insurance to the administrative authority at least 60 days before the date on which hazardous waste is first received for disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance, or be eligible to provide insurance as an excess or surplus lines insurer in one or more states, and authorized to transact business in Louisiana.

2. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.E.

3. The post-closure insurance policy must be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.3711.G. The term *face amount* means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

4. The post-closure insurance policy must guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The

policy must also guarantee that once post-closure care begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the administrative authority, to such party or parties as the administrative authority specifies.

5. An owner or operator or any other person authorized to perform post-closure care may request reimbursement for post-closure expenditures by submitting itemized bills to the administrative authority. Within 60 days after receiving bills for post-closure activities, the administrative authority will instruct the insurer to make reimbursements in those amounts as the administrative authority specifies in writing, if the administrative authority determines that the post-closure expenditures are in accordance with the post-closure plan or otherwise justified. If the administrative authority does not instruct the insurer to make such reimbursements he will provide the owner or operator with a detailed written statement of reasons.

6. The owner or operator must maintain the policy in full force and effect until the administrative authority consents to termination of the policy by the owner or operator as specified in LAC 33:V.3711.E.11. Failure to pay the premium, without substitution of alternate financial assurance as specified in this Part, will constitute a significant violation of these regulations, warranting such remedy as the administrative authority deems necessary. Such violation will be deemed to begin upon receipt by the administrative authority of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

7. Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

8. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Office of Environmental Services. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the administrative authority and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

a. the administrative authority deems the facility abandoned; or

b. the permit is terminated or revoked or a new permit is denied; or

c. closure is ordered by the administrative authority or a U.S. District Court or other court that can exercise jurisdiction; or

d. the owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

e. the premium due is paid.

9. Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Part to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the administrative authority.

10. Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rates or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26 week Treasury securities.

11. The administrative authority will give written consent to the owner or operator that he may terminate the insurance policy when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3711.I.

F. Financial Test and Corporate Guarantee for Post-Closure Care

1. An owner or operator may satisfy the requirements of this Section by demonstrating that he passes a financial test as specified in this Subsection. To pass this test the owner or operator must meet the criteria of either of the following.

a. The owner or operator must have:

i. two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

ii. net working capital and tangible net worth each at least six times the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

b. The owner or operator must have:

i. a current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by *Standard and Poor's* or Aaa, Aa, A, or Baa as issued by *Moody's*; and

ii. tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

2. The phrase *current closure and post-closure cost estimates* as used in LAC 33:V.3711.F.1 refers to the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (see LAC 33:V.3719.F). The phrase *current plugging and abandonment cost estimates* used in LAC 33:V.3711.F.1 refers to the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (40 CFR 144.70.f).

3. To demonstrate that he meets this test, the owner or operator must submit the following items to the Office of Environmental Services:

a. a letter signed by the owner's or operator's chief financial officer and worded as specified in LAC 33:V.3719.F; and

b. a copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

c. a special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

i. he has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

ii. in connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

4. An owner or operator of a new facility must submit the items specified in Paragraph F.3 of this Section to the Office of Environmental Services at least 60 days before the date on which hazardous waste is first received for disposal.

5. After the initial submission of items specified in Paragraph F.3 of this Section, the owner or operator must send updated information to the Office of Environmental Services within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in Paragraph F.3 of this Section.

6. If the owner or operator no longer meets the requirements of Paragraph F.1 of this Section, he must send notice to the Office of Environmental Services of intent to establish alternate financial assurance as specified in this Part. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

7. The administrative authority may, based on a reasonable belief that the owner or operator may no longer meet the requirements of LAC 33:V.3711.F.1, require reports of financial condition at any time from the owner or operator in addition to those specified in LAC 33:V.3711.F.3. If the administrative authority finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of LAC 33:V.3711.F.1, the owner or operator must provide alternate financial assurance as specified in this Part within 30 days after notification of such a finding.

8. The administrative authority may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see LAC 33:V.3711.F.3). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. Based on the application, the circumstances, and the accessibility of the applicant's assets, the administrative authority may disallow the use of this test. The owner or operator must provide alternate financial assurance as specified in this Part within 30 days after notification of the disallowance.

9. During the period of post-closure care, the administrative authority may approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the administrative authority that the amount of the cost estimate exceeds the remaining cost of post-closure care.

10. The owner or operator is no longer required to submit the items specified in LAC 33:V.3711.F.3 when:

a. an owner or operator substitutes alternate financial assurance as specified in this Part; or

b. the administrative authority releases the owner or operator from the requirements of this Part in accordance with LAC 33:V.3711.I.

11. An owner or operator may meet the requirements of this Section by obtaining a written guarantee. The guarantor

must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a substantial business relationship with the owner or operator. The guarantor must meet the requirements for owners or operators of LAC 33:V.3711.F.1-F.9 and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in LAC 33:V.3719.H. A certified copy of the guarantee must accompany the items sent to the administrative authority specified in LAC 33:V.3711.F.3. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a substantial business relationship with the owner or operator, this letter must describe this substantial business relationship and the value received in consideration of the guarantee. The terms of the corporate guarantee must provide that:

a. if the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in LAC 33:V.3711.A in the name of the owner or operator;

b. the corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the administrative authority. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts;

c. if the owner or operator fails to provide alternate financial assurance as specified in this Part and obtain the written approval of such alternate assurance from the administrative authority within 90 days after receipt by both the owner or operator and the administrative authority of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

G. Use of Multiple Financial Mechanisms. An owner or operator may satisfy the requirements of this Section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in Subsections A, B, D, and E of this Section, respectively, except that it is the combination of mechanisms, rather than the single mechanism, that must provide financial assurance for an amount at least equal to the cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The administrative authority may use any or all of the mechanisms to provide for post-closure care of the facility.

H. Use of a Financial Mechanism for Multiple Facilities. An owner or operator may use a financial assurance mechanism specified in this Section to meet the requirements of this Section for more than one facility. Evidence of financial assurance submitted to the administrative authority must include a list showing, for each facility, the EPA identification number, name, address, and the amount of funds for post-closure assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the administrative authority may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

I. Release of the Owner or Operator from the Requirements of this Part. Within 60 days after receiving certifications from the owner or operator and an independent, qualified professional engineer that the post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the administrative authority will notify the owner or operator that he is no longer required to maintain financial assurance for post-closure care of that unit, unless the administrative authority has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The administrative authority shall provide the owner or operator with a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 14:791 (November 1988), LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1512 (November 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2490 (November 2000), amended by the Office of Environmental Assessment, LR 31:1572 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2469 (October 2005), LR 33:2120 (October 2007), LR 34:1002 (June 2008).

## Subchapter C. Common Closure and Post-Closure Requirements

### §3713. Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care

A. An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in both LAC 33:V.3707 and 3711. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate

mechanism has been established and maintained for financial assurance of closure and post-closure care.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

# Subchapter D. Insurance Requirements

## §3715. Liability Requirements

A. Coverage for Sudden Accidental Occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in LAC 33:V.3715.A.1, 2, 3, 4, 5, or 6. For any facility that treats, stores, or disposes by land treatment (i.e., surface impoundment, waste pile, landfarm, or landfill) any acute hazardous waste (see LAC 33:V.4901, Table 3), or any toxic waste listed because of toxicity or reactivity (see LAC 33:V.4901, Table 4) the liability coverage must be at least $5 million per occurrence, with an annual aggregate of at least $5 million exclusive of legal defense costs.

1. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this Paragraph.

a. Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in LAC 33:V.3719.I. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.J. The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Office of Environmental Services. If requested by the administrative authority, the owner or operator must provide a signed duplicate original of the insurance policy. An owner or operator of a new facility must submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the certificate of liability insurance to the administrative authority at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

b. Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states, and authorized to transact business in Louisiana.

2. An owner or operator may meet the requirements of this Section by passing a financial test or using the corporate guarantee for liability coverage as specified in Subsections F and G of this Section.

3. An owner or operator may meet the requirements of this Section by obtaining a letter of credit for liability coverage as specified in LAC 33:V.3715.H.

4. An owner or operator may meet the requirements of this Section by obtaining a surety bond for liability coverage as specified in LAC 33:V.3715.I.

5. An owner or operator may meet the requirements of this Section by obtaining a trust fund for liability coverage as specified in LAC 33:V.3715.J.

6. An owner or operator may demonstrate the required liability coverage through use of combinations of financial test, insurance, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this Section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this Paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurances as "excess" coverage.

7. An owner or operator shall notify the Office of Environmental Services in writing within 30 days whenever:

a. a claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in LAC 33:V.3715.A.1-6; or

b. a Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under LAC 33:V.3715.A.1-6; or

c. a final court order establishing a judgement for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under LAC 33:V.3715.A.1-6.

B. Coverage for Non-Sudden Accidental Occurrences. An owner or operator of a surface impoundment, landfill, land treatment facility, or miscellaneous disposal unit that is used to manage hazardous waste, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by non-sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator

must have and maintain liability coverage for non-sudden accidental occurrences in the amount of at least $3 million per occurrence with an annual aggregate of at least $6 million, exclusive of legal defense costs. An owner or operator who must meet the requirements of this Section may combine the required per-occurrence coverage levels for sudden and non-sudden accidental occurrence into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and non-sudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and non-sudden accidental occurrences must maintain liability coverage in the amount of at least $5 million per occurrence and $10 million annual aggregate. This liability coverage may be demonstrated as specified in LAC 33:V.3715.B.1, 2, 3, 4, 5, or 6.

1. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this Paragraph.

a. Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in LAC 33:V.3719.I. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.J. The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Office of Environmental Services. If requested by the administrative authority, the owner or operator must provide a signed duplicate original of the insurance policy. An owner or operator of a new facility must submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the certificate of liability insurance to the administrative authority at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

b. Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer in one or more states and authorized to transact business in Louisiana.

2. An owner or operator may meet the requirements of this Section by passing a financial test or using the guarantee for liability coverage as specified in LAC 33:V.3715.F and G.

3. An owner or operator may meet the requirements of this Section by obtaining a letter of credit for liability coverage as specified in LAC 33:V.3715.H.

4. An owner or operator may meet the requirements of this Section by obtaining a surety bond for liability coverage as specified in LAC 33:V.3715.I.

5. An owner or operator may meet the requirements of this Section by obtaining a trust fund for liability coverage as specified in LAC 33:V.3715.J.

6. An owner or operator may demonstrate the required liability coverage through use of combinations of financial test, insurance, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this Section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this Paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

7. An owner or operator shall notify the Office of Environmental Services in writing within 30 days whenever:

a. a claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in LAC 33:V.3715.B.1-6; or

b. a Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under LAC 33:V.3715.B.1-6; or

c. a final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under LAC 33:V.3715.B.1-6.

C. Request for Variance. If an owner or operator can demonstrate to the satisfaction of the administrative authority that the levels of financial responsibility required by Subsections A and B of this Section are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the administrative authority. The request for a variance must be submitted to the administrative authority as part of the application under LAC 33:V.Chapter 5 for a facility that does not have a permit, or pursuant to the procedures for permit modification under LAC 33:V.Chapter 3 for a facility that has a permit. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the administrative authority's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The administrative authority may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the administrative authority to determine a level of financial responsibility other than that required by Subsections A and B of this Section. Any request for a variance for a permitted

facility will be treated as a request for a permit modification under LAC 33:V.321.

D. Adjustments by the Administrative Authority. If the administrative authority determines that the levels of financial responsibility required by Subsection A or B of this Section are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the administrative authority may adjust the level of financial responsibility required by Subsections A and B of this Section as may be necessary to protect human health and the environment. This adjusted level will be based on the administrative authority's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the administrative authority determines that there is a significant risk to human health and the environment from non-sudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, he may require that an owner or operator of the facility comply with Subsection B of this Section. An owner or operator must furnish to the Office of Environmental Services, within a reasonable time, any information that the administrative authority requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a facility that has a permit will be treated as a permit modification under LAC 33:V.321.

E. Period of Coverage. Within 60 days after receiving certifications from the owner or operator and an independent, qualified professional engineer that final closure has been completed in accordance with the approved closure plan, the administrative authority will notify the owner or operator in writing that he is no longer required by this Section to maintain liability coverage for that facility, unless the administrative authority has reason to believe that closure has not been in accordance with the approved closure plan.

F. Financial Test for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by demonstrating that he passes a financial test as specified in this Subsection. To pass this test the owner or operator must meet the criteria of either LAC 33:V.3715.F.1.a or b below.

a. The owner or operator must have:

i. net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by the test; and

ii. tangible net worth of at least $10 million; and

iii. assets located in the United States amounting to either at least 90 percent of his total assets or at least six times the amount of liability coverage to be demonstrated by this test.

b. The owner or operator must have:

i. a current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by *Standard and Poor's* or Aaa, Aa, A, or Baa as issued by *Moody's*; and

ii. tangible net worth of at least $10 million; and

iii. tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

iv. assets located in the United States amounting to either at least 90 percent of total assets or at least six times the amount of liability coverage to be demonstrated by this test.

2. The phrase amount of liability coverage as used in LAC 33:V.3715.F.1 refers to the annual aggregate amounts for which coverage is required under LAC 33:V.3715.A and B.

3. To demonstrate that he meets this test, the owner or operator must submit the following three items to the Office of Environmental Services:

a. a letter signed by the owner's or operator's chief financial officer and worded as specified in LAC 33:V.3719.G. If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by LAC 33:V.3707.F, 3711.F, 4403.E, and 4407.E, and liability coverage, he must submit the letter specified in LAC 33:V.3719.G to cover both forms of financial responsibility; a separate letter as specified in LAC 33:V.3719.F is not required;

b. a copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year;

c. a special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

i. he has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

ii. in connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

4. An owner or operator of a new facility must submit the items specified in Paragraph F.3 of this Section to the Office of Environmental Services at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal.

5. After the initial submission of items specified in LAC 33:V.3715.F.3, the owner or operator must send updated information to the administrative authority within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in LAC 33:V.3715.F.3.

6. If the owner or operator no longer meets the requirements of Paragraph F.1 of this Section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this Section. Evidence of liability coverage must be submitted to the Office of Environmental Services within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

7. The administrative authority may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see LAC 33:V.3715.F.3). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. Based on the application, the circumstances and the accessibility of the applicant's assets, the administrative authority may disallow the use of this test. The owner or operator must provide evidence of insurance for the entire amount of required liability coverage as specified in this Part within 30 days after notification of disallowance.

8. The corporate guarantee authorized for use to demonstrate financial assurance for closure and/or post-closure may not be used to demonstrate financial assurance for liability coverage.

G. Guarantee for Liability Coverage. Subject to LAC 33:V.3715.G.2, an owner or operator may meet the requirements of this Section by obtaining a written guarantee, hereinafter referred to as guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a substantial business relationship with the owner or operator. The guarantor must meet the requirements for owners or operators in LAC 33:V.3715.F.1-7. The wording of the guarantee must be identical to the wording specified in LAC 33:V.3719. A certified copy of the guarantee must accompany the items sent to the administrative authority as specified in LAC 33:V.3715.F.3. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a substantial business relationship with the owner or operator, this letter must describe this substantial business relationship and the value received in consideration of the guarantee.

1. If the owner or operator fails to satisfy a judgement based on a determination of liability for bodily injury or property damage to third parties caused by sudden or non-sudden accidental occurrences (or both as the case may be), arising from the operation of facilities covered by this guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

2. In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this Section only if the attorney general or insurance commissioner of the state in which the guarantor is incorporated and the attorney general or insurance commissioner of Louisiana have submitted written statements to the department that a guarantee executed as described in this Section and LAC 33:V.3719.H.2 is a legally valid and enforceable obligation in that state.

3. In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this Section only if the non-U.S. corporation has identified a registered agent for service of process in Louisiana and in the state in which it has its principal place of business, and the attorney general or insurance commissioner of Louisiana and the state in which the guarantor corporation has its principal place of business have submitted written statements to the department that a corporate guarantee executed as described in this Section and LAC 33:V.3719.H.2 is a legally valid and enforceable obligation in that state.

H. Letter of Credit for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this Subsection and submitting a copy of the letter of credit to the Office of Environmental Services.

2. The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.

3. The wording of the letter of credit must be identical to the wording specified in LAC 33:V.3719.K.

4. An owner or operator who uses a letter of credit to satisfy the requirements of this Section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

5. The wording of the standby trust fund must be identical to the wording specified in LAC 33:V.3719.N.

I. Surety Bond for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by obtaining a surety bond that conforms to the requirements of this Subsection and submitting a copy of the bond to the Office of Environmental Services.

2. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

3. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.L.

4. A surety bond may be used to satisfy the requirements of this Section only if the attorney general or insurance commissioner of the state in which the surety is incorporated and the attorney general or insurance commissioner of Louisiana have submitted a written statement to EPA that a surety bond executed as described in this Section and LAC 33:V.3719.L is a legally valid and enforceable obligation in that state.

J. Trust Fund for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by establishing a trust fund that conforms to the requirements of this Paragraph and submitting an originally signed duplicate of the trust agreement to the Office of Environmental Services.

2. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

3. The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this Section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the fund, must either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in this Section to cover the difference. For purposes of this Paragraph, *the full amount of the liability coverage to be provided* means the amount of coverage for sudden and/or non-sudden occurrences required to be provided by the owner or operator by this Section, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

4. The wording of the trust fund must be identical to the wording specified in LAC 33:V.3719.M.

K. Notwithstanding any other provision of LAC 33:V.Subpart 1, an owner or operator using liability insurance to satisfy the requirements of this Section may use, until October 16, 1982, a Hazardous Waste Facility Liability Endorsement or Certificate of Liability Insurance that does not certify that the insurer is licensed to transact the business of insurance, or eligible as an excess or surplus lines insurer, in one or more states.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 11:686 (July 1985), LR 13:433 (August 1987), LR 13:651 (November 1987), LR 16:399 (May 1990), LR 18:723 (July 1992), repromulgated LR 19:486 (April 1993), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1513 (November 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2492 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2471 (October 2005), LR 33:2122 (October 2007), LR 34:1002 (June 2008).

# Subchapter E. Incapacity Regulations

## §3717. Incapacity of Owners or Operators, Guarantors, or Financial Institutions

A. An owner or operator must notify the Office of Environmental Services by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in LAC 33:V.3707.F and 3711.F must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee (see LAC 33:V.3719.H).

B. An owner or operator who fulfills the requirements of LAC 33:V.3707, 3711 or 3715 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within 60 days after such an event.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2493 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2472 (October 2005), LR 33:2123 (October 2007).

# Subchapter F. Financial and Insurance Instruments

## §3719. Wording of the Instruments

A. A trust agreement for a trust fund as specified in LAC 33:V.3707.A or 3711.A or 4403.A or 4407.A must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

1. The wording of the trust agreement is as follows.

Trust Agreement

Trust Agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "incorporated in the State of ____" or "a national bank" or "a state bank"], the "Trustee."

WHEREAS, the Department of Environmental Quality of the State of Louisiana, an agency of the State of Louisiana, has established certain regulations applicable to the grantor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds

will be available when needed for closure and/or post-closure care of the facility;

WHEREAS, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facility identified herein;

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this agreement:

(a) The term *Grantor* means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term *Trustee* means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term *Secretary* means the Secretary, Louisiana Department of Environmental Quality and any successor agency.

(d) The term *administrative authority* means the Secretary, or a person designated by him or her to act therefor.

Section 2. Identification of Facilities and Cost Estimates

This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA Identification Number, name, address, and the current closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Louisiana Department of Environmental Quality. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. [NOTE: Standby Trust Agreements need not be funded at the time of execution. In the case of Standby Trust Agreements, Schedule B should be blank but for a statement that the Agreement is not presently funded, but shall be funded by the financial assurance document used by the Grantor in accordance with the terms of that document.] Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the administrative authority.

Section 4. Payment for Closure and Post-Closure Care

The Trustee shall make payments from the Fund as the administrative authority shall direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facility covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the administrative authority from the Fund for closure and post-closure expenditures in such amounts as the administrative authority shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the administrative authority specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this part. In investing, reinvesting, exchanging, selling, and managing the Fund, the trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

A. securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

B. the Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

C. the Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

A. to transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

B. to purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

A. to sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

B. to make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

C. to register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

D. to deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

E. to compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the

extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation

The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the administrative authority a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the administrative authority shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the administrative authority, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Part shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests and instructions. All orders, requests, and instructions by the administrative authority to the Trustee shall be in writing, signed by the administrative authority, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or administrative authority hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or administrative authority, except as provided for herein.

Section 15. Notice of Nonpayment

The Trustee shall notify the Grantor and the administrative authority, by certified mail, within ten days following the expiration of the thirty-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the administrative authority, or by the Trustee and the administrative authority, if the Grantor ceases to exist.

Section 17. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the administrative authority, or by the Trustee and the administrative authority, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to Grantor.

Section 18. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the administrative authority issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the State of Louisiana.

Section 20. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in LAC 33:V.3719.A.1 as such regulations were constituted on the date first above written.

WITNESSES: GRANTOR:
By:

Its:_____
(SEAL)

TRUSTEE:
By:_____

Its:_____
(SEAL)

THUS DONE AND PASSED in my office in _____, on the ____ day of _____ 20____, in the presence of _____ and _____, competent witnesses, who hereunto sign their names with the said appearers and me, Notary, after reading the whole.

NOTARY PUBLIC

2. The following is an example of the certification of acknowledgement which must accompany the trust agreement for a trust fund as specified in LAC 33:V.3707.A.2 or 4403.A.2 or 4407.A.2.

STATE OF LOUISIANA
PARISH OF _____

BE IT KNOWN, that on this _____ day of_____, 20____, before me, the undersigned Notary Public, duly commissioned and qualified within the State and Parish aforesaid, and in the presence of the witnesses hereinafter named and undersigned, personally came and appeared_____, to me well known, who declared and acknowledged that he had signed and executed the foregoing instrument as his act and deed, and as the act and deed of the _____, a corporation, for the consideration, uses and purposes and on terms and conditions therein set forth.

And the said appearer, being by me first duly sworn, did depose and say that he is the _____ of said corporation and that he signed and

executed said instrument in his said capacity, and under authority of the Board of Directors of said corporation.

Thus done and passed in the State and Parish aforesaid, on the day and date first hereinabove written, and in the presence of _____ and _____, competent witnesses, who have hereunto subscribed their names as such, together with said appearer and me, said authority, after due reading of the whole.

WITNESSES:

_____ _____

_____ _____ NOTARY PUBLIC

B. Payment Bond. A surety bond guaranteeing payment into a trust fund, as specified in LAC 33:V.3707.B or 3711.B or 4403.B or 4407.B, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

FINANCIAL GUARANTEE BOND

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address of owner or operator]

Type of organization:
[insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation: _____

Surety(ies): [name(s) and business address(es)]

EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure amounts separately]: _____

Total penal sum of bond: $_____

Surety's bond number: _____

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Louisiana Department of Environmental Quality in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS, said Principal is required, under the Resource Conservation and Recovery Act (RCRA) as amended and the Louisiana Environmental Quality Act, R.S. 30:2001 et seq., to have a permit in order to own or operate the hazardous waste management facility(ies) identified above; and

WHEREAS, the Principal is required by law to provide financial assurance for closure or closure and post-closure care, as a condition of the permit or interim status; and

WHEREAS, said Principal shall establish a standby trust fund as is required by LAC 33:V.Chapter 37 when a surety bond is used to provide such financial assurance;

NOW THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of the facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

OR, if the Principal shall fund the standby trust fund in such amount(s) within 15 days after a final order to begin final closure is issued by the Secretary, or a court of competent jurisdiction,

OR, if the Principal shall provide alternate financial assurance as specified in LAC 33:V.Chapter 37, and obtain written approval from the administrative authority of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and the administrative authority from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the administrative authority that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the administrative authority.

The Surety(ies) hereby waives notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations, and agrees that no such amendment shall in any way alleviate its obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of the penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the administrative authority, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of notice of cancellation by the Principal and the administrative authority, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies) and to the administrative authority, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the administrative authority.

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly in accordance with LAC 33:V.Chapter 37, and the conditions of the Hazardous Waste Facility permit so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase or decrease without the written permission of the administrative authority.

The Principal and Surety(ies) hereby agree that no portion of the penal sum may be expended without prior written approval of the administrative authority.

IN WITNESS WHEREOF, the Principal and the Surety have executed this FINANCIAL GUARANTEE BOND and have affixed their seals on the date set forth above.

Those persons whose signatures appear below hereby certify that they are authorized to execute this FINANCIAL GUARANTEE BOND on behalf of the Principal and Surety(ies), that each Surety hereto is authorized to do business in the State of Louisiana, and that the wording of this surety bond is identical to the wording specified in LAC 33:V.3719.B as such regulations were constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate Seal]

CORPORATE SURETIES

[Name and address]
State of incorporation: _____
Liability Limit: _____
[Signature(s)]
[Name(s) and title(s)]
[Corporate Seal]
[This information must be provided for each co-surety]

Bond Premium: $_____

C. Performance Bond. A surety bond guaranteeing performance of closure and/or post-closure care, as specified in LAC 33:V.3707.C or 3711.C must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

PERFORMANCE BOND

Date bond executed: _____

Effective date: _____

Principal: [Legal name and business address of owner or operator]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation: _____

Surety(ies): [Name(s) and business address(es)] _____

LHW/EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure separately]: _____

Total penal sum of bond: $_____

Surety's bond number _____

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Louisiana Department of Environmental Quality in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS, said Principal is required, under the Resource Conservation and Recovery Act as amended (RCRA) and the Louisiana Environmental Quality Act, R.S. 30:2001, et seq., to have a permit in order to own or operate the hazardous waste management facility(ies) identified above; and

WHEREAS, the Principal is required by law to provide financial assurance for closure and post-closure care, as a condition of the permit; and

WHEREAS, said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever required to do so, of the facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended;

AND, if the Principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the post-closure plan and other requirements of the permit, as such plan and permit may be amended pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

OR, if the Principal shall provide alternate financial assurance as specified in LAC 33:V.Chapter 37, and obtain the administrative authority's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and administrative authority, then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described hereinabove.

Upon notification by the administrative authority that the Principal has been found in violation of the closure requirements of LAC 33:V.Chapter 37 or of its permit, for the facility for which this bond guarantees performances of closure, the Surety(ies) shall either perform closure in accordance with the closure plan and other permit requirements, or place the closure amount guaranteed for the facility into the standby trust fund as directed by the administrative authority.

Upon notification by the administrative authority that the Principal has been found in violation of the post-closure requirements of the Hazardous Waste Regulations or of its permit for the facility for which this bond guarantees performance of post-closure, the surety(ies) shall either perform post-closure in accordance with the post-closure plan and other permit requirements or place the post-closure amount guaranteed for the facility into the standby trust fund as directed by the administrative authority.

Upon notification by the administrative authority that the Principal has failed to provide alternate financial assurance as specified in LAC 33:V.Chapter 37, and obtain written approval of such assurance from the administrative authority during the 90 days following receipt by both the Principal and the administrative authority of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the facility into the standby fund as directed by the administrative authority.

The Surety(ies) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations, and agree(s) that no such amendment shall in any way alleviate its obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment on succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of the penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the administrative authority, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of notice of cancellation by both the Principal and the administrative authority, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety and to the administrative authority, provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the administrative authority.

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly in accordance with LAC 33:V.Chapter 37, and the conditions of the Hazardous Waste Facility permit so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase or decrease without the written permission of the administrative authority.

The Principal and Surety(ies) hereby agree that no portion of the penal sum may be expended without prior written approval of the administrative authority.

IN WITNESS WHEREOF, the Principal and the Surety(ies) have executed this PERFORMANCE BOND and have affixed their seals on the date set forth above.

Those persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies), and that the wording of this surety bond is identical to the wording specified in LAC 33:V.3719.C as such regulation was constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate Seal]

CORPORATE SURETY(IES)

[Name and address]
State of incorporation: _____
Liability limit: $ _____
[Signature(s)]
[Name(s) and title(s)]
[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $ _____

D. Letter of Credit. A letter of credit, as specified in LAC 33:V.3707.D or 3711.D or 4403.C or 4407.C must be worded as follows, except that instructions in brackets are to

be replaced with the relevant information and the brackets deleted.

IRREVOCABLE STANDBY LETTER OF CREDIT

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
Attention: Office of Environmental Services,
Waste Permits Division

Dear [Sir or Madam]:

We hereby establish our Irrevocable Standby Letter of Credit Number _____ in favor of the Department of Environmental Quality of the State of Louisiana at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of U.S. dollars $_____ upon presentation of:

1. a sight draft, bearing reference to the Letter of Credit Number _____ drawn by the Secretary or his or her designated representative, together with;

2. a statement signed by the Secretary or his or her designated representative, reading as follows:

"I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Louisiana Environmental Quality Act, R.S. 30:2001, et seq."

This Letter of Credit is effective as of _____, _____ , and shall expire on, _____, _____ [date at least one year later], but such expiration date will be automatically extended for a period of at least one year on the above expiration date [ ____, _____ ] and on each successive expiration date thereafter, unless, at least 120 days before the then current expiration date, we notify both you and [name of owner/operator] by certified mail that we have decided not to extend this Letter of Credit beyond the then current expiration date. In the event we give such notification, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both you and [name of owner/operator], as shown on the signed return receipts.

Whenever this Letter of Credit is drawn under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [name of owner/operator] in accordance with your instructions.

We certify that the wording of this Letter of Credit is identical to the wording specified in LAC 33:V.3719.D as such regulations were constituted on the date shown immediately below.

[Signature(s) and Titles of Official(s) of issuing institutions]
[DATE]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code"].

E. A certificate of insurance, as specified in LAC 33:V.3707.E or 3711.E or 4403.D or 4407.D, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATE OF INSURANCE FOR CLOSURE OR POST-CLOSURE CARE

Name and Address of Insurer
(herein called the "Insurer"): _____

Name and Address of Insured
(herein called the "Insured"): _____

Facilities Covered: [List for each facility: EPA Identification Number, name, address, and the amount of insurance for closure and/or the amount for post-closure care (these amounts for all facilities covered must total the face amount shown below).]

Face Amount: $ _____

Policy Number: _____

Effective Date: _____

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for [insert "closure" or "closure and post-closure care" or "post-closure care"] for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of LAC 33:V.3707.E, 3711.E, 4403.D, and 4407.D as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the administrative authority, the Insurer agrees to furnish to the administrative authority a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in LAC 33:V.3719.E as such regulations were constituted on the date shown immediately below and that Insurer is authorized to conduct insurance business in the State of Louisiana.

[Authorized signature for Insurer]
[Name of person signing][Title of person signing]
Signature of witness or notary: _____ [Date]

F. Closure Guarantee. A letter from the chief financial officer, as specified in LAC 33:V:3707.F.3 or 3711.F.3 or 4403.E.3 or 4407.E.3, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

LETTER FROM CHIEF FINANCIAL OFFICER

(Closure and/or Post-Closure Care)

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
Attention: Office of Environmental Services,
Waste Permits Division
Dear [Sir or Madam]:

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure and/or post-closure costs, as specified in LAC 33:V.Chapter 37 and 43.

[Fill out the following five paragraphs. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, address, and current closure and/or post-closure cost estimates. Identify each cost as to whether it is for closure or post-closure.]

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure costs is being demonstrated through the financial test specified in LAC 33:V.Chapters 37 and 43. The current closure and/or post-closure cost estimates covered by the test are shown for each facility:_____.

2. This firm guarantees, through the guarantee specified in LAC 33:V.Chapters 37 and 43, financial assurance for closure or post-closure costs at the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: _____. The firm identified above is [insert one or more: (1) the direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____ ]. [Attach a written description of the business relationship or a copy of the contract establishing each relationship to this letter.]

3. In states other than Louisiana, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in LAC 33:V.Chapters 37 and 43. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: _____.

4. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to the U.S. Environmental Protection Agency or to a state through the financial test or any other financial assurance mechanism specified in LAC 33:V.Chapters 37 and 43 or equivalent or substantially equivalent state mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator or guarantor of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR Part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the first criteria of LAC 33:V.3707.F.1 or 3711.F.1 or the first criteria of LAC 33:V.4403.E.1 or 4407.E.1 are used. Fill in Alternative II if the second criteria of LAC 33:V.3707.F.1 or 3711.F.1 or the second criteria of LAC 33:V.4403.E.1 or 4407.E.1 are used.]

ALTERNATIVE I

| | | |
|---|---|---|
| 1. | Sum of current closure and post-closure estimates [total of all cost estimates shown in the five paragraphs above]: | $ ____ |
| *2. | Total liabilities [if any portion of the closure or post-closure cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4]: | $ ____ |
| *3. | Tangible net worth: | $ ____ |
| *4. | Net worth: | $ ____ |
| *5. | Current assests: | $ ____ |
| *6. | Current Liabilities: | $ ____ |
| 7. | Net working capital [line 5 minus line 6]: | $ ____ |
| *8. | The sum of net income plus depreciation, depletion, and amortization: | $ ____ |
| *9. | Total assets in U.S. (required only if less than 90 percent of firm's assets are located in the U.S.): | $ ____ |

| | | YES | NO |
|---|---|---|---|
| 10. | Is line 3 at least $10 million? | ____ | ____ |
| 11. | Is line 3 at least six times line 1? | ____ | ____ |
| 12. | Is line 7 at least six times line 1? | ____ | ____ |
| *13. | Are at least 90 percent of firm's assets located in the U.S.? If not, complete line 14. | ____ | ____ |
| 14. | Is line 9 at least six times line 1? | ____ | ____ |
| 15. | Is line 2 divided by line 4 less than 2.0? | ____ | ____ |
| 16. | Is line 8 divided by line 2 greater than 0.1? | ____ | ____ |
| 17. | Is line 5 divided by line 6 greater than 1.5? | ____ | ____ |

ALTERNATIVE II

| | | |
|---|---|---|
| 1. | Sum of current closure and post-closure cost estimates [total of all cost estimates shown in the five paragraphs above]: | $ _____ |
| 2. | Current bond rating of most recent issuance of this firm and name of rating service: | _____ |
| 3. | Date of issuance of bond: | _____ |
| 4. | Date of maturity of bond: | _____ |
| *5. | Tangible net worth [if any portion of the closure and post-closure cost estimate is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line]: | $ ____ |
| *6. | Total assets in U.S. [required only if less than 90 percent of firm's assets are located in the U.S.]: | $ ____ |

| | | YES | NO |
|---|---|---|---|
| 7. | Is line 5 at least $10 million? | ____ | ____ |
| *8. | Is line 5 greater than six times line 1? | ____ | ____ |
| *9. | Are at least 90 percent of firm's assets located in the U.S.? If not, complete line 10. | ____ | ____ |
| 10. | Is line 6 at least six times line 1? | ____ | ____ |

I hereby certify that the wording of this letter is identical to the wording specified in LAC 33:V.3719.F as such regulations were constituted on the date shown immediately below.

[Signature]
[Name]
[Title]
[Date]

G. Liability Coverage Guarantee. A letter from the chief financial officer, as specified in LAC 33:V.3715.F or 4411, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

LETTER FROM CHIEF FINANCIAL OFFICER

(Liability Coverage)

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
Attention: Office of Environmental Services,
Waste Permits Division
Dear [Sir or Madam]:

I am the chief financial officer of [firm's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage [insert "and closure and/or post-closure care" if applicable] as specified in LAC 33:V.Chapter 37 or 43.

[Fill out the following paragraph regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "none" in the space indicated. For each facility, include its EPA Identification Number, name, and address.]

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in LAC 33:V.Chapter 37 or 43.

The firm identified above guarantees, through the guarantee specified in LAC 33:V.Chapter 37 or 43, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: _____. The firm identified above is [insert one or more: (1) the direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee_____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in

consideration of this guarantee _____ ]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

[If you are using the financial test to demonstrate coverage of both liability and closure and post-closure care, fill in the following five paragraphs regarding facilities and associated closure and post-closure cost estimates. If there are no facilities that belong in a particular paragraph, write "none" in the space indicated. For each facility, include its EPA Identification Number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.]

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or post-closure care or liability coverage is demonstrated through the financial test specified in LAC 33:V.Chapters 37 and 43. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: _____

2. The firm identified above guarantees, through the guarantee specified in LAC 33:V.Chapters 37 and 43, the closure and post-closure care or liability coverage of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: _____

3. In states other than Louisiana, this firm is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in LAC 33:V.Chapters 37 and 43. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: _____

4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to the U.S. Environmental Protection Agency or to a state through the financial test or any other financial assurance mechanism in LAC 33:V.Chapters 37 and 43 or equivalent or substantially equivalent state mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____

5. This firm is the owner or operator or guarantor of the following UIC facilities for which financial assurance for plugging and abandonment is required under the applicable regulations of the Louisiana Department of Natural Resources and is assured through a financial test. The current closure cost estimates as required by LDNR are shown for each facility: _____

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed year, ended [date].

[Fill in Part A if you are using the financial test to demonstrate coverage only for the liability requirements under LAC 33:V.Chapters 37 and 43.]

PART A. LIABILITY COVERAGE FOR SUDDEN AND NONSUDDEN OCCURRENCES

[Fill in Alternative I if the first criteria of LAC 33:V.3707.F.1 or 4411.F.1 are used. Fill in Alternative II if the second criteria of LAC 33:V.3707.F.1 or 4411.F.1 are used.]

ALTERNATIVE I

| | | |
|---|---|---|
| 1. | Amount of annual aggregate liability coverage to be demonstrated: | $ _____ |
| *2. | Current assets: | $ _____ |
| *3. | Current liabilities: | $ _____ |
| *4. | Net working capital (line 2 minus line 3): | $ _____ |
| *5. | Tangible net worth: | $ _____ |
| *6. | Total assets in the U.S. (required only if less than 90 percent of firm's assets are located in the U.S.): | $ ____ |

| | | YES | NO |
|---|---|---|---|
| 7. | Is line 5 at least $10 million? | ____ | ____ |
| *8. | Is line 4 at least six times line 1? | ____ | ____ |
| 9. | Is line 5 at least six times line 1? | ____ | ____ |
| 10. | Are at least 90 percent of assets located in the U.S.? If not, complete line 11. | ____ | ____ |
| 11. | Is line 6 at least six times line 1? | ____ | ____ |

ALTERNATIVE II

| | | |
|---|---|---|
| 1. | Amount of annual aggregate liability coverage to be demonstrated: | $ _____ |
| 2. | Current bond rating of most recent issuance and name of rating service: | _____ |
| 3. | Date of issuance of bond: | _____ |
| 4. | Date of maturity of bond: | _____ |
| *5. | Tangible net worth: | $ _____ |
| *6. | Total assets in U.S. [required only if less than 90 percent of firm's assets are located in the U.S.]: | $ _____ |

| | | YES | NO |
|---|---|---|---|
| 7. | Is line 5 at least $10 million? | ____ | ____ |
| *8. | Is line 5 at least six times line 1? | ____ | ____ |
| 9. | Are at least 90 percent of firm's assets located in the U.S.? If not, complete line 10. | ____ | ____ |
| 10. | Is line 6 at least six times line 1? | ____ | ____ |

[Fill in Part B if you are using the financial test to demonstrate assurance of both liability coverage and closure or post-closure care.]

PART B. CLOSURE OR POST-CLOSURE CARE AND LIABILITY COVERAGE

[Fill in Alternative I if the first criteria of LAC 33:V.3707.F.1, 3711.F.1, and 3715.F.1, or if the first criteria of LAC 33:V.4403.E.1 or 4407.E.1 and 4411.F.1, are used. Fill in Alternative II if the second criteria of LAC 33:V.3707.F.1, 3711.F.1, and 3715.F.1, or if the second criteria of LAC 33:V.4403.E.1 or 4407.E.1 and 4411.F.1, are used.]

ALTERNATIVE I

| | | |
|---|---|---|
| 1. | Sum of current closure and post-closure cost estimates (total of all cost estimates listed above): | $ _____ |
| 2. | Amount of annual aggregate liability coverage to be demonstrated: | $ _____ |
| 3. | Sum of lines 1 and 2: | $ _____ |
| *4. | Total liabilities (if any portion of your closure or post-closure cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6): | $ _____ |
| *5. | Tangible net worth: | $ _____ |
| *6. | Net worth: | $ _____ |
| *7. | Current assets: | $ _____ |
| *8. | Current liabilities: | $ _____ |
| 9. | Net working capital (line 7 minus line 8): | $ _____ |
| *10. | The sum of net income plus depreciation, depletion, and amortization: | $ _____ |
| *11. | Total assets in the U.S. (required only if less than 90 percent of firm's assets are located in the U.S.): | |

| | | YES | NO |
|---|---|---|---|
| 12. | Is line 5 at least $10 million? | ____ | ____ |
| 13. | Is line 5 at least six times line 3? | ____ | ____ |
| 14. | Is line 9 at least six times line 3? | ____ | ____ |

| | | | |
|---|---|---|---|
| *15. | Are at least 90 percent of assets located in the U.S.? If not, complete line 16. | ____ | ____ |
| 16. | Is line 11 at least six times line 3? | ____ | ____ |
| 17. | Is line 4 divided by line 6 less than 2.0? | ____ | ____ |
| 18. | Is line 10 divided by line 4 greater than 0.1? | ____ | ____ |
| 19. | Is line 7 divided by line 8 greater than 1.5? | ____ | ____ |

ALTERNATIVE II

| | | |
|---|---|---|
| 1. | Sum of current closure and post-closure cost estimates (total of all cost estimates listed above): | $ _____ |
| 2. | Amount of annual aggregate liability coverage to be demonstrated: | $ _____ |
| 3. | Sum of lines 1 and 2: | $ _____ |
| 4. | Current bond rating of most recent issuance and name of rating service: | _____ |
| *5. | Date of issuance of bond: | _____ |
| *6. | Date of maturity of bond: | _____ |
| *7. | Tangible net worth (if any portion of the closure or post-closure cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line): | $ _____ |
| *8. | Total assets in the U.S. (required only if less than 90 percent of assets are located in the U.S.): | $ _____ |

| | | YES | NO |
|---|---|---|---|
| 9. | Is line 7 at least $10 million? | ____ | ____ |
| *10. | Is line 7 at least six times line 3? | ____ | ____ |
| 11. | Are at least 90 percent of assets located in the U.S.? If not, complete line 12. | ____ | ____ |
| 12. | Is line 8 at least six times line 3? | ____ | ____ |

I hereby certify that the wording of this letter is identical to the wording specified in LAC 33:V.3719.G as such regulations were constituted on the date shown immediately below.

[Signature]
[Name]
[Title]
[Date]

## H. Corporate Guarantees

1. A corporate guarantee, as specified in LAC 33:V.3707.F or 3711.F or 4403.E or 4407.E must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the bracket deleted.

CORPORATE GUARANTEE FOR CLOSURE OR POST-CLOSURE CARE

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the State of [insert name of State], herein referred to as guarantor, to the Louisiana Department of Environmental Quality, obligee, on behalf of [owner or operator] of [business address], which is [one of the following: "our subsidiary"; "a subsidiary of (name and address of common parent corporation), of which guarantor is a subsidiary"; or "an entity with which guarantor has a *substantial business relationship*, as defined in LAC 33:V.3703.A.8 or 4399"].

Recitals:

a. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in LAC 33:V.3707.F, 3711.F, 4403.E, and 4407.E.

b. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.]

c. *Closure plans* and *post-closure plans* as used below refer to the plans maintained as required by LAC 33:V.Chapters 35 and 43 for the closure and post-closure care of facilities as identified above.

d. For value received from [owner or operator], guarantor guarantees to the Louisiana Department of Environmental Quality that in the event that [owner or operator] fails to perform [insert "closure," "post-closure care," or "closure and post-closure care"] of the above facility(ies) in accordance with the closure or post-closure plans and other permit or interim status requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in LAC 33:V.Chapter 37 or 43, as applicable, in the name of [owner or operator] in the amount of the current closure or post-closure cost estimates as specified in LAC 33:V.Chapter 37 or 43.

e. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the administrative authority and to [owner or operator] that he intends to provide alternative financial assurance as specified in LAC 33:V.Chapter 37 or 43, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

f. The guarantor agrees to notify the administrative authority by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

g. Guarantor agrees that within 30 days after being notified by the administrative authority of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of closure or post-closure care, he shall establish alternate financial assurance as specified in LAC 33:V.Chapter 37 or 43, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.

h. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure or post-closure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure or post-closure, or any other modification or alteration of an obligation of the owner or operator pursuant to LAC 33:V.Chapter 37 or 43.

i. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial assurance requirements of LAC 33:V.Chapter 37 or 43 for the above-listed facilities, except as provided in this Paragraph of this agreement. [Insert the following language if the guarantor is a direct or higher-tier corporate parent, or a firm whose parent corporation is also the parent corporation of the owner or operator]: Guarantor may cancel this guarantee by sending notice by certified mail to the administrative authority and to [owner or operator], provided that this guarantee may not be canceled unless and until [the owner or operator] obtains, and the administrative authority approve(s), alternate closure and/or post-closure care coverage complying with LAC 33:V.3707, 3711, 4403, and 4407.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator]:

> Guarantor may cancel this guarantee 120 days following the receipt of notification, through certified mail, by the administrative authority, and by the owner or operator.

j. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in LAC 33:V.Chapter 37 or 43, as applicable, and obtain written approval of such assurance from the administrative authority within 90 days after a notice of cancellation by the guarantor is received by the administrative authority from guarantor, guarantor shall provide such alternative financial assurance in the name of [owner or operator].

k. Guarantor expressly waives notice of acceptance of this guarantee by the administrative authority or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of

the closure and/or post-closure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in LAC 33:V.3719.H.1 as such regulations were constituted on the date first above written.

Effective dates: _____
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]

Thus sworn and signed before me on this the ___ day of _____, 20____.

_____
Notary Public

2. A guarantee, as specified in LAC 33:V.3715.G or 4411.G, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

GUARANTEE FOR LIABILITY COVERAGE

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the State of ___" and insert name of state; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the state of the principal place of business], herein referred to as guarantor. This guarantee is made on behalf of [owner or operator] of [business address], which is [one of the following: "our subsidiary"; "a subsidiary of (name and address of common parent corporation), of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in LAC 33:V.3703 or 4399"], to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or non-sudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals:

a. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in LAC 33:V.3715.G and 4411.G.

b. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA identification number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each state and in Louisiana.] This corporate guarantee satisfies RCRA third-party liability requirements for [insert "sudden" or "non-sudden" or "both sudden and non-sudden"] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

c. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage identified above.

d. Exclusions. This guarantee does not apply to:

i. Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.

ii. Any obligation of the owner or operator under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

iii. Bodily injury to:

(a). an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or

(b). the spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of, employment by [insert owner or operator]. This exclusion applies:

(i). whether [insert owner or operator] may be liable as an employer or in any other capacity; and

(ii). to any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in Subclauses (a) and (b).

iv. Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

v. Property damage to:

(a). any property owned, rented, or occupied by [insert owner or operator];

(b). premises that are sold, given away, or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;

(c). property loaned to [insert owner or operator];

(d). personal property in the care, custody, or control of [insert owner or operator];

(e). that particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.

e. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the administrative authority and to [owner or operator] that he intends to provide alternate liability coverage as specified in LAC 33:V.3715 and 4411, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

f. The guarantor agrees to notify the administrative authority by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

g. Guarantor agrees that within 30 days after being notified by the administrative authority of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor, he shall establish alternate liability coverage as specified in LAC 33:V.3715 or 4411 in the name of [owner or operator], unless [owner or operator] has done so.

h. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by LAC:33:V.3715 and 4411, provided that such modification shall become effective only if the administrative authority does not disapprove the modification within 30 days of receipt of notification of the modification.

i. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of LAC 33:V.3715 and 4411 for the above-listed facility(ies), except as provided in Subparagraph j of this agreement.

j. [Insert the following language if the guarantor is a direct or higher-tier corporate parent, or a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the administrative authority and to [owner or operator], provided that this guarantee may not be terminated unless and until the [owner or operator] obtains, and the administrative authority approves, alternate liability coverage complying with LAC 33:V.3715 and/or 4411.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator]:

Guarantor may terminate this guarantee 120 days following receipt of notification, through certified mail, by the administrative authority and by [the owner or operator].

k. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

l. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

m. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents.

i. Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert Principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or non-sudden] accidental occurrence arising from operating [Principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signatures]
Principal
[Notary] [Date]
[Signatures]
Claimant(s)
[Notary] [Date]

ii. A valid final court order establishing a judgement against the Principal for bodily injury or property damage caused by sudden or non-sudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

n. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee will be considered [insert "primary" or "excess"] coverage.

I hereby certify that the wording of this guarantee is identical to the wording specified in LAC 33:V.3719.H.2 as such regulations were constituted on the date shown immediately below.

[Name of guarantor]
[Authorized signature of guarantor]
[Name of person signing]
[Title of person signing]
[Signature of witness or notary]

I. Liability Endorsement

1. A hazardous waste facility liability endorsement as required in LAC 33:V.3715 or 4411 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

a. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under LAC 33:V.3715.F or 4411. The coverage applies to [EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences," "non-sudden accidental occurrences," or "sudden and non-sudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for non-sudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs.

b. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with Clauses i through v of this Subparagraph are hereby amended to conform with Clauses i-v.

i. Bankruptcy or insolvency of the Insured shall not relieve the insurer of its obligations under the policy to which this endorsement is attached.

ii. The insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the Insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in LAC 33:V.3715.F or 4411.

iii. Whenever requested by the administrative authority, the Insurer agrees to furnish to the administrative authority a signed duplicate original of the policy and all endorsements.

iv. Cancellation of this endorsement, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the administrative authority.

v. Any other termination of this endorsement will be effective only upon written notice and only after the expiration of 30 days after a copy of such written notice is received by the administrative authority.

2. Attached to and forming part of policy Number _____ issued by [name of Insurer], herein called the Insurer, of [address of Insurer] to [name of Insured] of [address] this _____ day of _____, 20___.

3. I hereby certify that the wording of this endorsement is identical to the wording specified in LAC 33:V.3719.I as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states, and is authorized to conduct business in the State of Louisiana.

[Signature of Authorized Representative of Insurer]
[Type name]
[Title], Authorized Representative of [Name of Insurer]]
[Address of Representative]

J. Certificate of Liability Insurance. A certificate of liability insurance as required in LAC 33:V.3715 or 4411 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. [Name of Insurer], (the "Insurer") of [address of Insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the "insured"), of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under LAC 33:V.3715 or 4411. The coverage applies at [list EPA identification number, name, and address for each facility] for [insert "sudden accidental occurrences," "non-sudden accidental occurrences," or "sudden and non-sudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for non-sudden accidental occurrences, and which are insured for both]. The

limits of liability are [insert the dollar amount of "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number _____, issued on [date]. The effective date of said policy is [date].

2. The insurer further certifies the following with respect to the insurance described in Paragraph 1.

a. Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligation under the policy.

b. The insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in LAC 33:V.3715.F or 4411.

c. Whenever requested by the administrative authority, the insurer agrees to furnish to the administrative authority a signed duplicate original of the policy and all endorsements.

d. Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the administrative authority.

e. Any other termination of the insurance will be effective only upon written notice and only after the expiration of 30 days after a copy of such written notice is received by the administrative authority.

I hereby certify that the wording of this instrument is identical to the wording specified in LAC 33:V.3719.J as such regulation was constituted on the date this certificate was issued, as indicated below, and that the insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess of surplus lines insurer, in one or more states, and is authorized to conduct insurance business in the state of Louisiana.

[Signature of authorized representative of Insurer]
[Type name]
[Title], Authorized Representative of [Name of Insurer]
[Address of Representative]
DATE OF ISSUANCE: _____.

K. Letter of Credit. A letter of credit, as specified in LAC 33:V.3715 or 4411, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

IRREVOCABLE STANDBY LETTER OF CREDIT

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
Attention: Office of Environmental Services,
Waste Permits Division
Dear [Sir or Madam]:

We hereby establish our Irrevocable Standby Letter of Credit Number _____ in the favor of ["any and all third-party liability claimants" or insert name of trustee of the standby trust fund], at the request and for the account of [owner or operator's name and address] for third-party liability awards or settlements up to [in words] U.S. dollars $_____ per occurrence and the annual aggregate amount of [in words] U.S. dollars, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] U.S. dollars $_____ per occurrence, and the annual aggregate amount of [in words] U.S. dollars $_____ for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this Letter of Credit Number_____, and [insert the following language if the letter of credit is being used without a standby trust fund:]

1. A signed certificate reading as follows:

CERTIFICATE OF VALID CLAIM

The undersigned, as parties [insert principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or non-sudden] accidental occurrence arising from operations of [principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $_____. We hereby certify that the claim does not apply to any of the following.

a. Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

b. Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

c. Bodily injury to:

i. an employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

ii. the spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal]. This exclusion applies:

(a). whether [insert principal] may be liable as an employer or in any other capacity; and

(b). to any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in Clause K.1.c.i or ii of this Section.

d. Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

e. Property damage to:

i. any property owned, rented, or occupied by [insert principal];

ii. premises that are sold, given away, or abandoned by [insert principal] if the property damage arises out of any part of those premises;

iii. property loaned to [insert principal];

iv. personal property in the care, custody, or control of [insert principal];

v. that particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures]
Grantor
[Signatures]
Claimant(s)

2. Or, as an alternative to the Certificate of Valid Claim, a valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

This Letter of Credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify you, the administrative authority, and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this Letter of Credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

[Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another

mechanism for liability coverage, this letter of credit shall be considered [insert "primary" or "excess" coverage]."

We certify that the wording of this letter of credit is identical to the wording specified in LAC 33:V.3719.K as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution [Date]]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits published and copyrighted by the International Chamber of Commerce" or "the Uniform Commercial Code"].

L. Surety Bond. A surety bond, as specified in LAC 33:V.3715 or 4411, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

PAYMENT BOND

Surety Bond Number [insert number]

Parties [insert name and address of owner or operator], Principal, incorporated in [insert state of incorporation] of [insert city and state of principal place of business], and [insert name and address of Surety Company(ies)], surety company(ies), of [insert surety(ies) place of business].

EPA identification number, name, and address for each facility guaranteed by this bond:

| | Sudden Accidental Occurrences | Non-Sudden Accidental Occurrences |
|---|---|---|
| Penal Sum per Occurrence | [insert amount] | [insert amount] |
| Annual Aggregate | [insert amount] | [insert amount] |

Purpose: This is an agreement between the surety(ies) and the Principal under which the Surety(ies), its (their) successors and assignees, agree to be responsible for the payment of claims against the principal for bodily injury and/or property damage to third parties caused by ["sudden" and/or "non-sudden"] accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein, subject to the governing provisions and the following conditions.

1. Governing Provisions

a. Section 3004 of the Resource Conservation and Recovery Act of 1976, as amended.

b. Rules and regulations of the U.S. Environmental Protection Agency (EPA), particularly 40 CFR 264.147 or 265.147 (if applicable).

c. Rules and regulations of the Louisiana Department of Environmental Quality, particularly LAC 33:V.3715 and 4411, as applicable.

2. Conditions

a. The Principal is subject to the applicable governing provisions that require the Principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by ["sudden" and/or "non-sudden"] accidental occurrences arising from operations of the facility or group of facilities. Such obligation does not apply to any of the following:

i. Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

ii. Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or similar law.

iii. Bodily injury to:

(a). an employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(b). the spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal]. This exclusion applies:

(i). whether [insert principal] may be liable as an employer or in any other capacity; and

(ii). to any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in Subclauses (a) and (b) above.

iv. Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

v. Property damage to:

(a). any property owned, rented, or occupied by [insert principal];

(b). premises that are sold, given away, or abandoned by [insert Principal] if the property damage arises out of any part of those premises;

(c). property loaned to [insert Principal];

(d). personal property in the care, custody, or control of [insert Principal];

(e). that particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

b. This bond assures that the Principal will satisfy valid third-party liability claims, as described in Condition a.

c. If the Principal fails to satisfy a valid third-party liability claim, as described above, the Surety(ies) become(s) liable on this bond obligation.

d. The Surety(ies) shall satisfy a third-party liability claim only upon the receipt of one of the following documents.

i. Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert name of Principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or non-sudden] accidental occurrence arising from operating [Principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signature]
Principal
[Notary] [Date]
[Signature(s)]
Claimant(s)
[Notary] [Date]

ii. A valid final court order establishing a judgement against the Principal for bodily injury or property damage caused by sudden or non-sudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

e. In the event of combination of this bond with another mechanism for liability coverage, this bond will be considered [insert "primary" or "excess"] coverage.

f. The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the Surety(ies) furnish(es) notice to the administrative authority forthwith of all claims filed and payments made by the Surety(ies) under this bond.

g. The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and the administrative authority, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal and the administrative authority, as evidenced by the return receipt.

h. The Principal may terminate this bond by sending written notice to the Surety(ies) and to the administrative authority.

i. The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

j. This bond is effective from [insert date] (12:01 a.m., standard time, at the address of the Principal as stated herein) and shall continue in force until terminated as described above.

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in LAC 33:V.3719, as such regulations were constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate Seal]

CORPORATE SURETY[IES]

[Name and address]
State of incorporation:
Liability Limit: $
[Signature(s)]
[Name(s) and title(s)]
[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: $

## M. Trust Agreement

1. A trust agreement, as specified in LAC 33:V.3715 and 4411, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT

Trust Agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator] a [name of state] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert, "incorporated in the state of _____ " or "a national bank"], the "Trustee."

WHEREAS, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

WHEREAS, the Grantor has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee.

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

a. The term *Grantor* means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

b. The term *Trustee* means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities

This agreement pertains to the facilities identified on attached Schedule A [on Schedule A, for each facility list the EPA Identification Number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. Establishment of Fund

The Grantor and the Trustee hereby establish a trust fund, hereinafter the "Fund," for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ [up to $5 million] per occurrence and _____ [up to $10 million] annual aggregate for sudden accidental occurrences, exclusive of legal defense costs and _____ [up to $3 million] per occurrence and _____ [up to $6 million] annual aggregate for nonsudden occurrences exclusive of legal defense costs, except that the Fund is not established for the benefit of third parties for the following:

a. Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

b. Any obligation of [insert Grantor] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

c. Bodily injury to:

i. an employee of [insert Grantor] arising from, and in the course of, employment by [insert Grantor]; or

ii. the spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor]. This exclusion applies:

(a). whether [insert Grantor] may be liable as an employer or in any other capacity; and

(b). to any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in Clauses i and ii above.

d. Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

e. Property damage to:

i. any property owned, rented, or occupied by [insert Grantor];

ii. premises that are sold, given away, or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;

iii. property loaned to [insert Grantor];

iv. personal property in the care, custody, or control of [insert Grantor];

v. that particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered [insert "primary" or "excess"] coverage.

The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such

property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by EPA.

Section 4. Payment for Bodily Injury or Property Damage

The Trustee shall satisfy a third-party liability claim by making payments from the Fund only upon receipt of one of the following documents.

a. Certification from the Grantor and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert Grantor] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or non-sudden] accidental occurrence arising from operating [Grantor's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signatures]
Grantor
[Signatures]
Claimant(s)

b. A valid final court order establishing a judgement against the Grantor for bodily injury or property damage caused by sudden or non-sudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

a. securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held unless they are securities or other obligations of the federal or a state government;

b. the Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

c. the Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

a. to transfer from time to time any or all of the assets of the Fund to any common commingled or collective trust fund created by the Trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

b. to purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the trustee is expressly authorized and empowered:

a. to sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

b. to make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

c. to register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

d. to deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government;

e. to compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the fund.

Section 10. Annual Valuations

The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the administrative authority a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the administrative authority shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the administrative authority, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the administrative authority to the Trustee shall be in writing, signed by the administrative authority, or his or her designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the grantor or the administrative authority hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the administrative authority, except as provided for herein.

Section 15. Notice of Nonpayment

If a payment for bodily injury or property damage is made under Section 4 of this trust, the Trustee shall notify the Grantor of such payment and the amount(s) thereof within five working days. The Grantor shall, on or before the anniversary date of the establishment of the Fund following such notice, either make payments to the Trustee in amounts sufficient to cause the trust to return to its value immediately prior to the payment of claims under Section 4, or shall provide written proof to the Trustee that other financial assurance for liability coverage has been obtained equaling the amount necessary to return the trust to its value prior to the payment of claims. If the Grantor does not either make payments to the Trustee or provide the Trustee with such proof, the Trustee shall within 10 working days after the anniversary date of the establishment of the Fund provide a written notice of nonpayment to the administrative authority.

Section 16. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the administrative authority, or by the Trustee and the administrative authority if the Grantor ceases to exist.

Section 17. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the administrative authority, or by the Trustee and the administrative authority, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

The administrative authority will agree to termination of the Trust when the owner or operator substitutes alternate financial assurance as specified in LAC 33:V.Chapter 37 or 44.

Section 18. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the administrative authority issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the State of Louisiana.

Section 20. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in LAC 33:V.3719 as such regulations were constituted on the date first above written.

[Signature of Grantor]
[Title]
Attest:

[Title]
[Seal]

[Signature of Trustee]
Attest:

[Title]
[Seal]

2. The following is an example of the certification of acknowledgement which must accompany the trust agreement for a trust fund as specified in LAC 33:V.3715 or 4411.

State of Louisiana
Parish of

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

Witness:
_____

THUS DONE AND SIGNED before me this _____ day of _____ in _____.

_____
NOTARY PUBLIC

N. Standby Trust Agreement

1. A standby trust agreement, as specified in LAC 33:V.3715.H. or 4411.H, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

STANDBY TRUST AGREEMENT

Trust Agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator] a [name of a State] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert, "incorporated in the State of _____" or "a national bank"], the "Trustee."

WHEREAS, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or non-sudden accidental occurrences arising from operations of the facility or group of facilities.

WHEREAS, the Grantor has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assume all or part of such financial responsibility for the facilities identified herein.

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the trustee is willing to act as trustee.

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

a. The term *Grantor* means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

b. The term *Trustee* means the trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities

This agreement pertains to the facilities identified on attached Schedule A [on Schedule A, for each facility list the EPA identification number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. Establishment of Fund

The Grantor and the Trustee hereby establish a standby trust fund, hereafter the "Fund," for the benefit of any and all third parties injured or damaged by [sudden and/or non-sudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____[up to $1 million] per occurrence and _____[up to $2 million] annual aggregate for sudden accidental occurrences, and _____[up to $3 million] per occurrence and _____[up to $6 million] annual aggregate for non-sudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

a. Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

b. Any obligation of [insert Grantor] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

c. Bodily injury to:

i. an employee of [insert Grantor] arising from, and in the course of, employment by [insert Grantor]; or

ii. the spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor]. This exclusion applies:

(a). whether [insert Grantor] may be liable as an employer or in any other capacity, and

(b). to any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in Clauses i and ii above.

d. Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

e. Property damage to:

i. any property owned, rented, or occupied by [insert Grantor];

ii. premises that are sold, given away, or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;

iii. property loaned by [insert Grantor];

iv. personal property in the care, custody, or control of [insert Grantor];

v. that particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered [insert "primary" or "excess"] coverage.

The Fund is established initially as consisting of the proceeds of the letter of credit deposited into the Fund. Such proceeds and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by EPA.

Section 4. Payment for Bodily Injury or Property Damage

The Trustee shall satisfy a third-party liability claim by drawing on the letter of credit described in Schedule B and by making payments from the Fund only upon receipt of one of the following documents:

a. Certification from the Grantor and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert Grantor] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or non-sudden] accidental occurrence arising from operating [Grantor's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[_____].

[Signatures]
Grantor
[Signatures]
Claimant(s)

b. A valid final court order establishing a judgement against the Grantor for bodily injury or property damage caused by sudden or non-sudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of the proceeds from the letter of credit drawn upon by the Trustee in accordance with the requirements of LAC 33:V.3719.K and Section 4 of this Agreement.

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

a. securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

b. the Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or a state government; and

c. the Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

a. to transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

b. to purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, and Trustee is expressly authorized and empowered:

a. to sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency or any such sale or other disposition;

b. to make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

c. to register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited herein by another person, or to deposit or arrange for the deposit of any securities issued by the United States government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

d. to deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government;

e. to compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements to the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the administrative authority, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee

All orders, requests, certifications of valid claims, and instructions to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the administrative authority hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the administrative authority, except as provided for herein.

Section 14. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the administrative authority if the grantor ceases to exist.

Section 15. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the administrative authority, or by the Trustee and the administrative authority, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be paid to the grantor.

The administrative authority will agree to termination of the Trust when the owner or operator substitutes alternative financial assurances as specified in LAC 33:V.Chapter 37 or 44.

Section 16. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor and the administrative authority issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the State of Louisiana.

Section 18. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation of the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in LAC 33:V.3719.N as such regulations were constituted on the date first above written.

[Signature of Grantor]
[Title]

Attest:

[Title]
[Seal]

[Signature of Trustee]

Attest:

[Title]
[Seal]

2. The following is an example of the certification of acknowledgement which must accompany the trust agreement for a standby trust fund as specified in LAC 33:V.3715.H or 4411.H.

State of Louisiana
Parish of

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

Witness:

_____

_____

_____

THUS DONE AND SIGNED before me this _____ day of _____, _____, in _____.

_____
NOTARY PUBLIC

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 11:686 (July 1985), LR 13:433 (August 1987), LR 13:651 (November 1987), LR 16:47 (January 1990), LR 18:723 (July 1992), LR 21:266 (March 1995), LR 22:835 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1514 (November 1997), repromulgated LR 23:1684 (December 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2493 (November 2000), amended by the Office of Environmental Assessment, LR 30:2023 (September 2004), LR 31:1573 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2472 (October 2005), LR 33:1626 (August 2007), LR 33:2123 (October 2007), LR 34:631 (April 2008).

# Chapter 38. Universal Wastes

## Subchapter A. General

### §3801. Scope and Applicability

A. This Chapter establishes requirements for managing batteries as described in LAC 33:V.3803, pesticides as described in LAC 33:V.3805, mercury-containing equipment as described in LAC 33:V.3807, lamps as described in LAC 33:V.3809, electronics as described in LAC 33:V.3810, and antifreeze as described in LAC 33:V.3811. This Chapter provides an alternative set of management standards in lieu of regulations under LAC 33:V.Subpart 1.

B. Persons managing household wastes that are exempt under LAC 33:V.105.D.2.a and are also of the same type as the *universal wastes* as defined in this Chapter may, at their option, manage these wastes under the requirements of this Chapter.

C. Conditionally exempt small quantity generator wastes that are regulated under LAC 33:V.108 and are also of the same type as the universal wastes defined in LAC 33:V.3813 may, at the generator's option, manage these wastes under the requirements of this Chapter.

D. Persons who commingle the wastes described in Subsections B and C of this Section, together with universal waste regulated under this Chapter, must manage the commingled waste under the requirements of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:568 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1108 (June 1998), LR 24:1496 (August 1998), LR 24:1759 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:712 (May 2001), repromulgated LR 27:1518 (September 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3117 (December 2005).

### §3803. Applicability—Batteries

A. Batteries Covered under This Chapter

1. The requirements of this Chapter apply to persons managing batteries, as described in LAC 33:V.3813, except those listed in Subsection B of this Section.

2. Spent lead-acid batteries which are not managed under LAC 33:V.Chapter 41 are subject to management under this Chapter.

B. Batteries Not Covered under This Chapter. The requirements of this Chapter do not apply to persons managing the following batteries:

1. spent lead-acid batteries that are managed under LAC 33:V.Chapter 41;

2. batteries, as described in LAC 33:V.3813, that are not yet wastes under LAC 33:V.4901, including those that do

not meet the criteria for waste generation in Subsection C of this Section; and

3. batteries, as described in this Chapter, that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in LAC 33:V.4903.

C. Generation of Waste Batteries

1. A used battery becomes a waste on the date it is discarded (e.g., when sent for reclamation).

2. An unused battery becomes a waste on the date the handler decides to discard it.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:568 (May 1997).

## §3805. Applicability—Pesticides

A. Pesticides Covered under This Chapter. The requirements of this Section apply to persons managing pesticides, as described in LAC 33:V.3813, meeting the following conditions, except those listed in Subsection B of this Section:

1. recalled pesticides that are:

a. stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under FIFRA Section 19(b), including, but not limited to those owned by the registrant responsible for conducting the recall; or

b. stocks of a suspended or canceled pesticide, or a pesticide that is not in compliance with FIFRA, that are part of a voluntary recall by the registrant;

2. stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

B. Pesticides Not Covered under This Chapter. The requirements of this Chapter do not apply to persons managing the following pesticides:

1. recalled pesticides described in Paragraph A.1 of this Section, and unused pesticide products described in Paragraph A.2 of this Section, that are managed by farmers in compliance with LAC 33:V.1101.D (LAC 33:V.1101.D addresses pesticides disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label, providing the container is triple rinsed in accordance with the definition of *empty container* under LAC 33:V.109);

2. pesticides not meeting the conditions set forth in Subsection A of this Section. These pesticides must be managed in compliance with the hazardous waste regulations in LAC 33:V.Subpart 1;

3. pesticides that are not wastes under Subsection C of this Section, including those that do not meet the criteria for waste generation in Subsection C of this Section or those that are not wastes as described in Subsection D of this Section; and

4. pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in LAC 33:V.4901 or if it exhibits one or more of the characteristics identified in LAC 33:V.4903.

C. When a Pesticide Becomes a Waste

1. A recalled pesticide described in Subsection A of this Section becomes a waste on the first date on which both of the following conditions apply:

a. the generator of the recalled pesticide agrees to participate in the recall; and

b. the person conducting the recall decides to discard (i.e., burn the pesticide for energy recovery).

2. An unused pesticide product described in Paragraph A.2 of this Section becomes a waste on the date the generator decides to discard it.

D. Pesticides That Are Not Wastes. The following pesticides are not wastes:

1. recalled pesticides described in Paragraph A.1 of this Section, provided that the person conducting the recall:

a. has not made a decision to discard (i.e., burn for energy recovery) the pesticide. Until such a decision is made, the pesticide does not meet the definition of *solid waste* under LAC 33:V.109; thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including this Chapter. This pesticide remains subject to the requirements of FIFRA; or

b. has made a decision to use a management option that, under LAC 33:V.109, does not cause the pesticide to be a solid waste (i.e., the selected option is use (other than use constituting disposal) or reuse (other than burning for energy recovery), or reclamation). Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to the hazardous waste requirements including this Chapter. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of FIFRA;

2. unused pesticide products described in Paragraph A.2 of this Section, if the generator of the unused pesticide product has not decided to discard (i.e., burn for energy recovery) them. These pesticides remain subject to the requirements of FIFRA.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:569 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1108 (June 1998).

## §3807. Applicability—Mercury-Containing Equipment

A. Mercury-Containing Equipment Covered under This Chapter. The requirements of this Chapter apply to persons managing mercury-containing equipment, as described in

LAC 33:V.3813, except those listed in Subsection B of this Section.

B. Mercury-Containing Equipment Not Covered under This Chapter. The requirements of this Chapter do not apply to persons managing the following mercury-containing equipment:

1. mercury-containing equipment that is not yet waste under LAC 33:V.Chapter 49 (Subsection C of this Section describes when mercury-containing equipment becomes waste.);

2. mercury-containing equipment that is not hazardous waste. Mercury-containing equipment is a hazardous waste if it exhibits one or more of the characteristics identified in LAC 33:V.4903; and

3. equipment and devices from which the mercury-containing components have been removed.

C. Generation of Waste Mercury-Containing Equipment

1. Used mercury-containing equipment becomes waste on the date it is discarded (i.e., sent for reclamation).

2. Unused mercury-containing equipment becomes waste on the date the handler decides to discard it.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:569 (May 1997), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3117 (December 2005), LR 34:1017 (June 2008).

## §3809. Applicability—Lamps

A. Lamps Covered under This Chapter. The requirements for this Chapter apply to persons managing lamps as described in LAC 33:V.3813, except those listed in Subsection B of this Section.

B. Lamps Not Covered under This Chapter. The requirements of this Chapter do not apply to persons managing the following lamps:

1. lamps that are not yet wastes under LAC 33:V.4901 as provided in Subsection C of this Section; and

2. lamps that are not hazardous waste. A lamp is a hazardous waste if it exhibits one or more of the characteristics identified in LAC 33:V.4903.

C. Generation of Waste Lamps

1. A used lamp becomes a waste on the date it is discarded.

2. An unused lamp becomes a waste on the date the handler decides to discard it.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1760 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:302 (March 2001).

## §3810. Applicability—Electronics

A. Electronics Covered under This Chapter. The requirements of this Chapter apply to persons managing electronics as described in LAC 33:V.3813, except material listed in Subsection B of this Section. Discarded electronics not managed under LAC 33:V.Chapter 41 are subject to management under this Chapter.

B. Electronics Not Covered under This Chapter. The requirements of this Chapter do not apply to persons managing the following categories of electronics:

1. discarded electronics that are managed under LAC 33:V.Chapter 41;

2. electronics, as described in LAC 33:V.3813, that are not yet wastes under LAC 33:V.4901, including those that do not meet the criteria for waste generation in Subsection C of this Section; and

3. electronics, as described in this Chapter, that are not hazardous waste. Electronics are hazardous waste if they exhibit one or more of the characteristics identified in LAC 33:V.4903.

C. Generation of Waste Electronics

1. An electronic device becomes a waste on the date it is discarded (e.g., when sent for reclamation).

2. An unused electronic device becomes a waste on the date the handler decides to discard it.

3. An electronic device is a universal waste if destined for recycling or dismantling.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 31:3117 (December 2005).

## §3811. Applicability—Antifreeze

A. Antifreeze Covered under This Chapter. The requirements for this Chapter apply to persons managing antifreeze as described in LAC 33:V.3813, except those listed in Subsection B of this Section.

B. Antifreeze Not Covered under This Chapter. The requirements of this Chapter do not apply to persons managing the following antifreeze:

1. antifreeze, as described in LAC 33:V.3813, that is not yet a waste under LAC 33:V.4901, including those that do not meet the criteria for waste generation in Subsection C of this Section; and

2. antifreeze, as described in this Chapter, that is not yet a hazardous waste. Antifreeze is a hazardous waste if it exhibits one or more of the characteristics identified in LAC 33:V.4903.

C. Generation of Waste Antifreeze

1. Used or unused antifreeze becomes a waste on the date it is discarded (e.g., when sent for reclamation).

2. Waste antifreeze is a hazardous waste if it exhibits one or more of the characteristics identified in LAC 33:V.4903.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1760 (September 1998).

## §3813. Definitions

*Ampule*—an airtight vial made of glass, plastic, metal, or any combination of these materials.

*Antifreeze*—an ethylene glycol based mixture that lowers the freezing point of water and is used as an engine coolant.

*Battery*—a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

*Destination Facility*—a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in LAC 33:V.3821.A and C and 3843.A and C. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste. A facility that shreds, crushes, heats, or otherwise treats electronic devices or any component thereof, shall be considered a destination facility. A facility shall not be considered a destination facility if it engages in the disassembly or demanufacturing of electronics:

1. for the purpose of marketing, reselling, reusing, or recycling the components of the electronic devices; and

2. without treating the electronic devices or any component thereof.

*Electronics* or *Electronic Device*—a device or a component thereof that contains one or more circuit boards and is used primarily for data transfer or storage, communication, or entertainment purposes, including but not limited to, desktop and laptop computers, computer peripherals, monitors, copying machines, scanners, printers, radios, televisions, camcorders, video cassette recorders (VCRs), compact disc players, digital video disc players, MP3 players, telephones, including cellular and portable telephones, and stereos.

*FIFRA*—The Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).

*Generator*—any person, by site, whose act or process produces hazardous waste identified or listed in LAC 33:V.Chapter 49 or whose act first causes a hazardous waste to become subject to regulation.

*Lamp* (also referred to as *Universal Waste Lamp*)—the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

*Large Quantity Handler of Universal Waste*—a *universal waste handler* (as defined in this Section) who accumulates 5,000 kilograms or more total of universal waste (batteries, pesticides, mercury-containing equipment, lamps, electronics, or antifreeze, calculated collectively) at any time. This designation as a *large quantity handler of universal waste* is retained through the end of the calendar year in which the 5,000 kilogram-limit is met or exceeded.

*Mercury-Containing Equipment*—a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.

*Mercury-Containing Lamp*—an electric lamp in which mercury is purposely introduced by the manufacturer for the operation of the lamp.

*On-Site*—the same or geographically contiguous property which may be divided by public or private right-of-way, provided that the entrance and exit between the properties is at a crossroads intersection, and access is by crossing as opposed to going along the right of way. Noncontiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, are also considered on-site property.

*Pesticide*—any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:

1. is a new animal drug under FFDCA Section 201(w); or

2. is an animal drug that has been determined by regulation of the secretary of Health and Human Services not to be a new animal drug; or

3. is an animal feed under FFDCA Section 201(x) that bears or contains any substances described by Paragraph 1 or 2 of this Subsection.

*Small Quantity Handler of Universal Waste*—a *universal waste handler* (as defined in this Section) who does not accumulate 5,000 kilograms or more total of universal waste (batteries, pesticides, mercury-containing equipment, lamps, electronics, or antifreeze, calculated collectively) at any time.

*Thermostat*—a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in

compliance with the requirements of LAC 33:V.3821.C.2 or 3843.C.2.

*Universal Waste*—any of the following hazardous wastes that are subject to the universal waste requirements of this Chapter:

1. batteries as described in LAC 33:V.3803;

2. pesticides as described in LAC 33:V.3805;

3. mercury-containing equipment as described in LAC 33:V.3807;

4. lamps as described in LAC 33:V.3809;

5. electronics as described in LAC 33:V.3810; and

6. antifreeze as described in LAC 33:V.3811.

*Universal Waste Handler*—a *generator* (as defined in this Section) of universal waste; or the owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination. A universal waste handler does not include a person who treats (except under the provisions of LAC 33:V.3821.A or C, or 3843.A or C), disposes of, or recycles universal waste; or a person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

*Universal Waste Transfer Facility*—any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for 10 days or less.

*Universal Waste Transporter*—a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:570 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1760 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:287 (February 2000), LR 27:302 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3118 (December 2005).

## Subchapter B. Standards for Small Quantity Handlers of Universal Waste

### §3815. Applicability

A. This Subchapter applies to small quantity handlers of *universal waste* (as defined in LAC 33:V.3813).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:570 (May 1997).

### §3817. Prohibitions

A. A small quantity handler of universal waste is:

1. prohibited from disposing of universal waste; and

2. prohibited from diluting or treating universal waste, except by responding to releases as provided in LAC 33:V.3829; or by managing specific wastes as provided in LAC 33:V.3821.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:571 (May 1997).

### §3819. Notification

A. A small quantity handler of universal waste is not required to notify the department of universal waste handling activities.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:571 (May 1997).

### §3821. Waste Management

A. Universal Waste Batteries. A small quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

1. a small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;

2. a small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

a. sorting batteries by type;

b. mixing battery types in one container;

c. discharging batteries so as to remove the electric charge;

d. regenerating used batteries;

e. disassembling batteries or battery packs into individual batteries or cells;

f. removing batteries from consumer products; or

g. removing electrolyte from batteries; and

3. a small quantity handler of universal waste who removes electrolyte from batteries, or who generates other

solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in LAC 33:V.4903:

a. if the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of these regulations. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to LAC 33:V.Chapter 11;

b. if the electrolyte or other solid waste does not exhibit a characteristic of hazardous waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local Solid Waste Regulations.

B. Universal Waste Pesticides. A small quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

1. a container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;

2. a container that does not meet the requirements of Paragraph B.1 of this Section, provided that the unacceptable container is over packed in a container that does meet the requirements of Paragraph B.1 of this Section;

3. a tank that meets the requirements of LAC 33:V.Chapter 19, except for LAC 33:V.1915.C; or

4. a transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

C. Universal Waste Mercury-Containing Equipment. A small quantity handler of universal waste shall manage universal waste mercury-containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows.

1. A small quantity handler of universal waste shall place in a container any universal waste mercury-containing equipment with non-contained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, and compatible with the contents of the device; shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; and shall be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

2. A small quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing equipment, provided the handler:

a. removes and manages the ampules in a manner designed to prevent breakage of the ampules;

b. removes ampules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage);

c. ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of LAC 33:V.1109.E;

d. immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of LAC 33:V.1109.E;

e. ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

f. ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

g. stores removed ampules in closed, nonleaking containers that are in good condition;

h. packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.

3. A small quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals mercury from mercury-containing equipment in its original housing shall determine whether the mercury or clean-up residues resulting from spills or leaks, and/or other solid waste generated as a result of the removal of mercury-containing ampules or housings (e.g., the remaining mercury-containing device) exhibit a characteristic of hazardous waste identified in LAC 33:V.4903.

a. If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of these regulations. The handler is considered the generator of the mercury, residues, and/or other waste and shall manage it subject to LAC 33:V.Chapter 11.

b. If the mercury, residues, and/or other solid waste does not exhibit a characteristic of hazardous waste, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local Solid Waste Regulations.

4. A small quantity handler of universal waste mercury-containing equipment that does not contain an ampule may remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the handler:

a. immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment; and

b. follows all requirements for removing ampules and managing removed ampules under Paragraph C.2 of this Section.

D. Lamps. A small quantity handler of universal waste must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

1. a small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions; and

2. a small quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

E. Universal Waste Electronics. A small quantity handler of universal waste shall manage universal waste electronics in a way that prevents the release of any universal waste, component of a universal waste, or constituent of a universal waste to the environment, as follows:

1. store all universal waste electronics inside a building with a roof and four walls or in the cargo-carrying portion of a truck, such as in a trailer, in a manner that prevents universal waste electronics from being exposed to the environment and ensures that all universal waste electronics are handled, stored, and transported in a manner that maintains the reuse or recyclability of any such device or component thereof;

2. immediately clean up and place in a container any broken cathode ray tube from a universal waste electronic device. Any such container shall be closed, structurally sound, and compatible with the cathode ray tube and shall be capable of preventing leakage, spillage, or releases of broken cathode ray tubes, glass particles, or other hazardous constituents from such broken tubes, to the environment;

3. shall not shred, crush, heat, or otherwise treat electronics or any component thereof, and shall not break the cathode ray tube in any electronic device. Provided no treatment is occurring, a small quantity handler of universal waste electronics may disassemble electronics for the sole purpose of marketing, reselling, reusing, or recycling components thereof.

F. Universal Waste Antifreeze. A small quantity handler of universal waste shall manage universal waste antifreeze in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste antifreeze shall be contained in one or more of the following:

1. a container that remains closed, structurally sound, and compatible with the antifreeze and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;

2. a container that does not meet the requirements of Paragraph F.1 of this Section, provided that the unacceptable container is overpacked in a container that does meet the requirements of Paragraph F.1 of this Section;

3. a tank that meets the requirements of LAC 33:V.Chapter 19, except for LAC 33:V.1915.C; or

4. a transport vehicle or vessel that is closed, structurally sound, and compatible with the antifreeze and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:571 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1760 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:302 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3118 (December 2005).

## §3823. Labeling/Marking

A. A small quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below.

1. Universal waste batteries (e.g., each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste—Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies)."

2. A container, (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in LAC 33:V.3805.A.1 are contained must be labeled or marked clearly with:

a. the label that was on or accompanied the product as sold or distributed; and

b. the words "Universal Waste—Pesticide(s)" or "Waste—Pesticide(s)."

3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in LAC 33:V.3805.A.2 are contained must be:

a. labeled or marked clearly with:

i. the label that was on the product when purchased, if still legible;

ii. the appropriate label as required under the U.S. Department of Transportation Regulation 49 CFR Part 172; or

iii. another label prescribed or designated by the waste pesticide collection program administered or recognized by the state; and

b. the words "Universal Waste—Pesticide(s)" or "Waste—Pesticide(s)."

4. Universal waste mercury-containing equipment (i.e., each device), or a container in which the mercury-containing equipment is contained, shall be labeled or marked clearly with any of the following phrases: "Universal Waste—Mercury-Containing Equipment," or "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

5. A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats shall be labeled or marked clearly with any of the following phrases: "Universal Waste—Mercury Thermostat(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)."

6. Each lamp or a container or package in which such lamps are contained shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)."

7. Universal waste electronics, or a container in which the electronics are contained, or each electronic device, package, or pallet containing universal waste electronics, shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Electronics," or "Waste Electronics," or "Used Electronics."

8. Universal waste antifreeze, or a container in which the antifreeze is contained, shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Antifreeze," or "Waste Antifreeze," or "Used Antifreeze."

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:572 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1761 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:303 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3119 (December 2005), LR 34:1017 (June 2008).

## §3825. Accumulation Time Limits

A. A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of Subsection B of this Section are met.

B. A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

C. A small quantity handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:

1. placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

2. marking or labeling each individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;

3. maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received;

4. maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

5. placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or

6. any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:572 (May 1997).

## §3827. Employee Training

A. A small quantity handler of universal waste must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:573 (May 1997).

## §3829. Response to Releases

A. A small quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.

B. A small quantity handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of these regulations. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with LAC 33:V.Chapter 11.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:573 (May 1997).

## §3831. Off-Site Shipments

A. A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.

B. If a small quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of Subchapter D of this Chapter while transporting the universal waste.

C. If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR Parts 171-180, a small quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable U.S. Department of Transportation Regulations under 49 CFR Parts 172-180.

D. Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.

E. If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:

1. receive the waste back when notified that the shipment has been rejected; or

2. agree with the receiving handler on a destination facility to which the shipment will be sent.

F. A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:

1. send the shipment back to the originating handler; or

2. if agreed to by both the originating and receiving handler, send the shipment to a destination facility.

G. If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the Office of Environmental Compliance of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The administrative authority will provide instructions for managing the hazardous waste.

H. If a small quantity handler of universal waste receives a shipment of nonhazardous, nonuniversal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local Solid Waste Regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:573 (May 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2495 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2124 (October 2007).

## §3833. Tracking Universal Waste Shipments

A. A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:573 (May 1997).

## §3835. Exports

A. A small quantity handler of universal waste who sends universal waste to a foreign destination, other than to those OECD countries specified in LAC 33:V.1113.I.1.a (in which case the handler is subject to the requirements of LAC 33:V.Chapter 11.Subchapter B), must:

1. comply with the requirements applicable to a primary exporter in LAC 33:V.1113.D, G.1.a-d, G.1.f, G.2, and H;

2. export such universal waste only upon consent of the receiving country and in conformance with the *EPA Acknowledgment of Consent* as defined in LAC 33:V.1113; and

3. provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:573 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:684 (April 1998).

# Subchapter C. Standards for Large Quantity Handlers of Universal Waste

## §3837. Applicability

A. This Subchapter applies to large quantity handlers of *universal waste* (as defined in LAC 33:V.3813).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:573 (May 1997).

## §3839. Prohibitions

A. A large quantity handler of universal waste is:

1. prohibited from disposing of universal waste; and

2. prohibited from diluting or treating universal waste, except by responding to releases as provided in LAC 33:V.3851; or by managing specific wastes as provided in LAC 33:V.3843.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:574 (May 1997).

## §3841. Notification

A. Except as provided in Paragraphs A.1 and 2 of this Section, a large quantity handler of universal waste must have sent written notification of universal waste management to the Office of Environmental Services and received an EPA Identification Number, before meeting or exceeding the 5,000 kilogram storage limit.

1. A large quantity handler of universal waste who has already notified EPA of his hazardous waste management activities and has received an EPA Identification Number is not required to renotify under this Section.

2. A large quantity handler of universal waste who manages recalled universal waste pesticides as described in LAC 33:V.3805.A.1 and who has sent notification to EPA as required by 40 CFR Part 165 is not required to notify for those recalled universal waste pesticides under this Section.

B. This notification must include:

1. the universal waste handler's name and mailing address;

2. the name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;

3. the address or physical location of the universal waste management activities;

4. a list of all of the types of universal waste managed by the handler (e.g., batteries, pesticides, mercury-containing equipment, lamps, electronics, antifreeze); and

5. a statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:574 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1761 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2496 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2473 (October 2005), LR 31:3120 (December 2005), LR 33:2124 (October 2007).

## §3843. Waste Management

A. Universal Waste Batteries. A large quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

1. a large quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;

2. a large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

a. sorting batteries by type;

b. mixing battery types in one container;

c. discharging batteries so as to remove the electric charge;

d. regenerating used batteries;

e. disassembling batteries or battery packs into individual batteries or cells;

f. removing batteries from consumer products; or

g. removing electrolyte from batteries; and

3. a large quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in LAC 33:V.4903:

a. if the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of these regulations. The handler is considered the generator of the

hazardous electrolyte and/or other waste and is subject to LAC 33:V.Chapter 11;

b. if the electrolyte or other solid waste does not exhibit a characteristic of hazardous waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local Solid Waste Regulations.

B. Universal Waste Pesticides. A large quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

1. a container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;

2. a container that does not meet the requirements of Paragraph B.1 of this Section, provided that the unacceptable container is overpacked in a container that does meet the requirements of Paragraph B.1 of this Section;

3. a tank that meets the requirements of LAC 33:V.Chapter 19, except for LAC 33:V.1915.C; or

4. a transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

C. Universal Waste Mercury-Containing Equipment. A large quantity handler of universal waste shall manage universal waste mercury-containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows.

1. A large quantity handler of universal waste shall place in a container any universal waste mercury-containing equipment with non-contained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, and compatible with the contents of the device; shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; and shall be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

2. A large quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing equipment provided the handler:

a. removes and manages the ampules in a manner designed to prevent breakage of the ampules;

b. removes ampules only over or in a containment device (e.g., tray or pan sufficient to contain any mercury released from an ampule in case of breakage);

c. ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of LAC 33:V.1109;

d. immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of LAC 33:V.1109;

e. ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

f. ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

g. stores removed ampules in closed, nonleaking containers that are in good condition;

h. packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.

3. A large quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals mercury from mercury-containing equipment in its original housing shall determine whether the mercury or clean-up residues resulting from spills or leaks and/or other solid waste generated as a result of the removal of mercury-containing ampules or housings (e.g., the remaining mercury-containing device) exhibit a characteristic of hazardous waste identified in LAC 33:V.4903.

a. If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of these regulations. The handler is considered the generator of the mercury, residues, and/or other waste and is subject to LAC 33:V.Chapter 11.

b. If the mercury, residues, and/or other solid waste does not exhibit a characteristic of hazardous waste, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local Solid Waste Regulations.

4. A large quantity handler of universal waste mercury-containing equipment that does not contain an ampule may remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the handler:

a. immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment; and

b. follows all requirements for removing ampules and managing removed ampules under Paragraph C.2 of this Section.

D. Lamps. A large quantity handler of universal waste must manage lamps in a way that prevents releases of any

universal waste or component of a universal waste to the environment, as follows:

1. a large quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions; and

2. a large quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

E. Universal Waste Electronics. A large quantity handler of universal waste shall manage universal waste electronics in a way that prevents the release of any universal waste, component of a universal waste, or constituent of a universal waste to the environment, as follows:

1. store all universal waste electronics inside a building with a roof and four walls or in the cargo-carrying portion of a truck, such as in a trailer, in a manner that prevents universal waste electronics from being exposed to the environment and ensures that all universal waste electronics are handled, stored, and transported in a manner that maintains the reuse or recyclability of any such device or component thereof;

2. immediately clean up and place in a container any broken cathode ray tube from a universal waste electronic device. Any such container shall be closed, structurally sound, and compatible with the cathode ray tube and shall be capable of preventing leakage, spillage, or releases of broken cathode ray tubes, glass particles, or other hazardous constituents from such broken tubes, to the environment;

3. shall not shred, crush, heat, or otherwise treat electronics or any component thereof, and shall not break the cathode ray tube in any electronic device. Provided no treatment is occurring, a large quantity handler of universal waste electronics may disassemble electronics for the sole purpose of marketing, reselling, reusing, or recycling components thereof.

F. Universal Waste Antifreeze. A large quantity handler of universal waste shall manage universal waste antifreeze in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste antifreeze shall be contained in one or more of the following:

1. a container that remains closed, structurally sound, and compatible with the antifreeze and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;

2. a container that does not meet the requirements of Paragraph F.1 of this Section, provided that the unacceptable container is overpacked in a container that does meet the requirements of Paragraph F.1 of this Section;

3. a tank that meets the requirements of LAC 33:V.Chapter 19, except for LAC 33:V.1915.C; or

4. a transport vehicle or vessel that is closed, structurally sound, and compatible with the antifreeze and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:574 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1761 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:303 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3120 (December 2005).

## §3845. Labeling/Marking

A. A large quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below.

1. Universal waste batteries (e.g., each battery), or a container or tank in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste—Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies)."

2. A container (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in LAC 33:V.3805.A.1 are contained must be labeled or marked clearly with:

a. the label that was on or accompanied the product as sold or distributed; and

b. the words "Universal Waste—Pesticide(s)" or "Waste—Pesticide(s)."

3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in LAC 33:V.3805.A.2 are contained must be:

a. labeled or marked clearly with:

i. the label that was on the product when purchased, if still legible;

ii. appropriate label as required under the U.S. Department of Transportation Regulation 49 CFR Part 172; or

iii. another label prescribed or designated by the pesticide collection program; and

b. the words "Universal Waste—Pesticide(s)" or "Waste—Pesticide(s)."

4. Universal waste mercury-containing equipment (i.e., each device), or a container in which the mercury-containing equipment is contained, shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Mercury-Containing Equipment," or "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

5. A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Mercury Thermostat(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)."

6. Each lamp or a container or package in which such lamps are contained shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)."

7. Universal waste electronics, or a container in which the electronics are contained, or each electronic device, package, or pallet containing universal waste electronics, shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Electronics," or "Waste Electronics," or "Used Electronics."

8. Universal waste antifreeze, or a container in which the antifreeze is contained, shall be labeled or marked clearly with one of the following phrases: "Universal Waste—Antifreeze," or "Waste Antifreeze," or "Used Antifreeze."

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:575 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1761 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:303 (March 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3121 (December 2005), LR 34:1017 (June 2008).

## §3847. Accumulation Time Limits

A. A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of Subsection B of this Section are met.

B. A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity was solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

C. A large quantity handler of universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:

1. placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

2. marking or labeling the individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;

3. maintaining an inventory system on-site that identifies the date the universal waste being accumulated became a waste or was received;

4. maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

5. placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or

6. any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:575 (May 1997).

## §3849. Employee Training

A. A large quantity handler of universal waste must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:576 (May 1997).

## §3851. Response to Releases

A. A large quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.

B. A large quantity handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of these regulations. The handler is considered the generator of the material resulting from the release, and is subject to LAC 33:V.Chapter 11.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:576 (May 1997).

## §3853. Off-Site Shipments

A. A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.

B. If a large quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of Subchapter D of this Chapter while transporting the universal waste.

C. If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR Parts 171-180, a large quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable U.S. Department of Transportation Regulations under 49 CFR Parts 172-180.

D. Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.

E. If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:

1. receive the waste back when notified that the shipment has been rejected; or

2. agree with the receiving handler on a destination facility to which the shipment will be sent.

F. A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:

1. send the shipment back to the originating handler; or

2. if agreed to by both the originating and receiving handler, send the shipment to a destination facility.

G. If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the Office of Environmental Compliance of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The administrative authority will provide instructions for managing the hazardous waste.

H. If a large quantity handler of universal waste receives a shipment of nonhazardous, nonuniversal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local Solid Waste Regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:576 (May 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2496 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2124 (October 2007).

## §3855. Tracking Universal Waste Shipments

A. Receipt of Shipments. A large quantity handler of universal waste must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:

1. the name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;

2. the quantity of each type of universal waste received (e.g., batteries, pesticides, mercury-containing equipment, thermostats, lamps, electronics, antifreeze); and

3. the date of receipt of the shipment of universal waste.

B. Shipments Off-Site. A large quantity handler of universal waste must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste sent must include the following information:

1. the name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;

2. the quantity of each type of universal waste sent (e.g., batteries, pesticides, mercury-containing equipment, thermostats, lamps, electronics, antifreeze); and

3. the date the shipment of universal waste left the facility.

C. Record Retention

1. A large quantity handler of universal waste must retain the records described in Subsection A of this Section for at least three years from the date of receipt of a shipment of universal waste.

2. A large quantity handler of universal waste must retain the records described in Subsection B of this Section for at least three years from the date a shipment of universal waste left the facility.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 23:576 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1762 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3121 (December 2005).

### §3857. Exports

A. A large quantity handler of universal waste who sends universal waste to a foreign destination, other than to those OECD countries specified in LAC 33:V.1113.I.1.a (in which case the handler is subject to the requirements of LAC 33:V.Chapter 11.Subchapter B), must:

1. comply with the requirements applicable to a primary exporter in LAC 33:V.1113.D, G.1.a-d, G.1.f, G.2, and H;

2. export such universal waste only upon consent of the receiving country and in conformance with the *EPA Acknowledgment of Consent* as defined in LAC 33:V.1113; and

3. provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:577 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:685 (April 1998).

## Subchapter D. Standards for Universal Waste Transporters

### §3859. Applicability

A. This Subchapter applies to *universal waste transporters* (as defined in LAC 33:V.3813).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:577 (May 1997).

### §3861. Prohibitions

A. A universal waste transporter is:

1. prohibited from disposing of universal waste; and

2. prohibited from diluting or treating universal waste, except by responding to releases as provided in LAC 33:V.3867.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:577 (May 1997).

### §3863. Waste Management

A. A universal waste transporter must comply with all applicable U.S. Department of Transportation Regulations in 49 CFR Parts 171-180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the U.S. Department of Transportation Regulations, a material is considered a hazardous waste if it is subject to the hazardous waste manifest requirements specified in LAC 33:V.Chapter 11. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the U.S. Department of Transportation Regulations.

B. Some universal waste materials are regulated by the U.S. Department of Transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under LAC 33:V.Chapter 11, they may not be described by the U.S. Department of Transportation proper shipping name "hazardous waste, (l) or (s), n.o.s.," nor may the hazardous material's proper shipping name be modified by adding the word "waste."

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:577 (May 1997).

### §3865. Storage Time Limits

A. A universal waste transporter may only store the universal waste at a universal waste transfer facility for 10 days or less.

B. If a universal waste transporter stores universal waste for more than 10 days, the transporter becomes a universal waste handler and must comply with the applicable requirements of Subchapter B or C of this Chapter while storing the universal waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:577 (May 1997).

### §3867. Response to Releases

A. A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.

B. A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, it is subject to all applicable requirements of these regulations. If the waste is determined to be a hazardous waste, the transporter is subject to LAC 33:V.Chapter 11.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:577 (May 1997).

### §3869. Off-Site Shipments

A. A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.

B. If the universal waste being shipped off-site meets the U.S. Department of Transportation's definition of "hazardous materials" under 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with the applicable U.S. Department of Transportation Regulations under 49 CFR Part 172.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:578 (May 1997).

### §3871. Exports

A. A universal waste transporter transporting a shipment of universal waste to a foreign destination other than to those OECD countries specified in LAC 33:V.1113.I.1.a (in which case the transporter is subject to the requirements of LAC 33:V.Chapter 11.Subchapter B) may not accept a shipment if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent. In addition the transporter must ensure that:

1. a copy of the EPA Acknowledgment of Consent accompanies the shipment; and

2. the shipment is delivered to the facility designated by the person initiating the shipment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:578 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:685 (April 1998).

## Subchapter E. Standards for Destination Facilities

### §3873. Applicability

A. The owner or operator of a *destination facility* (as defined in LAC 33:V.3813) is subject to all applicable requirements of LAC 33:V.Chapters 3, 5, 11, 15, 17, 19, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 37, 41, and 43, and the notification requirement under LAC 33:V.105.A.

B. The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with LAC 33:V.4105.D.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:578 (May 1997), amended by the Office of the Secretary, Legal Affairs Division, LR 32:607 (April 2006).

### §3875. Off-Site Shipments

A. The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility, or a foreign destination.

B. The owner or operator of a destination facility may reject a shipment containing universal waste, or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, he must contact the shipper to notify him of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility must:

1. send the shipment back to the original shipper; or

2. if agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.

C. If the owner or operator of a destination facility receives a shipment containing hazardous waste that was shipped as a universal waste, the owner or operator of the destination facility must immediately notify the Office of Environmental Compliance of the illegal shipment, and provide the name, address, and phone number of the shipper. The administrative authority will provide instructions for managing the hazardous waste.

D. If the owner or operator of a destination facility receives a shipment of nonhazardous, nonuniversal waste, the owner or operator may manage the waste in any way that is in compliance with applicable federal or state Solid Waste Regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:578 (May 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2496 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2124 (October 2007).

### §3877. Tracking Universal Waste Shipments

A. The owner or operator of a destination facility must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:

1. the name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;

2. the quantity of each type of universal waste received (e.g., batteries, pesticides, mercury-containing equipment, thermostats, lamps, electronics, antifreeze); and

3. the date of receipt of the shipment of universal waste.

B. The owner or operator of a destination facility must retain the records described in Subsection A of this Section for at least three years from the date of receipt of a shipment of universal waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 23:578 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1762 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 31:3121 (December 2005).

# Subchapter F. Import Requirements

## §3879. Imports

A. Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of this Chapter, immediately after the waste enters the United States, as indicated in Paragraphs A.1-3 of this Section.

1. A universal waste transporter is subject to the universal waste transporter requirements of Subchapter D of this Chapter.

2. A universal waste handler is subject to the small or large quantity handler of universal waste requirements of Subchapter B or C of this Chapter, as applicable.

3. An owner or operator of a destination facility is subject to the destination facility requirements of Subchapter E of this Chapter.

B. Persons managing universal waste that is imported from an OECD country as specified in LAC 33:V.1113.I.1.a are subject to Paragraphs A.1-3 of this Section, in addition to the requirements of LAC 33:V.Chapter 11.Subchapter B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 23:578 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:685 (April 1998).

# Subchapter G. Petitions to Include Other Wastes under This Chapter

## §3881. General

A. Any person seeking to add a hazardous waste or a category of hazardous waste to this Chapter may petition for a regulatory amendment under this Subpart and LAC 33:I.Chapter 9.

B. To be successful, the petitioner must demonstrate to the satisfaction of the administrative authority that regulation under the universal waste regulations in this Chapter:

1. is appropriate for the waste or category of waste;

2. will improve management practices for the waste or category of waste; and

3. will improve implementation of the hazardous waste program.

C. The petition must include the information required by LAC 33:I.Chapter 9. The petition should also address as many of the factors listed in LAC 33:V.3883 as are appropriate for the waste or waste category addressed in the petition.

D. The administrative authority will evaluate and grant or deny petitions using the factors listed in LAC 33:V.3883. The decision will be based on the weight of evidence showing that regulation under this Chapter is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:320 (February 1998).

## §3883. Factors for Petitions to Include Other Wastes under This Chapter

A. Factors for petitions to include other waste under this Chapter include:

1. the waste or category of waste, as generated by a wide variety of generators, is listed in LAC 33:V.4901 or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in LAC 33:V.4903. When a characteristic waste is added to the universal waste regulations of this Chapter by using a generic name to identify the waste category (e.g., batteries), the definition of universal waste in LAC 33:V.3813 will be amended to include only the hazardous waste portion of the waste category (e.g., hazardous waste batteries). Thus, only the portion of the waste stream that does exhibit one or more characteristics (i.e., is hazardous waste) is subject to the universal waste regulations of this Chapter;

2. the waste or category of waste is not exclusive to a specific industry or group of industries and is commonly generated by a wide variety of types of establishments including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, and government organizations, as well as large industrial facilities;

3. the waste or category of waste is generated by a large number of generators (e.g., more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator;

4. systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste;

5. the risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (e.g., waste management requirements appropriate to be added to LAC 33:V.3821, 3843, and 3863 and/or applicable Department of Transportation requirements) would be protective of human health and the environment during accumulation and transport;

6. regulation of the waste or category of waste under this Chapter will increase the likelihood that the waste will be diverted from nonhazardous waste management systems

(e.g., the municipal waste stream, nonhazardous industrial or commercial waste stream, municipal sewer, or stormwater systems) to recycling, treatment, or disposal in compliance with Subtitle C of RCRA;

7. regulation of the waste or category of waste under this Chapter will improve implementation of and compliance with the hazardous waste regulatory program; and/or

8. such other factors as may be appropriate.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:320 (February 1998).

# Chapter 39. Reserved

# Chapter 40. Used Oil

## §4001. Definitions

A. Terms that are defined in LAC 33:V.109 have the same meanings when used in this Chapter.

*Aboveground Tank*—a tank used to store or process used oil that is not an *underground tank* as defined in LAC 33:V.109.

*Container*—any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

*Do-It-Yourselfer (DIY) Used Oil Collection Center*—any site or facility that accepts/aggregates and stores used oil collected only from household do-it-yourselfers.

*Existing Tank*—a tank that is used for the storage or processing of used oil and that is in operation or for which installation commenced on or prior to the effective date of the authorized used oil program. Installation will be considered to have commenced if the owner or operator has obtained all approvals or permits necessary to begin installation of the tank and if either a continuous on-site installation program has begun or the owner or operator has entered into contractual obligations which cannot be canceled or modified without substantial loss for installation of the tank to be completed within a reasonable time.

*Household Do-It-Yourselfer Used Oil*—oil that is derived from households, such as used oil generated by individuals through the maintenance of their personal vehicles.

*Household Do-It-Yourselfer Used Oil Generator*—an individual who generates household do-it-yourselfer used oil.

*New Tank*—a tank that will be used to store or process used oil and for which installation commenced after the effective date of the authorized used oil program.

*Petroleum Refining Facility*—an establishment primarily engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking, or other processes (i.e., facilities classified as SIC 2911).

*Processing*—chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used-oil-derived product. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation, and re-refining.

*Re-Refining Distillation Bottoms*—the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.

*Tank*—any stationary device designed to contain an accumulation of used oil which is constructed primarily of nonearthen materials, (e.g., wood, concrete, steel, plastic) which provides structural support.

*Used Oil*—any oil that has been refined from crude oil or any synthetic oil that has been used and, as a result of such use, is contaminated by physical or chemical impurities.

*Used Oil Aggregation Point*—any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point from which used oil is transported to the aggregation point in shipments of no more than 55 gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

*Used Oil Burner*—a facility where used oil not meeting the specification requirements in LAC 33:V.4005 is burned for energy recovery in devices identified in LAC 33:V.4063.

*Used Oil Collection Center*—any site or facility that is registered, licensed, permitted, and/or recognized to manage used oil and accepts/aggregates and stores used oil collected from used oil generators regulated under LAC 33:V.Chapter 40.Subchapter B which bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of LAC 33:V.4017. Used oil collection centers may also accept used oil from household do-it-yourselfers.

*Used Oil Fuel Marketer*—any person who conducts either of the following activities:

a. directs a shipment of off-specification used oil from their facility to a used oil burner; or

b. first claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in LAC 33:V.4005.

*Used Oil Generator*—any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

*Used Oil Processor/Re-Refiner*—a facility that processes used oil.

*Used Oil Transfer Facility*—any transportation-related facility, including loading docks, parking areas, storage

areas, and other areas where shipments of used oil are held for more than 24 hours and not longer than 35 days during the normal course of transportation or prior to an activity performed in accordance with LAC 33:V.4009.B.2. Transfer facilities that store used oil for more than 35 days are subject to regulation under Subchapter E of this Chapter.

*Used Oil Transporter*—any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil-derived products or used oil fuel.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 22:836 (September 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 34:631 (April 2008).

# Subchapter A. Materials Regulated as Used Oil

## §4003. Applicability

This Section identifies those materials that are subject to regulation as used oil under this Chapter. This Section also identifies some materials that are not subject to regulation as used oil under this Chapter and indicates whether these materials may be subject to regulation as hazardous waste under this Subpart.

A. Used Oil. Used oil is to be recycled unless a used oil handler disposes of it or sends it for disposal. Except as provided in LAC 33:V.4005, the regulations of LAC 33:V.Chapter 40 apply to used oil and to materials identified in LAC 33:V.4003 as being subject to regulation as used oil, whether or not the used oil or material exhibits any characteristics of hazardous waste identified in LAC 33:V.4903.

B. Mixtures of Used Oil and Hazardous Waste

1. Listed Hazardous Waste

a. Mixtures of used oil and hazardous waste that are listed in LAC 33:V.4901 are subject to regulation as hazardous waste under LAC 33:V.Subpart 1, rather than as used oil under LAC 33:V.Chapter 40.

b. Rebuttable Presumption for Used Oil. Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in LAC 33:V.4901. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (e.g., by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in LAC 33:V.3105, Table 1).

i. The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins if they are processed through a tolling arrangement as described in LAC 33:V.4017.D to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner or disposed.

ii. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units in which the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

2. Characteristic Hazardous Waste. Mixtures of used oil and hazardous waste that solely exhibit one or more of the hazardous waste characteristics identified in LAC 33:V.4903 and mixtures of used oil and hazardous waste that are listed in LAC 33:V.4901 solely because they exhibit one or more of the characteristics of hazardous waste identified in LAC 33:V.4903 are subject to:

a. regulation as hazardous waste under LAC 33:V.Subpart 1 rather than as used oil under LAC 33:V.Chapter 40 if the resultant mixture exhibits any characteristics of hazardous waste identified in LAC 33:V.4903, except as provided in LAC 33:V.4003.B.2.c;

b. regulation as used oil under LAC 33:V.Chapter 40 if the resultant mixture does not exhibit any characteristics of hazardous waste identified under LAC 33:V.4903, except as specified in LAC 33:V.4003.B.2.c; or

c. regulation as used oil under this Chapter if the mixture is of used oil and a waste which is hazardous solely because it exhibits the characteristic of ignitability (e.g., ignitable-only mineral spirits), provided that the resulting mixture does not exhibit the characteristic of ignitability under LAC 33:V.4903.B.

3. Conditionally Exempt Small Quantity Generator Hazardous Waste. Mixtures of used oil and conditionally exempt small quantity generator hazardous waste regulated under LAC 33:V.108 are subject to regulation as used oil under this Chapter.

C. Materials Containing or Otherwise Contaminated with Used Oil

1. Except as provided in LAC 33:V.4003.C.2, materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material:

a. are not used oil and thus not subject to LAC 33:V.Chapter 40; and

b. are subject to the hazardous waste regulations of LAC 33:V.Subpart 1, if applicable.

2. Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under LAC 33:V.Chapter 40.

3. Used oil drained or removed from materials containing or otherwise contaminated with used oil is subject to regulation as used oil under LAC 33:V.Chapter 40.

D. Mixtures of Used Oil with Products

1. Except as provided in LAC 33:V.4003.D.2, mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under LAC 33:V.Chapter 40.

2. Mixtures of used oil and diesel fuel mixed on-site by the generator of the used oil for use in the generator's own vehicles are not subject to LAC 33:V.Chapter 40 once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil is subject to the requirements of LAC 33:V.Chapter 40.Subchapter B.

E. Materials Derived from Used Oil

1. Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used in a manner constituting disposal (e.g., re-refined lubricants) are:

a. not used oil and, thus, are not subject to LAC 33:V.Chapter 40; and

b. not solid wastes and, thus, are not subject to the hazardous waste regulations of LAC 33:V.Subpart 1 as provided in LAC 33:V.109.*Hazardous Waste*.4.b.i.

2. Materials produced from used oil that are burned for energy recovery (e.g., used oil fuels) are subject to regulation as used oil under LAC 33:V.Chapter 40.

3. Except as provided in LAC 33:V.4003.E.4, materials derived from used oil that are disposed of or used in a manner constituting disposal are:

a. not used oil and, thus, are not subject to LAC 33:V.Chapter 40; and

b. solid wastes and, thus, are subject to the hazardous waste regulations of LAC 33:V.Subpart 1 if the materials are listed or identified as hazardous waste.

4. Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to LAC 33:V.Chapter 40.

F. Wastewater. Wastewater, the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act and LAC 33:IX (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil is not subject to the requirements of this Chapter. For purposes of LAC 33:V.4003.F, "de minimis" quantities of used oils are defined as small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills, or other releases or the used oil is recovered from wastewaters.

G. Used Oil Introduced into Crude Oil Pipelines or a Petroleum Refining Facility

1. Used oil mixed with crude oil or natural gas liquids (e.g., in a production separator or crude oil stock tank) for insertion into a crude oil pipeline is exempt from the requirements of LAC 33:V.Chapter 40. The used oil is subject to the requirements of LAC 33:V.Chapter 40 prior to the mixing of used oil with crude oil or natural gas liquids.

2. Mixtures of used oil and crude oil or natural gas liquids containing less than 1 percent used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion into the refining process at a point prior to crude distillation or catalytic cracking are exempt from the requirements of LAC 33:V.Chapter 40.

3. Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from the requirements of LAC 33:V.Chapter 40 provided that the used oil constitutes less than 1 percent of the crude oil feed to any petroleum refining facility process unit at any given time. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of LAC 33:V.Chapter 40.

4. Except as provided in LAC 33:V.4003.G.5, used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from the requirements of LAC 33:V.Chapter 40 only if the used oil meets the specification of LAC 33:V.4005. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of LAC 33:V.Chapter 40.

5. Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from the requirements of LAC 33:V.Chapter 40. This exemption does not extend to used oil which is intentionally introduced into a hydrocarbon recovery system (e.g., by pouring collected used oil into the wastewater treatment system).

6. Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from the requirements of LAC 33:V.Chapter 40.

H. Used Oil on Vessels. Used oil produced on vessels from normal shipboard operations is not subject to this Chapter until it is transported ashore.

I. Used Oil Containing PCBs. Used oil containing PCBs (as defined at 40 CFR 761.3) at any concentration less than 50 ppm is subject to the requirements of this Subchapter unless, because of dilution, it is regulated under 40 CFR Part

761 as a used oil containing PCBs at 50 ppm or greater. PCB-containing used oil subject to the requirements of this Subchapter may also be subject to the prohibitions and requirements found at 40 CFR Part 761, including Sections 761.20(d) and (e). Used oil containing PCBs at concentrations of 50 ppm or greater is not subject to the requirements of this Subchapter, but is subject to regulation under 40 CFR Part 761. No person may avoid these provisions by diluting used oil containing PCBs, unless otherwise specifically provided for in this Subchapter or 40 CFR Part 761.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 22:828, 836 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1108 (June 1998), LR 25:481 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:713 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2540 (October 2005), LR 34:631 (April 2008), LR 34:1017 (June 2008), LR 34:1899 (September 2008).

### §4005. Used Oil Specifications

A. Used oil burned for energy recovery and any fuel produced from used oil by processing, blending, or other treatment is subject to regulation under this Chapter unless it is shown not to exceed any of the allowable levels of the constituents and properties shown in Table 1 of this Section. Once used oil that is to be burned for energy recovery has been shown not to exceed any allowable levels and the person making that showing complies with LAC 33:V.4081, 4083, and 4085.B, the used oil is no longer subject to this Chapter.

**Table 1**
**Used Oil Not Exceeding Any Allowable Level Shown Below is Not Subject to LAC 33:V.Chapter 40 When Burned for Energy Recovery[1]**

| Constituent/Property | Allowable Level |
|---|---|
| Arsenic | 5 ppm maximum |
| Cadmium | 2 ppm maximum |
| Chromium | 10 ppm maximum |
| Lead | 100 ppm maximum |
| Flash Point | 100°F minimum |
| Total Halogens | 4,000 ppm maximum[2] |

[1]The allowable level does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see LAC 33:V.4003.B).

[2]Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under LAC 33:V.4003.B.1. Such used oil is subject to LAC 33:V.Chapter 30 rather than LAC 33:V.Chapter 40 when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

[Note: Applicable standards for the burning of used oil containing PCBs are imposed by 40 CFR 761.20(e).]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 34:632 (April 2008).

### §4007. Prohibitions

A. Surface Impoundment Prohibition. Used oil shall not be managed in surface impoundments or waste piles unless the units are subject to regulation under LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37, and 43.

B. Use as a Dust Suppressant. The use of used oil as a dust suppressant is prohibited.

C. Burning in Particular Units. Off-specification used oil fuel may be burned for energy recovery in only the following devices:

1. *industrial furnaces* identified in LAC 33:V.109;

2. *boilers* as defined in LAC 33:V.109 that are identified as follows:

a. industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

b. utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or

c. used oil-fired space heaters provided that the burner meets the provisions of LAC 33:V.4015.

3. hazardous waste incinerators subject to regulation under LAC 33:V.Chapter 31 and Chapter 43.Subchapter N.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## Subchapter B. Standards for Used Oil Generators

### §4009. Applicability

A. General. Except as provided in LAC 33:V.4009.A.1-4, this Subchapter applies to all used oil generators.

1. Household Do-It-Yourselfer Used Oil Generators. Household do-it-yourselfer used oil generators are not subject to regulation under LAC 33:V.Chapter 40.

2. Vessels. Vessels at sea or at port are not subject to LAC 33:V.Chapter 40.Subchapter B. For purposes of this Subchapter, used oil produced on vessels from normal shipboard operations is considered to be generated at the time it is transported ashore. The owner or operator of the vessel and the person(s) removing or accepting used oil from the vessel are co-generators of the used oil and are both responsible for managing the waste in compliance with this Subchapter once the used oil is transported ashore. The co-genenerators may decide among them which party will fulfill the requirements of this Subchapter.

3. Diesel Fuel. Mixtures of used oil and diesel fuel mixed by the generator of the used oil for use in the generator's own vehicles are not subject to LAC 33:V.Chapter 40 once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil fuel is subject to the requirements of this Subchapter.

4. Farmers. Farmers who generate an average of 25 gallons per month or less of used oil from vehicles or machinery used on the farm in a calendar year are not subject to the requirements of LAC 33:V.Chapter 40.

B. Other Applicable Provisions. Used oil generators who conduct the following activities are subject to the requirements of other applicable provisions of LAC 33:V.Chapter 40 as indicated in LAC 33:V.4009.B.1-5:

1. generators who transport used oil, except under the self-transport provisions of LAC 33:V.4017.B and C, must also comply with LAC 33:V.Chapter 40.Subchapter D;

2. generators who process or re-refine used oil must also comply with LAC 33:V.Chapter 40.Subchapter E, except as provided in LAC 33:V.4009.B.2.b. Generators who perform the following activities are not processors provided that the used oil is generated on-site and is not being sent off-site to a burner of on- or off-specification used oil fuel:

a. filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the generator;

b. separating used oil from wastewater generated on-site to make the wastewater acceptable for discharge or reuse pursuant to Section 402 or Section 307(b) of the Clean Water Act, LAC 33:IX, or other applicable federal or state regulations governing the management or discharge of wastewater;

c. using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation;

d. draining or otherwise removing used oil from materials containing or otherwise contaminated with used oil in order to remove excessive oil to the extent possible in accordance with LAC 33:V.4003.C; or

e. filtering, separating, or otherwise reconditioning used oil before burning it in a space heater pursuant to LAC 33:V.4015;

3. generators who burn off-specification used oil for energy recovery, except under the on-site space heater provisions of LAC 33:V.4015, must also comply with LAC 33:V.Chapter 40.Subchapter F;

4. generators who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in LAC 33:V.4005 must also comply with LAC 33:V.Chapter 40.Subchapter G; and

5. generators who dispose of used oil, including the use of used oil as a dust suppressant, must also comply with LAC 33:V.Chapter 40.Subchapter H.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 22:836 (September 1996).

## §4011. Hazardous Waste Mixing

A. Mixtures of used oil and hazardous waste must be managed in accordance with LAC 33:V.4003.B.

B. The rebuttable presumption for used oil of LAC 33:V.4003.B.1.b applies to used oil managed by generators. Under the rebuttable presumption for used oil of LAC 33:V.4003.B.1.b, used oil containing greater than 1,000 ppm total halogens is presumed to be a hazardous waste and, thus, must be managed as hazardous waste and not as used oil unless the presumption is rebutted. However, the rebuttable presumption does not apply to certain metalworking oils/fluids and certain used oils removed from refrigeration units.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4013. Used Oil Storage

A. Used oil generators are subject to all applicable Spill Prevention, Control, and Countermeasures (40 CFR Part 112) in addition to the requirements of this Subchapter. Used oil generators are also subject to the Underground Storage Tanks (LAC 33:XI) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this Subchapter.

B. Storage Units. Used oil generators shall not store used oil in units other than tanks, containers, or units subject to regulation under LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37, and 43.

C. Condition of Units. Containers and aboveground tanks used to store used oil at generator facilities must:

1. be in good condition (no severe rusting, apparent structural defects or deterioration); and

2. not be leaking (no visible leaks).

D. Labels

1. Containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil."

2. Fill pipes used to transfer used oil into underground storage tanks at generator facilities must be labeled or marked clearly with the words "Used Oil."

E. Response to Releases. Upon detection of a release of used oil to the environment which is not subject to the requirements of LAC 33:XI.715 and which has occurred after the effective date of the recycled used oil management

program in effect in the state in which the release is located, a generator must perform the following cleanup steps:

1. stop the release;

2. contain the released used oil;

3. clean up and properly manage the released used oil and other materials; and

4. if necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:481 (March 1999).

### §4015. On-Site Burning in Space Heaters

A. Generators may burn used oil in used oil-fired space heaters provided that:

1. the heater burns only used oil that the owner or operator generates or used oil received from household do-it-yourself used oil generators;

2. the heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

3. the combustion gases from the heater are vented to the ambient air.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4017. Off-Site Shipments

A. Except as provided in LAC 33:V.4017.B-D, generators must ensure that their used oil is transported only by transporters who have obtained EPA identification numbers.

B. Self-Transportation of Small Amounts to Approved Collection Centers. Generators may transport, without an EPA identification number, used oil that is generated at the generator's site and used oil collected from household do-it-yourselfers to a used oil collection center provided that:

1. the generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;

2. the generator transports no more than 55 gallons of used oil at any one time; and

3. the generator transports the used oil to a used oil collection center that is registered, licensed, permitted, or recognized to manage used oil.

C. Self-Transportation of Small Amounts to Aggregation Points Owned by the Generator. Generators may transport, without an EPA identification number, used oil that is generated at the generator's site to an aggregation point provided that:

1. the generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;

2. the generator transports no more than 55 gallons of used oil at any one time; and

3. the generator transports the used oil to an aggregation point that is owned and/or operated by the same generator.

D. Tolling Arrangements. Used oil generators may arrange for used oil to be transported by a transporter who does not have an EPA identification number if the used oil is reclaimed under a contractual agreement according to which reclaimed oil is returned by the processor/re-refiner to the generator for use as a lubricant, cutting oil, or coolant. The contract (known as a "tolling arrangement") must indicate:

1. the type of used oil and the frequency of shipments;

2. that the vehicle used to transport the used oil to the processing/re-refining facility and to deliver recycled used oil back to the generator is owned and operated by the used oil processor/re-refiner; and

3. that reclaimed oil will be returned to the generator.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## Subchapter C. Standards for Used Oil Collection Centers and Aggregation Points

### §4019. Do-It-Yourselfer Used Oil Collection Centers

A. Applicability. This Section applies to owners or operators of all do-it-yourselfer (DIY) used oil collection centers.

B. DIY Used Oil Collection Center Requirements. Owners or operators of all DIY used oil collection centers must comply with the generator standards in LAC 33:V.Chapter 40.Subchapter B and any applicable requirements set forth in LAC 33:VII.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4021. Used Oil Collection Centers

A. Applicability. This Section applies to owners or operators of used oil collection centers. A used oil collection center is any site or facility that accepts/aggregates and stores used oil collected from used oil generators regulated under LAC 33:V.Chapter 40.Subchapter B who bring used oil to the collection center in shipments of no more than 55

gallons under the provisions of LAC 33:V.4017.B. Used oil collection centers may also accept used oil from household do-it-yourselfers.

B. Used Oil Collection Center Requirements. Owners or operators of all used oil collection centers must:

1. comply with the generator standards in LAC 33:V.Chapter 40.Subchapter B and any applicable requirements set forth in LAC 33:VII; and

2. be registered, licensed, permitted, and/or recognized to manage used oil.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4023. Used Oil Aggregation Points Owned by the Generator

A. Applicability. This Section applies to owners or operators of all used oil aggregation points. A used oil aggregation point is any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point from which used oil is transported to the aggregation point in shipments of no more than 55 gallons under the provisions of LAC 33:V.4017.C. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

B. Used Oil Aggregation Point Requirements. Owners or operators of all used oil aggregation points must comply with the generator standards in LAC 33:V.Chapter 40.Subchapter B and any applicable requirements set forth in LAC 33:VII.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## Subchapter D. Standards for Used Oil Transporter and Transfer Facilities

### §4025. Applicability

A. General. Except as provided in LAC 33:V.4025.A.1-4, this Subchapter applies to all used oil transporters.

1. This Subchapter does not apply to on-site transportation.

2. This Subchapter does not apply to generators who transport shipments of used oil totaling 55 gallons or less from the generator to a used oil collection center as specified in LAC 33:V.4017.B.

3. This Subchapter does not apply to generators who transport shipments of used oil totaling 55 gallons or less from the generator to a used oil aggregation point owned or operated by the same generator as specified in LAC 33:V.4017.C.

4. This Subchapter does not apply to transportation of used oil from household do-it-yourselfers to a regulated used oil generator, collection center, aggregation point, processor/re-refiner, or burner subject to the requirements of LAC 33:V.Chapter 40. Except as provided in LAC 33:V.4025.A.1-3, this Subchapter does, however, apply to transportation of collected household do-it-yourselfer used oil from regulated used oil generators, collection centers, aggregation points, or other facilities where household do-it-yourselfer used oil is collected.

B. Imports and Exports. Transporters who import used oil from abroad or export used oil outside of the United States are subject to the requirements of this Subchapter from the time the used oil enters and until the time it exits the United States.

C. Trucks Used to Transport Hazardous Waste. Unless trucks previously used to transport hazardous waste are emptied as described in LAC 33:V.109.*Empty Container* prior to transporting used oil, the used oil is considered to have been mixed with the hazardous waste and must be managed as hazardous waste unless, under the provisions of LAC 33:V.4003.B, the hazardous waste/used oil mixture is determined not to be hazardous waste.

D. Other Applicable Provisions. Used oil transporters who conduct the following activities are also subject to other applicable provisions of this Chapter as indicated in LAC 33:V.4025.D.1-5:

1. transporters who generate used oil must also comply with LAC 33:V.Chapter 40.Subchapter B;

2. transporters who process or re-refine used oil, except as provided in LAC 33:V.4027, must also comply with LAC 33:V.Chapter 40.Subchapter E;

3. transporters who burn off-specification used oil for energy recovery must also comply with LAC 33:V.Chapter 40.Subchapter F;

4. transporters who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in LAC 33:V.4005 must also comply with LAC 33:V.Chapter 40.Subchapter G; and

5. transporters who dispose of used oil must also comply with LAC 33:V.Chapter 40.Subchapter H.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4027. Restrictions on Transporters Who Are Not Also Processors or Re-Refiners

A. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation. However, except as provided in LAC 33:V.4027.B, used oil transporters may not process used oil unless they also

comply with the requirements for processors/re-refiners in LAC 33:V.Chapter 40.Subchapter E.

B. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil-derived products unless they also comply with the processor/re-refiner requirements in LAC 33:V.Chapter 40.Subchapter E.

C. Transporters of used oil that is removed from oil-bearing electrical transformers and turbines and filtered by the transporter or at a transfer facility prior to being returned to its original use are not subject to the processor/re-refiner requirements in LAC 33:V.Chapter 40.Subchapter E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4029. Notification

A. Identification Numbers. Used oil transporters who have not previously complied with the notification requirements of LAC 33:V.Chapter 40 must comply with these requirements and obtain an EPA identification number.

B. Mechanics of Notification. A used oil transporter who has not received an EPA identification number may obtain one by notifying the Office of Environmental Services of their used oil activity by submitting a completed Louisiana Notification of Hazardous Waste Activity Form (HW-1).

C. Upon promulgation of this Chapter, used oil transporters and transfer facilities who have previously notified must renotify the Office of Environmental Services of used oil activity.

D. Used oil transporters and transfer facilities must notify the Office of Environmental Services within seven business days if any of the information submitted in the application for the identification number changes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2473 (October 2005), LR 33:2124 (October 2007).

## §4031. Used Oil Transportation

A. Deliveries. A used oil transporter must deliver all used oil received to:

1. another used oil transporter, provided that the transporter has obtained an EPA identification number;

2. a used oil processing/re-refining facility which has obtained an EPA identification number;

3. an off-specification used oil burner facility which has obtained an EPA identification number; or

4. an on-specification used oil burner facility.

B. DOT Requirements. Used oil transporters must comply with all applicable requirements under the U.S. Department of Transportation regulations in 49 CFR Parts 171-180. Persons transporting used oil that meets the definition of a hazardous material in 49 CFR 171.8 must comply with all applicable regulations in 49 CFR Parts 171-180.

C. Used Oil Discharges

1. In the event of a discharge of used oil during transportation, the transporter must take appropriate immediate action to protect human health and the environment (e.g., notify local authorities, dike the discharge area, etc.).

2. If a discharge of used oil occurs during transportation and an official acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have EPA identification numbers.

3. An air, rail, highway, or water transporter who has discharged used oil must:

a. give notice, if required by 49 CFR 171.15, to the National Response Center (800/424-8802 or 202/426-2675); and

b. report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, DC 20590.

4. A water transporter who has discharged used oil must give notice as required by 33 CFR 153.203.

5. A transporter must clean up any used oil discharge that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the used oil discharge no longer presents a hazard to human health or the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4033. Rebuttable Presumption for Used Oil

A. To ensure that used oil is not a hazardous waste under the rebuttable presumption of LAC 33:V.4003.B.1.b, the used oil transporter must determine whether the total halogen content of used oil being transported or stored at a transfer facility is above or below 1,000 ppm.

B. The transporter must make this determination by:

1. testing the used oil; or

2. applying knowledge of the halogen content of the used oil in light of the materials or processes used.

C. If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste, which is listed in LAC 33:V.4901. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (e.g., by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in LAC 33:V.3105, Table 1).

1. The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins if they are processed, through a tolling arrangement, as described in LAC 33:V.4017.D, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner or disposed.

2. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units if the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

D. Record Retention. Records of analyses conducted or information used to comply with LAC 33:V.4033.A-C must be maintained by the transporter for at least three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 22:828 (September 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1017 (June 2008).

## §4035. Used Oil Storage at Transfer Facilities

Used oil transporters are subject to all applicable spill prevention, control, and countermeasures (40 CFR Part 112) in addition to the requirements of this Subchapter. Used oil transporters are also subject to the Underground Storage Tanks (LAC 33:XI) standards for used oil stored in underground tanks, whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this Subchapter. Used oil transfer facility status is contingent upon approval of the administrative authority.

A. Applicability. This Section applies to used oil transfer facilities. Used oil transfer facilities are transportation-related facilities, including loading docks, parking areas, storage areas, and other areas, where shipments of used oil are held for more than 24 hours during the normal course of transportation and not longer than 35 days. Transfer facilities that store used oil for more than 35 days are subject to regulation under LAC 33:V.Chapter 40.Subchapter E.

B. Storage Units. Owners or operators of used oil transfer facilities may not store used oil in units other than tanks, containers, or units subject to regulation under LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37, and 43.

C. Condition of Units. Containers and aboveground tanks used to store used oil at transfer facilities must:

1. be in good condition (no severe rusting, apparent structural defects or deterioration); and

2. not be leaking (no visible leaks).

D. Secondary Containment for Containers. Containers used to store used oil at transfer facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dikes, berms, or retaining walls; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil which is released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

E. Secondary Containment for Existing Aboveground Tanks. Existing aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil which is released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

F. Secondary Containment for New Aboveground Tanks. New aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent

any used oil which is released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

G. Labels

1. Containers and aboveground tanks used to store used oil at transfer facilities must be labeled or marked clearly with the words "Used Oil."

2. Fill pipes used to transfer used oil into underground storage tanks at transfer facilities must be labeled or marked clearly with the words "Used Oil."

H. Response to Releases. Upon detection of a release of used oil to the environment which is not subject to the requirements of LAC 33:XI.715 and which occurred after the effective date of the recycled used oil management program in effect in the state in which the release is located, the owner/operator of a transfer facility must perform the following cleanup steps:

1. stop the release;

2. contain the released used oil;

3. clean up and manage properly the released used oil and other materials; and

4. if necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:481 (March 1999).

### §4037. Tracking

A. Acceptance. Used oil transporters must keep a record of each used oil shipment accepted for transport. This record shall be in the form of a used oil reuse/recycle manifest obtained from the department. Records for each shipment must include:

1. the name and address of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

2. the EPA identification number (if applicable) of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

3. the quantity of used oil accepted;

4. the date of acceptance; and

5. the signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor/re-refiner who provided the used oil for transport. Intermediate rail transporters are not required to sign the record of acceptance.

B. Deliveries. Used oil transporters must keep a record of each shipment of used oil that is delivered to another used oil transporter or to a used oil burner, processor/re-refiner, or disposal facility. This record shall be in the form of a used oil reuse/recycle manifest obtained from the department. Records of each delivery must include:

1. the name and address of the receiving facility or transporter;

2. the EPA identification number of the receiving facility or transporter;

3. the quantity of used oil delivered;

4. the date of delivery;

5. except as provided in LAC 33:V.4037.A.5.b, the signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter. Intermediate rail transporters are not required to sign the record of delivery.

C. Exports of Used Oil. Used oil transporters must maintain the records described in LAC 33:V.4037.B.1-4 for each shipment of used oil exported to any foreign country.

D. Record Retention. The records described in LAC 33:V.4037.A-C must be maintained for at least three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995), amended by the Office of Environmental Assessment, LR 31:1573 (July 2005).

### §4039. Management of Residues

A. Transporters who generate residues from the storage or transport of used oil must manage the residues as specified in LAC 33:V.4003.E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## Subchapter E. Standards for Used Oil Processors and Re-Refiners

### §4041. Applicability

A. The requirements of this Subchapter apply to owners and operators of facilities that process used oil. The requirements of this Subchapter do not apply to:

1. transporters that conduct incidental processing operations that occur during the normal course of transportation as provided in LAC 33:V.4027; or

2. burners that conduct incidental processing operations that occur during the normal course of used oil management prior to burning as provided in LAC 33:V.4063.B.

B. Other Applicable Provisions. Used oil processors/re-refiners who conduct the following activities are also subject

to the requirements of other applicable provisions of this Chapter as indicated in LAC 33:V.4041.B.1-5:

1. processors/re-refiners who generate used oil must also comply with LAC 33:V.Chapter 40.Subchapter B;

2. processors/re-refiners who transport used oil must also comply with LAC 33:V.Chapter 40.Subchapter D;

3. except as provided in LAC 33:V.4041.B.3.a and b, processors/re-refiners who burn off-specification used oil for energy recovery must also comply with LAC 33:V.Chapter 40.Subchapter F. Processors/re-refiners burning used oil for energy recovery under the following conditions are not subject to LAC 33:V.Chapter 40.Subchapter F:

a. the used oil is burned in an on-site space heater that meets the requirements of LAC 33:V.4015; or

b. the used oil is burned for purposes of processing used oil which is considered burning incidentally to used oil processing;

4. processors/re-refiners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in LAC 33:V.4005 must also comply with LAC 33:V.Chapter 40.Subchapter G; and

5. processors/re-refiners who dispose of used oil must also comply with LAC 33:V.Chapter 40.Subchapter H.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4043. Notification

A. Identification Numbers. Used oil processors and re-refiners who have not previously complied with the notification requirements of LAC 33:V.Chapter 40 must comply with these requirements and obtain an EPA identification number.

B. Mechanics of Notification. A used oil processor or re-refiner who has not received an EPA identification number may obtain one by notifying the Office of Environmental Services of their used oil activity by submitting a completed Louisiana Notification of Hazardous Waste Activity Form (HW-1).

C. Upon promulgation of this Chapter, used oil processors and re-refiners who have previously notified must renotify the Office of Environmental Services of used oil activity.

D. Used oil processors and re-refiners must notify the Office of Environmental Services within seven business days if any of the information submitted in the application for the identification number changes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2473 (October 2005), LR 33:2124 (October 2007).

## §4045. General Facility Standards

A. Preparedness and Prevention. Owners and operators of used oil processing and re-refining facilities must comply with the following requirements.

1. Maintenance and Operation of Facility. Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned release of used oil to air, soil, or surface water which could threaten human health or the environment.

2. Required Equipment. All facilities must be equipped with the following, unless none of the hazards posed by used oil handled at the facility could require a particular kind of equipment specified in LAC 33:V.4045.A.2.a-d:

a. an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

b. a device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or emergency response teams;

c. portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

d. water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

3. Testing and Maintenance of Equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to ensure its proper operation in time of emergency.

4. Access to Communications or Alarm System

a. Whenever used oil is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in LAC 33:V.4045.A.2.

b. If there is ever just one employee on the premises while the facility is operating, the employee must have immediate access to a communication device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required in LAC 33:V.4045.A.2.

5. Required Aisle Space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes; and

6. Arrangements with Local Authorities

a. The owner or operator must attempt to make the following arrangements, as appropriate for the type of used oil handled at the facility and the potential need for the services of these organizations:

i. to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of used oil handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;

ii. to designate primary emergency authority to a specific police and a specific fire department for those instances when multiple departments might respond to an emergency and to make further agreements with any other departments to provide support to the primary emergency authority;

iii. to make agreements with emergency response teams, emergency response contractors, and equipment suppliers; and

iv. to familiarize local hospitals with the properties of used oil handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

b. Where local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

B. Contingency Plan and Emergency Procedures. Owners and operators of used oil processing and re-refining facilities must comply with the following requirements.

1. Purpose and Implementation of Contingency Plan

a. Each owner or operator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned release of used oil to air, soil, or surface water.

b. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of used oil which could threaten human health or the environment.

2. Content of Contingency Plan

a. The contingency plan must describe the actions facility personnel must take to comply with LAC 33:V.4045.B.1 and 6 in response to fires, explosions, or any unplanned release of used oil to air, soil, or surface water at the facility.

b. If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR Chapter 1 Part 112, or 40 CFR Chapter V Part 1510, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate used oil management provisions that are sufficient to comply with the requirements of this Chapter.

c. The plan must describe arrangements agreed to by local police departments, fire departments, emergency response teams, emergency response contractors, equipment suppliers, and hospitals to coordinate emergency services in accordance with LAC 33:V.4045.A.6.

d. The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency coordinator (see LAC 33:V.4045.B.5) and this list must be kept up-to-date. Where more than one person is listed, one must be named as primary emergency coordinator and the others must be listed in the order in which they will assume responsibility as alternates.

e. The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, internal and external communications and alarm systems, and decontamination equipment), where this equipment may be required. This list must be kept up-to-date. In addition, the plan must include the location and a physical description of each item on the list and a brief outline of its capabilities.

f. The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of used oil or fires).

3. Copies of Contingency Plan. A copy of the contingency plan and all revisions to the plan must be:

a. maintained at the facility; and

b. submitted to all local police departments, fire departments, emergency response teams, and hospitals that may be called upon to provide emergency services.

4. Amendment of Contingency Plan. The contingency plan must be reviewed and immediately amended, if necessary, whenever:

a. applicable regulations are revised;

b. the plan fails in an emergency;

c. the facility changes its design, construction, operation, maintenance, or other circumstances in such a way that materially increases the potential for fires, explosions, or releases of used oil or changes the response necessary in an emergency;

d. the list of emergency coordinators changes; or

e. the list of emergency equipment changes.

5. Emergency Coordinator. At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristic of used oil handled, the location of all records within the facility, and facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

[NOTE: The emergency coordinator's responsibilities are more fully spelled out in LAC 33:V.4045.B.6. Applicable responsibilities for the emergency coordinator vary, depending on factors such as the type and variety of used oil handled by the facility and the type and complexity of the facility; and]

6. Emergency Procedures

a. Whenever there is an imminent or actual emergency situation, the emergency coordinator (or the designee when the emergency coordinator is on call) must immediately:

i. activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

ii. notify appropriate local agencies that have designated response roles, if their help is needed.

b. Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and the areal extent of any released materials. He may do this by observation, review of facility records or manifests, and, if necessary, chemical analyses.

c. Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

d. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, then he must report his findings as follows:

i. if his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

ii. he must immediately notify the state official designated as the on-scene coordinator for the geographical area. The report must include:

(a). name and telephone number of reporter;

(b). name and address of facility;

(c). time and type of incident (e.g., release, fire);

(d). name and quantity of material(s) involved, to the extent known;

(e). the extent of injuries, if any; and

(f). the possible hazards to human health or the environment outside the facility.

e. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other used oil or hazardous waste at the facility. These measures must include, where applicable, stopping processes and operation, collecting and containing released used oil, and removing or isolating containers.

f. If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

g. Immediately after an emergency, the emergency coordinator must provide for recycling, storing, or disposing of recovered used oil, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

h. The emergency coordinator must ensure that, in the affected area(s) of the facility:

i. no waste or used oil that may be incompatible with the released material is recycled, treated, stored, or disposed of until cleanup procedures are completed;

ii. all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed; and

iii. the owner or operator must notify SPOC and the appropriate local authorities that the facility is in compliance with Subparagraphs B.h.i and ii of this Section before operations are resumed in the affected area(s) of the facility.

i. The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report about the incident to SPOC. The report must include:

i. name, address, and telephone number of the owner or operator;

ii. name, address, and telephone number of the facility;

iii. date, time, and type of incident (e.g., fire, explosion);

iv. name and quantity of material(s) involved;

v. the extent of injuries, if any;

vi. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and

vii. estimated quantity and disposition of recovered material that resulted from the incident.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2473 (October 2005), LR 33:2125 (October 2007), LR 34:632 (April 2008).

## §4047. Rebuttable Presumption for Used Oil

A. To ensure that used oil managed at a processing/re-refining facility is not hazardous waste under the rebuttable presumption of LAC 33:V.4003.B.1.b, the owner or operator of a used oil processing/re-refining facility must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

B. The owner or operator must make this determination by:

1. testing the used oil; or

2. applying knowledge of the halogen content of the used oil in light of the materials or processes used.

C. If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste, which is listed in LAC 33:V.4901. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (e.g., by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in LAC 33:V.3105, Table 1).

1. The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner or disposed.

2. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 22:828 (September 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1017 (June 2008).

## §4049. Used Oil Management

Used oil processors/re-refiners are subject to all applicable Spill Prevention, Control, and Countermeasures (40 CFR Part 112) in addition to the requirements of this Subchapter. Used oil processors/re-refiners are also subject to the Underground Storage Tanks (LAC 33:XI) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this Subchapter.

A. Management Units. Used oil processors/re-refiners may not store used oil in units other than tanks, containers, or units subject to regulation under LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37, and 43.

B. Condition of Units. Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must:

1. be in good condition (no severe rusting, apparent structural defects or deterioration); and

2. not be leaking (no visible leaks).

C. Secondary Containment for Containers. Containers used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

D. Secondary Containment for Existing Aboveground Tanks. Existing aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

E. Secondary Containment for New Aboveground Tanks. New aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

F. Labels

1. Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must be labeled or marked clearly with the words "Used Oil."

2. Fill pipes used to transfer used oil into underground storage tanks at processing and re-refining facilities must be labeled or marked clearly with the words "Used Oil."

G. Response to Releases. Upon detection of a release of used oil to the environment not subject to the requirements of LAC 33:XI.715 which has occurred after the effective date of the recycled used oil management program in effect in the state in which the release is located, an owner/operator must perform the following cleanup steps:

1. stop the release;

2. contain the released used oil;

3. clean up and manage properly the released used oil and other materials; and

4. if necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

H. Closure

1. Aboveground Tanks. Owners and operators who store or process used oil in aboveground tanks must comply with the following requirements:

a. at closure of a tank system, the owner or operator must remove or decontaminate used oil residues in tanks, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under LAC 33:V.Subpart 1; and

b. if the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in LAC 33:V.4049.H.1.a, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to hazardous waste landfills (LAC 33:V.4501).

2. Containers. Owners and operators who store used oil in containers must comply with the following requirements:

a. at closure, containers holding used oils or residues of used oil must be removed from the site; and

b. the owner or operator must remove or decontaminate used oil residues, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil and manage them as hazardous waste, unless the materials are not hazardous waste under LAC 33:V.Chapters 1, 31, 41, and 49.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:482 (March 1999).

## §4051. Analysis Plan

Owners or operators of used oil processing and re-refining facilities must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of LAC 33:V.4047 and, if applicable, LAC 33:V.4081. The owner or operator must keep the plan at the facility.

A. Rebuttable Presumption for Used Oil in LAC 33:V.4047. At minimum, the plan must specify the following:

1. whether sample analyses or knowledge of the halogen content of the used oil will be used to make this determination;

2. if sample analyses are used to make this determination:

a. the sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:

i. one of the sampling methods in LAC 33:V.4999.Appendix D; or

ii. a method shown to be equivalent under LAC 33:V.105.H and I;

b. the frequency of sampling to be performed and whether the analysis will be performed on-site or off-site; and

c. the methods used to analyze used oil for the parameters specified in LAC 33:V.4047; and

3. the type of information that will be used to determine the halogen content of the used oil.

B. On-Specification Used Oil Fuel in LAC 33:V.4081. At a minimum, the plan must specify the following if LAC 33:V.4081 is applicable:

1. whether sample analyses or other information will be used to make this determination;

2. if sample analyses are used to make this determination:

a. the sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:

i. one of the sampling methods in LAC 33:V.4999.Appendix D; or

ii. a method shown to be equivalent under LAC 33:V.105.H and I;

b. whether used oil will be sampled and analyzed prior to or after any processing/re-refining;

c. the frequency of sampling to be performed and whether the analysis will be performed on-site or off-site; and

d. the methods used to analyze used oil for the parameters specified in LAC 33:V.4081; and

3. the type of information that will be used to make the on-specification used oil fuel determination.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4053. Tracking

A. Acceptance. Used oil processors/re-refiners must keep a record of each used oil shipment accepted for processing/re-refining. These records shall take the form of a used oil reuse/recycle manifest obtained from the department. Records for each shipment must include the following information:

1. the name and address of the transporter who delivered the used oil to the processor/re-refiner;

2. the name and address of the generator or processor/re-refiner from whom the used oil was sent for processing/re-refining;

3. the EPA identification number of the transporter who delivered the used oil to the processor/re-refiner;

4. the EPA identification number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent for processing/re-refining;

5. the quantity of used oil accepted; and

6. the date of acceptance.

B. Delivery. Used oil processor/re-refiners must keep a record of each shipment of used oil that is shipped to a used oil burner, processor/re-refiner, or disposal facility. These records shall take the form of a used oil reuse/recycle manifest obtained from the department. Records for each shipment must include the following information:

1. the name and address of the transporter who delivers the used oil to the burner, processor/re-refiner, or disposal facility;

2. the name and address of the burner, processor/re-refiner, or disposal facility who will receive the used oil;

3. the EPA identification number of the transporter who delivers the used oil to the burner, processor/re-refiner, or disposal facility;

4. the EPA identification number of the burner, processor/re-refiner, or disposal facility who will receive the used oil;

5. the quantity of used oil shipped; and

6. the date of shipment.

C. Record Retention. The records described in LAC 33:V.4053.A and B must be maintained for at least three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995).

## §4055. Operating Record and Reporting

A. Operating Record

1. The owner or operator must keep a written operating record at the facility.

2. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

a. records and results of used oil analyses performed as described in the analysis plan required under LAC 33:V.4051; and

b. summary reports and details of all incidents that require implementation of the contingency plan as specified in LAC 33:V.4045.B.

B. Reporting. A used oil processor/re-refiner must report to the administrative authority, in the form of a letter, on a biennial basis (by March 1 of each even-numbered year), the following information concerning used oil activities during the previous calendar year:

1. the EPA identification number, name, and address of the processor/re-refiner;

2. the calendar year covered by the report; and

3. the quantities of used oil accepted for processing/re-refining and the manner in which the used oil is processed/re-refined, including the specific processes employed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4057. Off-Site Shipments of Used Oil

A. Used oil processors/re-refiners who initiate shipments of used oil off-site must ship this oil using a used oil transporter who has obtained an EPA identification number.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4059. Management of Residues

A. Owners and operators who generate residues from the storage, processing, or re-refining of used oil must manage the residues as specified in LAC 33:V.4003.E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## Subchapter F. Standards for Used Oil Burners That Burn Off-Specification Used Oil for Energy Recovery

### §4061. Applicability

A. General. The requirements of this Subchapter apply to used oil burners except as specified in LAC 33:V.4061.A.1 and 2. A used oil burner is a facility where used oil not meeting the specification requirements in LAC 33:V.4005 is burned for energy recovery in devices identified in LAC 33:V.4063.A. Facilities burning used oil for energy recovery under the following conditions are not subject to LAC 33:V.Chapter 40.Subchapter F:

1. the used oil is burned by the generator in an on-site space heater under the provisions of LAC 33:V.4015; or

2. the used oil is burned by a processor/re-refiner for purposes of processing used oil, which is considered burning incidentally to used oil processing.

B. Other Applicable Provisions. Used oil burners who conduct the following activities are also subject to the requirements of other applicable provisions of this Chapter as indicated below:

1. burners who generate used oil must also comply with LAC 33:V.Chapter 40.Subchapter B;

2. burners who transport used oil must also comply with LAC 33:V.Chapter 40.Subchapter D;

3. burners who process or re-refine used oil must also comply with LAC 33:V.Chapter 40.Subchapter E, except as provided in LAC 33:V.4063.B;

4. burners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in LAC 33:V.4005 must also comply with LAC 33:V.Chapter 40.Subchapter G; and

5. burners who dispose of used oil must comply with LAC 33:V.Chapter 40.Subchapter H.

C. Specification Fuel. This Subchapter does not apply to persons burning used oil that meets the used oil fuel specification of LAC 33:V.4005, provided that the burner complies with the requirements of LAC 33:V.Chapter 40.Subchapter G.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4063. Restrictions on Burning

A. Off-specification used oil fuel may be burned for energy recovery only in the following devices:

1. *industrial furnaces* identified in LAC 33:V.4003;

2. *boilers*, as defined in LAC 33:V.4003, that are identified as follows:

a. industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

b. utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or

c. used oil-fired space heaters provided that the burner meets the provisions of LAC 33:V.4015; or

3. hazardous waste incinerators subject to regulation under LAC 33:V.Chapter 31 or LAC 33:V.Chapter 43.Subchapter N.

B. With the following exception, used oil burners may not process used oil unless they also comply with the requirements of LAC 33:V.Chapter 40.Subchapter E. Used oil burners may aggregate off-specification used oil with virgin oil or on-specification used oil for purposes of burning, but may not aggregate for purposes of producing on-specification used oil.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4065. Notification

A. Identification Numbers. Used oil burners which have not previously complied with the notification requirements of this Chapter must comply with these requirements and obtain an EPA identification number.

B. Mechanics of Notification. A used oil burner who has not received an EPA identification number may obtain one by notifying the Office of Environmental Services of their used oil activity by submitting a completed Louisiana Notification of Hazardous Waste Activity Form (HW-1).

C. Upon promulgation of this Chapter, used oil burners that burn off-specification used oil for energy recovery and have previously notified must renotify the Office of Environmental Services of this used oil activity.

D. A used oil burner must notify the Office of Environmental Services within seven business days if any of the information submitted in the application for the identification number changes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2474 (October 2005), LR 33:2125 (October 2007).

## §4067. Rebuttable Presumption for Used Oil

A. To ensure that used oil managed at a used oil burner facility is not hazardous waste under the rebuttable presumption of LAC 33:V.4003.B.1.b, a used oil burner must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

B. The used oil burner must determine if the used oil contains above or below 1,000 ppm total halogens by:

1. testing the used oil;

2. applying knowledge of the halogen content of the used oil in light of the materials or processes used; or

3. if the used oil has been received from a processor/re-refiner subject to regulation under LAC 33:V.Chapter 40.Subchapter E, using information provided by the processor/re-refiner.

C. If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste, which is listed in LAC 33:V.4901. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (e.g., by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in LAC 33:V.3105, Table 1).

1. The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins if they are processed, through a tolling arrangement as described in LAC 33:V.4017.D to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner or disposed.

2. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

D. Record Retention. Records of analyses conducted or information used to comply with LAC 33:V.4067.A-C must be maintained by the burner for at least three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 22:828 (September 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 34:632 (April 2008), LR 34:1018 (June 2008).

## §4069. Used Oil Storage

Used oil burners are subject to all applicable Spill Prevention, Control, and Countermeasures (40 CFR Part 112) in addition to the requirements of this Subchapter. Used oil burners are also subject to the Underground Storage Tank (LAC 33:XI) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this Subchapter.

A. Storage Units. Used oil burners may not store used oil in units other than tanks, containers, or units subject to regulation under LAC 33:V.Chapters 11, 15, 17, 19, 21, 23, 25, 27, 28, 29, 31, 32, 33, 35, 37, and 43.

B. Condition of Units. Containers and aboveground tanks used to store oil at burner facilities must:

1. be in good condition (no severe rusting, apparent structural defects or deterioration); and

2. not be leaking (no visible leaks).

C. Secondary Containment for Containers. Containers used to store used oil at burner facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall.

2. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

D. Secondary Containment for Existing Aboveground Tanks. Existing aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

E. Secondary Containment for New Aboveground Tanks. New aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

1. The secondary containment system must consist of, at a minimum:

a. dikes, berms, or retaining walls; and

b. a floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

c. an equivalent secondary containment system.

2. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

F. Labels

1. Containers and aboveground tanks used to store used oil at burner facilities must be labeled or marked clearly with the words "Used Oil."

2. Fill pipes used to transfer used oil into underground storage tanks at burner facilities must be labeled or marked clearly with the words "Used Oil."

G. Response to Releases. Upon detection of a release of used oil to the environment not subject to the requirements of LAC 33:XI.715 which has occurred after the effective date of the recycled used oil management program in effect for the state in which the release is located, a burner must perform the following cleanup steps:

1. stop the release;

2. contain the released used oil;

3. clean up and manage properly the released used oil and other materials; and

4. if necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:482 (March 1999).

## §4071. Tracking

A. Acceptance. Used oil burners must keep a record of each used oil shipment accepted for burning. These records shall take the form of a used oil reuse/recycle manifest obtained from the department. Records for each shipment must include the following information:

1. the name and address of the transporter who delivered the used oil to the burner;

2. the name and address of the generator or processor/re-refiner from whom the used oil was sent to the burner;

3. the EPA identification number of the transporter who delivered the used oil to the burner;

4. the EPA identification number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent to the burner;

5. the quantity of used oil accepted; and

6. the date of acceptance.

B. Record Retention. The records described in LAC 33:V.4071.A must be maintained for at least three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995).

## §4073. Notices

A. Certification. Before a burner accepts the first shipment of off-specification used oil fuel from a generator, transporter, or processor/re-refiner, the burner must provide to the generator, transporter, or processor/re-refiner a one-time written and signed notice certifying that:

1. the burner has notified the administrative authority stating the location and general description of his used oil management activities; and

2. the burner will burn the used oil only in an industrial furnace or boiler identified in LAC 33:V.4063.A.

B. Certification Retention. The certification described in LAC 33:V.4073.A must be maintained for three years from the date the burner last receives shipment of off-specification used oil from that generator, transporter, or processor/re-refiner.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4075. Management of Residues

A. Burners who generate residues from the storage or burning of used oil must manage the residues as specified in LAC 33:V.4003.E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

# Subchapter G. Standards for Used Oil Fuel Marketers

## §4077. Applicability

A. Any person who conducts either of the following activities is subject to the requirements of this Subchapter:

1. directs a shipment of off-specification used oil from their facility to a used oil burner; or

2. first claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in LAC 33:V.4005.

B. The following persons are not marketers subject to this Subchapter:

1. used oil generators and transporters who transport used oil received only from generators, unless the generator or transporter directs a shipment of off-specification used oil from their facility to a used oil burner. Processors/re-refiners who burn some used oil fuel for purposes of processing are considered to be burning incidentally to processing. Thus, generators and transporters who direct shipments of off-specification used oil to processor/re-refiners who incidentally burn used oil are not marketers subject to this Subchapter; and

2. persons who direct shipments of on-specification used oil and who are not the first person to claim the oil meets the used oil fuel specifications of LAC 33:V.4005.

C. Any person subject to the requirements of this Subchapter must also comply with one of the following:

1. LAC 33:V.Chapter 40.Subchapter B;

2. LAC 33:V.Chapter 40.Subchapter D;

3. LAC 33:V.Chapter 40.Subchapter E; or

4. LAC 33:V.Chapter 40.Subchapter F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4079. Prohibitions

A. A used oil fuel marketer may initiate a shipment of off-specification used oil only to a used oil burner who:

1. has an EPA identification number; and

2. burns the used oil in an industrial furnace or boiler identified in LAC 33:V.4063.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4081. On-Specification Used Oil Fuel

A. Analysis of Used Oil Fuel. A generator, transporter, processor/re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of LAC 33:V.4005 by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.

B. Record Retention. A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the specifications for used oil fuel under LAC 33:V.4005, must keep copies of analyses of the used oil (or other information used to make the determination) for three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4083. Notification

A. Identification Numbers. A used oil fuel marketer subject to the requirements of this Subchapter who has not previously complied with the notification requirements of this Chapter must comply with these requirements and obtain an EPA identification number.

B. A marketer who has not received an EPA identification number may obtain one by notifying the Office of Environmental Services of their used oil activity by submitting a completed Louisiana Notification of Hazardous Waste Activity Form (HW-1) EPA Form 8700-12.

C. Upon promulgation of this Chapter, used oil fuel marketers who have previously notified must renotify the Office of Environmental Services of used oil activity.

D. A generator must notify the Office of Environmental Services within seven days if any of the information submitted in the application for the identification number changes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2474 (October 2005), LR 33:2125 (October 2007).

## §4085. Tracking

A. Off-Specification Used Oil Delivery. Any used oil marketer who directs a shipment of off-specification used oil to a burner must keep a record of each shipment of used oil to that used oil burner. These records shall take the form of a used oil reuse/recycle manifest obtained from the department. Records for each shipment must include the following information:

1. the name and address of the transporter who delivers the used oil to the burner;

2. the name and address of the burner who receives the used oil;

3. the EPA identification number of the transporter who delivers the used oil to the burner;

4. the EPA identification number of the burner;

5. the quantity of used oil shipped; and

6. the date of shipment.

B. On-Specification Used Oil Delivery. A generator, transporter, processor/re-refiner, or burner who first claims the used oil that is to be burned for energy recovery meets the fuel specifications under LAC 33:V.4005 must keep a record of each shipment of used oil to the facility to which it delivers the used oil. Records for each shipment must include the following information:

1. the name and address of the facility receiving the shipment;

2. the quantity of used oil fuel delivered;

3. the date of shipment or delivery; and

4. a cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specification as required under LAC 33:V.4081.A.

C. Record Retention. The records described in LAC 33:V.4085.A and B must be maintained for at least three years.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:482 (March 1999).

### §4087. Notices

A. Certification. Before a used oil generator, transporter, or processor/re-refiner directs the first shipment of off-specification used oil fuel to a burner, he must obtain a one-time notice written and signed by the burner certifying that:

1. the burner has notified the administrative authority stating the location and general description of his used oil management activities; and

2. the burner will burn the off-specification used oil only in an industrial furnace or boiler identified in LAC 33:V.4063.A.

B. Certification Retention. The certification described in LAC 33:V.4087.A must be maintained for three years from the date the last shipment of off-specification used oil is shipped to the burner.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## Subchapter H. Standards for Disposal of Used Oil and Use as a Dust Suppressant

### §4089. Applicability

A. The requirements of this Subchapter apply to all used oils that cannot be recycled and are therefore being disposed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4091. Disposal

A. Disposal of Hazardous Used Oils. Used oils that are identified as a hazardous waste and cannot be recycled in accordance with this Chapter must be managed in accordance with the hazardous waste management requirements of LAC 33:V.Subpart 1.

B. Disposal of Nonhazardous Used Oils. Used oils that are not hazardous wastes and cannot be recycled under this Chapter must be disposed in accordance with the requirements of LAC 33:VII.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4093. Use as a Dust Suppressant

A. The use of used oil as a dust suppressant is prohibited.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266, 267 (March 1995).

# Chapter 41. Recyclable Materials

### §4101. Applicability

A. Hazardous wastes that are recycled will be known as *recyclable materials*.

B. A recyclable material is subject to the regulations in this Chapter and other sections as specifically referred to herein.

C. A material that is used for a purpose for which it is manufactured or produced is not a recyclable material for purposes of this Chapter.

D. Upon transport of a recyclable material from the generation site and out of the direct control of the generator, the owner of the recyclable material shall notify the Office of Environmental Compliance in the manner provided in LAC 33:I.3923 within 24 hours of any determination that the material shall not be used, reused, or recycled. Following such a determination the recyclable material is no longer considered a recyclable material and is fully subject to all requirements of these regulations.

E. Upon determination by the generator that any material held for use, reuse, or recycling is to be discarded, such material shall no longer be considered a recyclable material and shall be handled as otherwise required in these regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 11:988 (October 1985), amended LR 11:1139 (December 1985), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2498 (November 2000), LR 30:1674 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 32:607 (April 2006).

## §4105. Requirements for Recyclable Material

A. Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities in Subsections B-E of this Section, except for the materials listed in Paragraphs A.1 and 2 of this Section. Hazardous wastes that are recycled will be known as *recyclable materials*.

1. The following recyclable materials are not subject to regulation under this Section and are not subject to the notification requirements of LAC 33:V.105 or Section 3010 of RCRA:

a. industrial ethyl alcohol that is reclaimed, except that, unless otherwise provided in an international agreement:

i. a person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, shall comply with the requirements applicable to a primary exporter in LAC 33:V.1113.D, G, and H, export such materials only upon consent of the receiving country and in conformance with the Louisiana State Acknowledgment of Consent as defined in LAC 33:V.1113, and provide a copy of the Louisiana State Acknowledgment of Consent to the shipment to the transporter transporting the shipment for export;

ii. a transporter transporting a shipment for export shall not accept a shipment if he knows the shipment does not conform to the Louisiana State Acknowledgment of Consent, shall ensure that a copy of the Louisiana State Acknowledgment of Consent accompanies the shipment, and shall ensure that it is delivered to the facility designated by the person initiating the shipment;

b. scrap metal that is not excluded under LAC 33:V.105.D.1.m;

c. fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under LAC 33:V.105.D.1.l);

d. the following recyclable materials:

i. hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil as long as the resulting fuel meets the used oil specification under LAC 33:V.4005 and as long as no other hazardous wastes are used to produce the hazardous waste fuel;

ii. hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, as long as the fuel meets the used oil fuel specification under LAC 33:V.4005; and

iii. oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, as long as the reclaimed oil meets the used oil fuel specification under LAC 33:V.4005.

2. The following recyclable materials are not subject to the requirements of this Section but are regulated under LAC 33:V.4139, 4141, 4143, and 4145, and all applicable provisions as provided in LAC 33:V.Chapters 1, 3, 5, 7, 27, 31, and 43:

a. recyclable materials used in a manner constituting disposal;

b. hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under LAC 33:V.Chapter 31 or 43.Subchapter N;

c. recyclable materials from which precious metals are reclaimed; and

d. spent lead-acid batteries that are being reclaimed.

3. Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of LAC 33:V.Subpart 1, but is regulated under LAC 33:V.Chapter 40. Used oil that is recycled includes any used oil that is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). The term includes, but is not limited to, oil that is re-refined, reclaimed, burned for energy recovery, or reprocessed.

4. Hazardous waste that is exported to or imported from designated member countries of the Organization for Economic Cooperation and Development (OECD) (as defined in LAC 33:V.1113.I.1.a) for the purpose of recovery is subject to the requirements of LAC 33:V.Chapter 11.Subchapter B, if it is subject to either the manifesting requirements of LAC 33:V.Chapter 11 or to the universal waste management standards of LAC 33:V.Chapter 38.

B. Generators and transporters of recyclable materials are subject to the applicable requirements of LAC 33:V.Chapters 11 and 13 and the notification requirements of LAC 33:V.105, except as provided in Paragraph A.1 of this Section.

C. Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of LAC 33:V.Chapters 3, 5, 11, 15, 19, 21, 22, 23, 29, 33, 35, and 37, and Chapter 43.Subchapters A-K; and the notification requirements of LAC 33:V.105.A, except as provided in Subsection A of this Section. The recycling process itself is exempt from regulation, except as provided in Subsection E of this Section.

D. Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in Subsection A of this Section:

1. notification requirements of LAC 33:V.105.A;

2. LAC 33:V.1516.B and C, dealing with the use of manifest and manifest discrepancies; and

3. Subsection E of this Section.

E. Owners or operators subject to LAC 33:V.Subpart 1 permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of LAC 33:V.Chapter 17 and Chapter 43.Subchapters Q-R.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 12:319 (May 1986), LR 13:84 (February 1987), LR 13:433 (August 1987), LR 16:219 (March 1990), LR 17:362 (April 1991), repromulgated LR 18:1256 (November 1992), amended LR 18:1375 (December 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 22:837 (September 1996), LR 23:579 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:685 (April 1998), LR 24:1108 (June 1998), LR 24:1742 (September 1998), LR 25:482 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:713 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 32:608 (April 2006).

## §4139. Recyclable Materials Used in a Manner Constituting Disposal

A. This Section applies to recyclable materials that are applied to or placed on the land without being mixed with any other substance or after being mixed or combined with any other substance. These materials will be referred to throughout this Section as *materials used in a manner that constitutes disposal*.

B. Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently subject to regulation if:

1. the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means; and

2. such products meet the applicable treatment standards in LAC 33:V.Chapter 22.Subchapter A (or applicable prohibition levels in LAC 33:V.2209 or 2215, where no treatment standards have been established), or Section 3004(d) of RCRA for each recyclable material (i.e., hazardous waste constituent) that they contain.

C. Fertilizers that contain recyclable materials are not subject to regulation provided that:

1. they are zinc fertilizers excluded from the definition of *solid waste* according to LAC 33:V.105.D.1.u; or

2. they meet the applicable treatment standards in LAC 33:V.2223 for each hazardous waste that they contain.

D. Anti-skid/de-icing uses of slags, which are generated from high temperature metals recovery (HTMR) processing of hazardous wastes K061, K062, and F006, in a manner constituting disposal are not covered by the exemption in Subsection C of this Section and remain subject to regulation.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 15:378 (May 1989), LR 16:220 (March 1990), LR 17:367 (April 1991), LR 17:658 (July 1991), LR 20:1000 (September 1994), LR 22:21 (January 1996), repromulgated LR 22:100 (February 1996), amended LR 23:566 (May 1997), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1743 (September 1998); amended by the Office of Environmental Assessment, Environmental Planning Division, LR 30:1684 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 32:610 (April 2006).

## §4141. General Requirements for Recyclable Materials Used in a Manner Constituting Disposal

A. Generators and transporters of materials that are used in a manner that constitutes disposal are subject to all the requirements of LAC 33:V.Chapters 11 and 13, and the notification requirements under Section 3010 of RCRA and LAC 33:V.105.

B. Owners and operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable provisions of LAC 33:V.Chapters 3, 5, 7, 11, 15, 19, 21, 23, 29, 33, 35, and 37, and the notification requirements of Section 3010 of RCRA and LAC 33:V.105.

C. Owners and operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of LAC 33:V.Chapters 3, 5, 7, 11, 15, 19, 21, 22, 23, 25, 27, 29, 31, 33, 35, and 37, and the notification requirements of Section 3010 of RCRA and LAC 33:V.105. These requirements do not apply to products

that contain these recyclable materials under the provisions of LAC 33:V.4139.B.

D. The use of waste or used oil or other material that is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment is prohibited.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 32:610 (April 2006).

## §4143. Recyclable Materials Utilized for Precious Metal Recovery

A. Applicability. This Section applies to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, and any combination of these.

B. Requirements. Persons who generate, transport, or store recyclable materials that are regulated under this Section are subject to the following requirements:

1. all such persons shall comply with the notification requirements under Section 3010 of RCRA and LAC 33:V.105;

2. generators shall operate in accordance with LAC 33:V.Chapter 11;

3. transporters shall operate in accordance with LAC 33:V.Chapter 13;

4. persons who store shall operate in accordance with LAC 33:V.Chapters 11 and 15; and

5. persons who export precious metals to or import precious metals from designated OECD member countries for recovery are subject to the requirements of LAC 33:V.Chapter 11.Subchapter B and LAC 33:V.4311. Persons who export precious metals to or import precious metals from non-OECD countries for recovery are subject to the requirements of LAC 33:V.1113 and 1123.

C. Persons who store recycled materials regulated under this Section shall keep the following records to document that they are not accumulating these materials speculatively, as defined in LAC 33:V.109:

1. the volume of these materials stored at the beginning of the calendar year;

2. the amount of these materials generated or received during the calendar year; and

3. the amount of these materials remaining at the end of the calendar year.

D. Recyclable materials that are regulated under this Section that are accumulated speculatively are subject to all applicable provisions of these regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 11:988 (October 1985), amended LR 11:1139 (December 1985), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:685 (April 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 32:611 (April 2006).

## §4145. Spent Lead-Acid Batteries Being Reclaimed

A. Applicability. If you generate, collect, transport, store, or re-generate lead-acid batteries for reclamation purposes, you may be exempt from certain hazardous waste management requirements. Use the following table to determine which requirements apply to you. Alternatively, you may choose to manage your spent lead-acid batteries under the Universal Waste rule in LAC 33:V.Chapter 38.

| If Your Batteries: | And If You: | Then You: | And You: |
|---|---|---|---|
| 1. will be reclaimed through regeneration (such as by electrolyte replacement); | | are exempt from LAC 33:V. Subpart 1 except for LAC 33:V. Chapters 1 and 49, and LAC 33:V.1103 and 3105, Table 1, and the notification requirements at Section 3010 of RCRA and LAC 33:V.105; | are subject to LAC 33:V. Chapters 1 and 49 and LAC 33:V.1103 and 3105, Table 1. |
| 2. will be reclaimed other than through regeneration; | generate, collect, and/or transport these batteries; | are exempt from LAC 33:V. Subpart 1 except for LAC 33:V.Chapters 1 and 49, and LAC 33:V.1103 and 3105, Table 1, and the notification requirements at Section 3010 of RCRA and LAC 33:V.105; | are subject to LAC 33:V. Chapters 1 and 49 and LAC 33:V.1103 and 3105, Table 1, and applicable provisions under LAC 33:V.Chapter 22. |
| 3. will be reclaimed other than through regeneration; | store these batteries, but you aren't the reclaimer; | are exempt from LAC 33:V. Subpart 1 except for LAC 33:V.Chapters 1 and 49, and LAC 33:V.1103 and 3105, Table 1, and the notification requirements at Section 3010 of RCRA and LAC 33:V.105; | are subject to LAC 33:V. Chapters 1 and 49 and LAC 33:V.1103 and 3105, Table 1, and applicable provisions under LAC 33:V.Chapter 22. |
| 4. will be reclaimed other than through regeneration; | store these batteries before you reclaim them; | must comply with LAC 33:V.4145.B and, as appropriate, other regulatory provisions described in LAC 33:V.4145.B; | are subject to LAC 33:V. Chapter 49 and LAC 33:V.1103 and 3105, Table 1, and applicable provisions under LAC 33:V.Chapter 22. |

| If Your Batteries: | And If You: | Then You: | And You: |
|---|---|---|---|
| 5. will be reclaimed other than through regeneration; | don't store these batteries before you reclaim them; | are exempt from LAC 33:V. Subpart 1 except for LAC 33:V. Chapters 1 and 49 and LAC 33:V.1103 and 3105, Table 1, and the notification requirements at Section 3010 of RCRA and LAC 33:V.105; | are subject to LAC 33:V. Chapter 49 and LAC 33:V.1103 and 3105, Table 1, and applicable provisions under LAC 33:V.Chapter 22. |

B. Requirements. The requirements of this Section apply to you if you store spent lead-acid batteries before you reclaim them, but you don't reclaim them through regeneration. The requirements are slightly different depending on your RCRA permit status.

1. For interim status facilities, you must comply with:

a. notification requirements under Section 3010 of RCRA and LAC 33:V.105;

b. all applicable provisions in LAC 33:V.Chapter 43, except LAC 33:V.4313 (waste analysis), and 4353 and 4355 (dealing with the use of the manifest and manifest discrepancies); and

c. all applicable provisions in LAC 33:V.Chapters 3, 5, and 7.

2. For permitted facilities, you must comply with:

a. notification requirements under Section 3010 of RCRA and LAC 33:V.105;

b. all applicable provisions in LAC 33:V.Chapter 15, except LAC 33:V.1519, 1521, 1523, 1525, 1527, 1529, and 1531;

c. all applicable provisions in LAC 33:V.1516, except Subsections B and C (dealing with the use of the manifest and manifest discrepancies); and

d. all applicable provisions in LAC 33:V.Chapters 3, 5, 7, 19, 21, 23, 29, 33, 35, and 37.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 13:237 (April 1987), LR 23:579 (May 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:287 (February 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 32:611 (April 2006), LR 32:830 (May 2006).

# Chapter 42. Conditional Exemption for Low-Level Mixed Waste Storage, Treatment, Transportation, and Disposal

## §4201. What definitions apply to this Chapter?

A. This Chapter uses the following special definitions.

*Agreement State*—a state that has entered into an agreement with the NRC under Section 274.b of the Atomic Energy Act of 1954 (AEA), as amended (68 Stat. 919), to assume responsibility for regulating within its borders by-product, source, or special nuclear material in quantities not sufficient to form a critical mass.

*Certified Delivery*—certified mail with return receipt requested, equivalent courier service, or other means that provides the sender with a receipt confirming delivery.

*Eligible Naturally Occurring and/or Accelerator-Produced Radioactive Material (NARM)*—NARM that is eligible for the transportation and disposal conditional exemption. It is a NARM waste that contains RCRA hazardous waste, meets the waste acceptance criteria of, and is allowed by state NARM regulations to be disposed of at a low-level radioactive waste disposal facility (LLRWDF) licensed in accordance with LAC 33:XV.Chapters 3 and 13, NRC, or NRC agreement state equivalent regulations.

*Exempted Waste*—a waste that meets the eligibility criteria in LAC 33:V.4205 and meets all of the conditions in LAC 33:V.4207 or meets the eligibility criteria in LAC 33:V.4223 and complies with all the conditions in LAC 33:V.4225. Such waste is conditionally exempted from the regulatory definition of *hazardous waste* described in LAC 33:V.109.

*Hazardous Waste*—any material that is defined to be hazardous waste in accordance with LAC 33:V.109, definition of *hazardous waste*.

*Land Disposal Restriction (LDR) Treatment Standards*—treatment standards, under LAC 33:V.Chapter 22, that a RCRA hazardous waste must meet before it can be disposed of in a RCRA hazardous waste land disposal unit.

*License*—a license issued by the department, NRC, or a NRC agreement state to users that manage radionuclides regulated by the department, NRC, or NRC agreement states under authority of the Atomic Energy Act of 1954, as amended (see LAC 33:XV.102).

*Low-Level Mixed Waste (LLMW)*—a waste that contains both low-level radioactive waste and RCRA hazardous waste.

*Low-Level Radioactive Waste (LLRW)*—a radioactive waste that is not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or by-product material, as defined in Section 11e.(2) of the Atomic Energy Act (see also the definition of *waste* at LAC 33:XV.102).

*Mixed Waste*—a waste that contains both RCRA hazardous waste and source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954, as amended.

*Naturally Occurring and/or Accelerator-Produced Radioactive Material (NARM)*—radioactive materials that are:

a. naturally occurring and are not source, special nuclear, or by-product materials, as defined by the AEA; or

b. produced by an accelerator. NARM is regulated by the states under state law or by Department of Energy (DOE), as authorized by the AEA under DOE orders.

*NRC*—the U. S. Nuclear Regulatory Commission.

*We or Us*—*administrative authority*, as defined in LAC 33:V.109. Within this Chapter, the administrative authority is the Office of Environmental Services, unless otherwise indicated.

*You*—a generator, treater, or other handler of low-level mixed waste or eligible NARM.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1004 (May 2002), amended LR 28:2181 (October 2002), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2474 (October 2005), LR 33:2125 (October 2007).

### §4203. What does a storage and treatment conditional exemption do?

A. The storage and treatment conditional exemption exempts your LLMW from the regulatory definition of *hazardous waste* in LAC 33:V.109 if your waste meets the eligibility criteria in LAC 33:V.4205 and you meet the conditions in LAC 33:V.4207.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1005 (May 2002).

### §4205. What wastes are eligible for the storage and treatment conditional exemption?

A. LLMW, defined in LAC 33:V.4201, is eligible for this conditional exemption if it is generated and managed by you under a single department, NRC, or other NRC agreement state license. (Mixed waste generated at a facility with a different license number and shipped to your facility for storage or treatment requires a permit and is ineligible for this exemption. In addition, NARM waste is ineligible for this exemption.)

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1005 (May 2002), amended LR 28:2181 (October 2002).

### §4207. What conditions must you meet for your LLMW to qualify for and maintain a storage and treatment exemption?

A. For your LLMW to qualify for the exemption, you must notify us in writing by certified delivery that you are claiming a conditional exemption for the LLMW stored on your facility. The dated notification must include your name, address, RCRA identification number, department, NRC, or NRC agreement state license number, the waste code(s) and storage unit(s) for which you are seeking an exemption, and a statement that you meet the conditions of this Chapter. Your notification must be signed by your authorized representative, who certifies that the information in the notification is true, accurate, and complete. You must notify us of your claim either within 90 days of the effective date of these regulations in your state or within 90 days of when a storage unit is first used to store conditionally exempt LLMW.

B. To qualify for and maintain an exemption for your LLMW you must:

1. store your LLMW waste in tanks or containers in compliance with the requirements of your license that apply to the proper storage of low-level radioactive waste (not including those license requirements that relate solely to recordkeeping);

2. store your LLMW in tanks or containers in compliance with chemical compatibility requirements of a tank or container in LAC 33:V.1919, 2115, 4429 and 4444;

3. certify that facility personnel who manage stored conditionally exempt LLMW are trained in a manner that ensures that the conditionally exempt waste is safely managed and includes training in chemical waste management and hazardous materials incidents response that meets the personnel training standards found in LAC 33:V.1515.A.3;

4. conduct an inventory of your stored conditionally exempt LLMW at least annually and inspect it at least quarterly for compliance with this Chapter; and

5. maintain an accurate emergency plan and provide it to all local authorities who may have to respond to a fire, explosion, or release of hazardous waste or hazardous constituents. Your plan must describe emergency response arrangements with local authorities, describe evacuation plans, list the names, addresses, and telephone numbers of all facility personnel qualified to work with local authorities as emergency coordinators, and list emergency equipment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1005 (May 2002).

### §4209. What waste treatment does the storage and treatment conditional exemption allow?

A. You may treat your LLMW at your facility within a tank or container in accordance with the terms of your

department, NRC, or NRC agreement state license. Treatment that cannot be done in a tank or container without a RCRA permit (such as incineration) is not allowed under this exemption.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1005 (May 2002).

**§4211. How could you lose the conditional exemption for your LLMW and what action must you take?**

A. Your LLMW will automatically lose the storage and treatment conditional exemption if you fail to meet any of the conditions specified in LAC 33:V.4207. When your LLMW loses the exemption, you must immediately manage that waste, which failed the condition as RCRA hazardous waste, and the storage unit storing the LLMW immediately becomes subject to RCRA hazardous waste container and/or tank storage requirements.

1. If you fail to meet any of the conditions specified in LAC 33:V.4207, you must report to us or the oversight agency in the NRC agreement state, in writing by certified delivery within 30 days of learning of the failure. Your report must be signed by your authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

a. the specific condition(s) you failed to meet;

b. a description of the LLMW (including the waste name, hazardous waste codes, and quantity) and storage location at the facility; and

c. the date(s) on which you failed to meet the condition(s).

2. If the failure to meet any of the conditions may endanger human health or the environment, you must also promptly notify the Office of Environmental Compliance in accordance with LAC 33:I.3923 and submit a written report within five days using the procedures provided in LAC 33:I.3925.B and C. Failures that may endanger human health or the environment include, but are not limited to, discharge of a CERCLA reportable quantity or other leaking or exploding tanks or containers or detection of radionuclides above background or hazardous constituents in the leachate collection system of a storage area. If the failure may endanger human health or the environment, you must follow the provisions of your emergency plan.

B. We may terminate your conditional exemption for your LLMW, or require you to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirement(s) of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1006 (May 2002), amended LR 28:2181 (October 2002), LR 30:1674 (August 2004).

**§4213. If you lose the storage and treatment conditional exemption for your LLMW, can the exemption be reclaimed?**

A. You may reclaim the storage and treatment exemption for your LLMW if:

1. you again meet the conditions specified in LAC 33:V.4207; and

2. you send us a notice by certified delivery that you are reclaiming the exemption for your LLMW. Your notice must be signed by your authorized representative certifying that the information contained in your notice is true, complete, and accurate. In your notice you must do the following:

a. explain the circumstances of each failure;

b. certify that you have corrected each failure that caused you to lose the exemption for your LLMW and that you again meet all the conditions as of the date you specify;

c. describe plans that you have implemented, listing specific steps you have taken, to ensure the conditions will be met in the future; and

d. include any other information you want us to consider when we review your notice reclaiming the exemption.

B. We may terminate a reclaimed conditional exemption if we find that your claim is inappropriate based on factors including, but not limited to, the following:

1. you have failed to correct the problem;

2. you explained the circumstances of the failure unsatisfactorily; or

3. you failed to implement a plan with steps to prevent another failure to meet the conditions of LAC 33:V.4207.

C. In reviewing a reclaimed conditional exemption under this Section, we may add conditions to the exemption to ensure that waste management during storage and treatment of the LLMW will protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1006 (May 2002).

**§4215. What records must you keep at your facility and for how long?**

A. In addition to those records required by your department, NRC, or NRC agreement state license, you must keep the following records:

1. your initial notification records, return receipts, reports to us of failure(s) to meet the exemption conditions, and all records supporting any reclaim of an exemption;

2. records of your LLMW annual inventories and quarterly inspections;

3. your certification that facility personnel who manage stored mixed waste are trained in safe management of LLMW, including training in chemical waste management and hazardous materials incidents response; and

4. your emergency plan as specified in LAC 33:V.4207.B.

B. You must maintain records concerning notification, personnel trained, and your emergency plan for as long as you claim this exemption and for three years thereafter or in accordance with department regulations under LAC 33:XV.Chapter 4, NRC, or equivalent NRC agreement state regulations, whichever is longer. You must maintain records concerning your annual inventory and quarterly inspections for three years after the waste is sent for disposal or in accordance with department regulations under LAC 33:XV.Chapter 4, NRC or equivalent NRC agreement state regulations, whichever is longer.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1006 (May 2002).

### §4217. When is your LLMW no longer eligible for the storage and treatment conditional exemption?

A. When your LLMW has met the requirements of your department, NRC, or NRC agreement state license for decay-in-storage and can be disposed of as nonradioactive waste, then the conditional exemption for storage no longer applies. On that date your waste is subject to hazardous waste regulation under the relevant sections, and the time period for accumulation of a hazardous waste, as specified in LAC 33:V.1109.E, begins.

B. When your conditionally exempt LLMW, which has been generated and stored under a single department, NRC, or other NRC agreement state license number, is removed from storage, it is no longer eligible for the storage and treatment exemption. However, your waste may be eligible for the transportation and disposal conditional exemption at LAC 33:V.4221.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1006 (May 2002).

### §4219. Do closure requirements apply to units that stored LLMW prior to the effective date of this Chapter?

A. Interim status and permitted storage units that have been used to store only LLMW prior to the effective date of this Chapter and, after that date, store only LLMW that becomes exempt under this Chapter are not subject to the closure requirements of LAC 33:V.Chapters 5, 18, 19, 21, 23, 24, 25, 27, 28, 29, 32, 35, and 43. Storage units (or portions of units) that have been used to store both LLMW and non-mixed hazardous waste prior to the effective date of this Chapter or are used to store both after that date remain subject to closure requirements with respect to the non-mixed hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1007 (May 2002).

### §4221. What does the transportation and disposal conditional exemption do?

A. This conditional exemption exempts your waste from the regulatory definition of hazardous waste if your waste meets the eligibility criteria under LAC 33:V.4223 and you meet the conditions in LAC 33:V.4225.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1007 (May 2002).

### §4223. What wastes are eligible for the transportation and disposal conditional exemption?

A. Eligible waste must be:

1. a *LLMW*, as defined in this Chapter, that meets the waste acceptance criteria of a LLRWDF; and/or

2. an *eligible NARM waste*, as defined in this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1007 (May 2002).

### §4225. What are the conditions you must meet for your waste to qualify for and maintain the transportation and disposal conditional exemption?

A. You must meet the following conditions for your eligible waste to qualify for and maintain the exemption.

1. The eligible waste must meet or be treated to meet LDR treatment standards, as described in LAC 33:V.4227.

2. If you are not already subject to department, NRC, or NRC agreement state equivalent manifest and transportation regulations for the shipment of your waste, you must manifest and transport your waste according to department regulations, as described in LAC 33:V.4229, NRC, or NRC agreement state equivalent regulations.

3. The exempted waste must be in containers when it is disposed of in the LLRWDF, as described in LAC 33:V.4235.

4. The exempted waste must be disposed of at a designated LLRWDF, as described in LAC 33:V.4233.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1007 (May 2002).

**§4227. What treatment standards must your eligible waste meet?**

A. Your LLMW or eligible NARM waste must meet LDR treatment standards specified in LAC 33:V.Chapter 22.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1007 (May 2002).

**§4229. Are you subject to the manifest and transportation condition in LAC 33:V.4225.A.2?**

A. If you are not already subject to equivalent department, NRC, or NRC agreement state manifest and transportation regulations for the shipment of your waste, you must meet the manifest requirements under LAC 33:XV.465 and the transportation requirements under LAC 33:XV.Chapter 15 to ship the exempted waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1007 (May 2002).

**§4231. When does the transportation and disposal exemption take effect?**

A. The exemption becomes effective once all the following have occurred.

1. Your eligible waste meets the applicable LDR treatment standards.

2. You have received return receipts that you have notified us and the LLRWDF, as described in LAC 33:V.4237.

3. You have completed the packaging and preparation for shipment requirements for your waste according to LAC 33:XV.Chapter 15, NRC, or other NRC agreement state equivalent regulations, and you have prepared a manifest for your waste according to LAC 33:XV.Chapter 4, NRC, or other NRC agreement state equivalent regulations.

4. You have placed your waste on a transportation vehicle destined for a LLRWDF licensed by the department, NRC, or other NRC agreement state.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1007 (May 2002).

**§4233. Where must your exempted waste be disposed of?**

A. Your exempted waste must be disposed of in a LLRWDF that is regulated and licensed by LAC 33:XV.Chapters 3 and 13, NRC, or other NRC agreement state, including state NARM licensing regulations for eligible NARM.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1008 (May 2002).

**§4235. What type of container must be used for disposal of exempted waste?**

A. Your exempted waste must be placed in containers before it is disposed. The container must be:

1. a carbon steel drum;

2. an alternative container with equivalent containment performance in the disposal environment, such as a carbon steel drum; or

3. a *high integrity container* as defined by department, NRC, or other NRC agreement state regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1008 (May 2002).

**§4237. Whom must you notify?**

A. You must provide a one time notice to us stating that you are claiming the transportation and disposal conditional exemption prior to the initial shipment of an exempted waste from your facility to a LLRWDF. Your dated written notice must include your facility name, address, phone number, and RCRA ID number and be sent by certified delivery.

B. You must notify the LLRWDF receiving your exempted waste by certified delivery before shipment of each exempted waste. You can only ship the exempted waste after you have received the return receipt of your notice to the LLRWDF. This notification must include the following:

1. a statement that you have claimed the exemption for the waste;

2. a statement that the eligible waste meets applicable LDR treatment standards;

3. your facility's name, address, and RCRA ID number;

4. the RCRA hazardous waste codes prior to the exemption of the waste streams;

5. a statement that the exempted waste must be placed in a container, according to LAC 33:V.4235, prior to disposal in order for the waste to remain exempt under the transportation and disposal conditional exemption of this Chapter;

6. the manifest number of the shipment that will contain the exempted waste; and

7. a certification that all the information provided is true, complete, and accurate. The statement must be signed by your authorized representative.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1008 (May 2002).

**§4239. What records must you keep at your facility and for how long?**

A. In addition to those records required by the department, NRC, or other NRC agreement state license, you must keep records as follows.

1. You must follow the applicable existing recordkeeping requirements under LAC 33:V.1529, 2245, and 4357 to demonstrate that your waste has met LDR treatment standards prior to your claiming the exemption.

2. You must keep a copy of all notifications and return receipts required under LAC 33:V.4241 and 4243 for three years after the exempted waste is sent for disposal.

3. You must keep a copy of all notifications and return receipts required under LAC 33:V.4237.A for three years after the last exempted waste is sent for disposal.

4. You must keep a copy of the notification and return receipt required under LAC 33:V.4237.B for three years after the exempted waste is sent for disposal.

5. If you are not already subject to equivalent department, NRC, or other NRC agreement state manifest and transportation regulations for the shipment of your waste, you must also keep all other documents related to tracking the exempted waste as required under LAC 33:XV.465, including applicable NARM requirements, in addition to the records specified in this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1008 (May 2002).

**§4241. How could you lose the transportation and disposal conditional exemption for your waste and what actions must you take?**

A. Any waste will automatically lose the transportation and disposal exemption if you fail to manage it in accordance with all of the conditions specified in LAC 33:V.4225.

1. When you fail to meet any of the conditions specified in LAC 33:V.4225 for any of your wastes, you must report to the Office of Environmental Compliance, in writing by certified delivery, within 30 days of learning of the failure. Your report must be signed by your authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

a. the specific condition(s) that you failed to meet for the waste;

b. a description of the waste (including the waste name, hazardous waste codes, and quantity) that lost the exemption; and

c. the date(s) on which you failed to meet the condition(s) for the waste.

2. If the failure to meet any of the conditions may endanger human health or the environment, you must also promptly notify the Office of Environmental Compliance in accordance with LAC 33:I.3923 and submit a written report within five days using the procedures provided in LAC 33:I.3925.B and C.

B. We may terminate your ability to claim a conditional exemption for your waste or require you to meet additional conditions to claim a conditional exemption for serious or repeated noncompliance with any requirement(s) of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1008 (May 2002), amended LR 28:2181 (October 2002), LR 30:1675 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2125 (October 2007).

**§4243. If you lose the transportation and disposal conditional exemption for a waste, can the exemption be reclaimed?**

A. You may reclaim the transportation and disposal exemption for a waste after you have received a return receipt confirming that we have received your notification of the loss of the exemption specified in LAC 33:V.4241.A and if:

1. you again meet the conditions specified in LAC 33:V.4225 for the waste; and

2. you send a notice, by certified delivery, to us that you are reclaiming the exemption for the waste. Your notice must be signed by your authorized representative certifying that the information provided is true, accurate, and complete. The notice must:

a. explain the circumstances of each failure;

b. certify that each failure that caused you to lose the exemption for the waste has been corrected and that you again meet all conditions for the waste as of the date you specify;

c. describe plans you have implemented, listing the specific steps that you have taken, to ensure that conditions will be met in the future; and

d. include any other information you want us to consider when we review your notice reclaiming the exemption.

B. We may terminate a reclaimed conditional exemption if we find that your claim is inappropriate based on factors including, but not limited to:

1. you have failed to correct the problem;

2. you explained the circumstances of the failure unsatisfactorily; or

3. you failed to implement a plan with steps to prevent another failure to meet the conditions of LAC 33:V.4225.

C. In reviewing a reclaimed conditional exemption under this Section, we may add conditions to the exemption to

ensure that transportation and disposal activities will protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:1009 (May 2002).

# Chapter 43. Interim Status

## §4301. Purpose and Applicability

A. The purpose of interim status is to allow existing facilities to operate in an appropriate and responsible manner during the period of time required to process and review permit application or until certification of final closure or, if the facility is subject to post-closure requirements, until post-closure responsibilities are fulfilled. Interim status facilities must, when required by the administrative authority, submit to the Office of Environmental Services a permit application in compliance with the requirements of these regulations. Failure to submit an application is a violation of interim status and will result in revocation of a facility's interim status designation. Once revoked the facility will be treated as an unpermitted facility and appropriate legal action will be taken.

B. Except as provided in LAC 33:V.4719, the standards of this Chapter and of LAC 33:V.Chapter 26 apply to owners and operators of facilities that treat, store, or dispose of hazardous waste who have fully complied with the requirements for interim status under Section 3005(e) of RCRA and LAC 33:V.501 until either a permit is issued under Section 3005 of RCRA or until applicable LAC 33:V.Chapter 43 closure and post-closure responsibilities are fulfilled, and to those owners and operators of facilities in existence on November 19, 1980, who have failed to provide timely notification as required by Section 3010(a) of RCRA and/or failed to file Part A of the permit application as required by LAC 33:V.303.K and 501.C. These standards apply to all treatment, storage, and disposal of hazardous waste at these facilities after the effective date of these regulations, except as specifically provided otherwise in this Chapter or LAC 33:V.Chapter 49.

[Comment: As stated in Section 3005(a) of RCRA, after the effective date of regulations under that Section (i.e., LAC 33:V.Chapters 3, 5, and 7), the treatment, storage, and disposal of hazardous waste is prohibited except in accordance with a permit. Section 3005(e) of RCRA provides for the continued operation of an existing facility that meets certain conditions, until final administrative disposition of the owner's and operator's permit application is made.]

C. The requirements of this Chapter do not apply to:

1. a person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sanctuaries Act;

[Comment: These LAC 33:V.Chapter 43 regulations do apply to the treatment or storage of hazardous waste before it is loaded onto an ocean vessel for incineration or disposal at sea, as provided in Subsection B of this Section.]

2. the owner or operator of a POTW which treats, stores, or disposes of hazardous waste;

[Comment: The owner or operator of a facility under Paragraphs C.1 and 2 of this Section is subject to the requirements of LAC 33:V.Chapters 11, 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 35, and-37 to the extent they are included in a permit by rule granted to such a person under 40 CFR 122 and by 144.14.]

3. a person who treats, stores, or disposes of hazardous waste in a state with a RCRA hazardous waste program authorized under Subpart A or B of 40 CFR Part 271, except that the requirements of this Chapter will continue to apply:

a. if the authorized state RCRA program does not cover disposal of hazardous waste by means of underground injection; or

b. to a person who treats, stores, or disposes of hazardous waste in a state authorized under Subpart A or B of 40 CFR Part 271 if the state has not been authorized to carry out the requirements and prohibitions applicable to the treatment, storage, or disposal of hazardous waste at his facility which are imposed in accordance with the Hazardous and Solid Waste Act Amendments of 1984. The requirements and prohibitions that are applicable until a state receives authorization to carry them out include all federal program requirements identified in 40 CFR 271.1.j;

4. the owner or operator of a facility permitted, licensed, or registered by the state to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation by LAC 33:V.Subpart 1;

5. the owner and operator of a facility managing recyclable materials described in LAC 33:V.4105.A.1-3, except to the extent they are referred to in LAC 33:V.Chapter 40 or LAC 33:V.4139, 4141, 4143, or 4145;

6. a generator accumulating waste on-site in compliance with LAC 33:V.1109.E, except to the extent the requirements are included in LAC 33:V.1109.E;

7. a farmer disposing of waste pesticides from his own use in compliance with LAC 33:V.1101.D;

8. the owner or operator of a *totally enclosed treatment facility* (as defined in LAC 33:V.109);

9. the owner or operator of an *elementary neutralization unit* or *wastewater treatment unit* (as defined in LAC 33:V.109), provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 High TOC Subcategory defined in LAC 33:V.2299.Appendix, Table 2, Treatment Standards for Hazardous Wastes) or reactive (D003) waste to remove the characteristic before land disposal, the owner/operator must comply with the requirements set out in LAC 33:V.4321.B;

10.a. except as provided in Subparagraph C.10.b of this Section, a person engaged in treatment or containment

activities during immediate response to any of the following situations:

i. a discharge of a hazardous waste;

ii. an imminent and substantial threat of a discharge of hazardous waste;

iii. a discharge of a material that, when discharged, becomes a hazardous waste; or

iv. an immediate threat to human health, public safety, property, or the environment from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an *explosives or munitions emergency response specialist* as defined in LAC 33:V.109;

b. an owner or operator of a facility otherwise regulated by this Chapter must comply with all applicable requirements of LAC 33:V.Chapter 43.Subchapters C and D;

c. any person who is covered by Subparagraph C.10.b of this Section and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this Chapter and 40 CFR 122-124 for those activities; and

d. in the case of an explosives or munitions emergency response, if a federal, state, tribal, or local official acting within the scope of his or her official responsibilities or an explosives or munitions emergency response specialist determines that immediate removal of the material or waste is necessary to protect human health or the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have EPA identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition;

11. a transporter storing manifested shipments of hazardous waste in containers meeting the requirements of LAC 33:V.1109.A at a transfer facility for a period of 10 days or less;

12. the addition of absorbent material to waste in a *container* (as defined in LAC 33:V.109) or the addition of waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container and LAC 33:V.4321.B.1 and LAC 33:V.Chapter 43.Subchapter H are complied with;

13. universal waste handlers and universal waste transporters (as defined in LAC 33:V.3813) handling the wastes listed below. These handlers are subject to regulation under LAC 33:V.Chapter 38, when handling the following universal wastes:

a. batteries as described in LAC 33:V.3803;

b. pesticides as described in LAC 33:V.3805;

c. mercury-containing equipment as described in LAC 33:V.3807;

d. lamps as described in LAC 33:V.3809;

e. electronics as described in LAC 33:V.3810; and

f. antifreeze as described in LAC 33:V.3811;

14. LAC 33:V.5309 identifies when the requirements of this Chapter apply to the storage of military munitions classified as solid waste under LAC 33:V.5303. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in LAC 33:V.Subpart 1.

D. Facilities having interim status are subject to all applicable federal and state laws and regulations, including these regulations.

E. The requirements of this Chapter apply to owners or operators of all facilities which treat, store, or dispose of hazardous waste referred to in LAC 33:V.Chapter 22, and Chapter 22 standards are material conditions or requirements of the LAC 33:V.Chapter 43 interim status standards.

F. Interim status is not available to any facility that has been previously denied a permit for the treatment, storage or disposal of hazardous waste or for which authority to operate has been previously terminated.

G. EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027 must not be managed at facilities subject to regulation under LAC 33:V.4301-4547 unless:

1. the wastewater treatment sludge is generated in a surface impoundment as part of the plant's wastewater treatment system;

2. the waste is stored in tanks or containers;

3. the waste is stored or treated in waste piles that meet the requirements of LAC 33:V.2301.C as well as all other applicable requirements of LAC 33:V.Chapter 43.Subchapter K;

4. the waste is burned in incinerators that are certified pursuant to the standards and procedures in LAC 33:V.4522; or

5. the waste is burned in facilities that thermally treat the waste in a device other than an incinerator and that are certified pursuant to the standards and procedures in LAC 33:V.4534.

H. Failure to Qualify for Interim Status. If the department has reason to believe upon examination of a Part I application that it fails to meet the requirements of these regulations, it shall notify the owner or operator in writing of the apparent deficiency. Such notice shall specify the grounds for the department's belief that the application is deficient. The owner or operator shall have 30 days from receipt to respond to such a notification and to explain or cure the alleged deficiency in his Part I application. If, after such notification and opportunity for response, the department determines that the application is deficient, it may take appropriate enforcement action.

I. LAC 33:V.5309 identifies when the requirements of this Chapter apply to the storage of military munitions classified as solid waste under LAC 33:V.5303. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in LAC 33:V.Chapters 1-37, 41-49, and 53.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:84 (February 1987), LR 16:220 (March 1990), LR 17:362 (April 1991), LR 18:1256 (November 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1743 (September 1998), LR 25:482 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1466 (August 1999), LR 26:2498 (November 2000), LR 27:713 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2474 (October 2005), LR 31:3121 (December 2005), LR 32:612 (April 2006), LR 33:2126 (October 2007), LR 34:632 (April 2008).

## §4302. Operation during Interim Status

A. During the interim status period the facility shall not:

1. treat, store, or dispose of hazardous waste not specified in Part I of the permit application;

2. employ processes not specified in Part I of the permit application; or

3. exceed the design capacities specified in Part I of the permit application.

B. Interim Status Standards. During interim status, owners or operators shall comply with the interim status standards at LAC 33:V.Chapter 43.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 20:1000 (September 1994).

## §4303. Changes during Interim Status

A. Except as provided in LAC 33:V.4303.B, the owner or operator of an interim status facility may make the following changes at the facility:

1. treatment, storage, or disposal of new hazardous wastes not previously identified in Part I of the permit application (and, in the case of newly listed or identified wastes, addition of the units being used to treat, store, or dispose of the hazardous wastes on the effective date of the listing or identification) if the owner or operator submits a revised Part I permit application prior to such treatment, storage, or disposal;

2. increases in the design capacity of processes used at the facility if the owner or operator submits a revised Part I permit application prior to such a change (along with a justification explaining the need for the change) and the administrative authority approves the changes because:

a. there is a lack of available treatment, storage, or disposal capacity at other hazardous waste management facilities; or

b. the change is necessary to comply with a federal, state, or local requirement;

3. changes in the processes for the treatment, storage, or disposal of hazardous waste or addition of processes if the owner or operator submits a revised Part I permit application prior to such change (along with a justification explaining the need for the change) and the administrative authority approves:

a. the change is necessary to prevent a threat to human health and the environment because of an emergency situation; or

b. the change is necessary to comply with a federal, state, or local requirement;

4. changes in the ownership or operational control of a facility, which shall be done in accordance with LAC 33:I.Chapter 19;

5. changes made in accordance with an interim status corrective action order issued by EPA under Section 3008(h) of RCRA or other federal authority, or by a court in a judicial action brought by EPA. Changes under this Paragraph are limited to the treatment, storage, or disposal of solid waste from releases that originate within the boundary of the facility;

6. addition of newly regulated units for the treatment, storage, or disposal of hazardous waste if the owner or operator submits a revised Part I permit application on or before the date on which the unit becomes subject to the new requirements.

B. Except as specifically allowed under this Section, changes listed under LAC 33:V.4303.A may not be made if they amount to reconstruction of the hazardous waste management facility. Reconstruction occurs when the capital investment in the changes to the facility exceeds 50 percent of the capital cost of a comparable entirely new hazardous waste management facility. If all other requirements are met, the following changes may be made even if they amount to a reconstruction:

1. changes made solely for the purposes of complying with the requirements of LAC 33:V.4437 for tanks and ancillary equipment;

2. if necessary to comply with federal, state, or local requirements, changes to an existing unit, changes solely involving tanks or containers, or addition of replacement surface impoundments that satisfy the standards of LAC 33:V.Chapters 15, 19, 21, or 29;

3. changes that are necessary to allow owners or operators to continue handling newly listed or identified hazardous wastes that have been treated, stored, or disposed of at the facility prior to the effective date of the rule establishing the new listing or identification;

4. changes during closure of a facility or of a unit within a facility made in accordance with an approved closure plan;

5. changes necessary to comply with an interim status corrective action order issued by EPA under Section 3008(h) of RCRA or other federal authority, or by a court in a judicial proceeding brought by EPA, provided that such changes are limited to the treatment, storage, or disposal of solid waste from releases that originate within the boundary of the facility;

6. changes to treat or store, in tanks, containers, or containment buildings, hazardous wastes subject to land disposal prohibitions imposed by LAC 33:V.Chapter 22, provided that such changes are made solely for the purpose of complying with LAC 33:V.Chapter 22;

7. addition of newly regulated units under LAC 33:V.4303.A.6;

8. changes necessary to comply with standards under 40 CFR Part 63, Subpart EEE–National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 15:378 (May 1989), LR 16:220 (March 1990), LR 16:614 (July 1990), LR 17:658 (July 1991), LR 18:1375 (December 1992), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:484 (March 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2430 (October 2005).

## §4305. Termination of Interim Status

A. Interim status terminates when:

1. for owners or operators of each land disposal facility which achieved interim status prior to November 8, 1984, on November 8, 1985, unless:

a. the owner or operator submits a Part II application for a permit for such facility prior to that date; and

b. the owner or operator certifies that such facility is in compliance with all applicable groundwater monitoring and financial responsibility requirements;

2. for owners or operators of each land disposal facility which is in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to the requirement to have a RCRA permit and which is granted interim status, 12 months after the date on which the facility first becomes subject to such permit requirement unless the owner or operator of such facility:

a. submits a Part II application for a RCRA permit for such facility before the date 12 months after the date on which the facility first becomes subject to such permit requirement; and

b. certifies that such facility is in compliance with all applicable ground-water monitoring and financial responsibility requirements;

3. for owners and operators of each incinerator facility which has achieved interim status prior to November 8, 1984, interim status terminates on November 8, 1989, unless the owner or operator of the facility submits a Part II application for a RCRA permit for an incinerator facility by November 8, 1986;

4. for owners or operators of any facility (other that a land disposal or an incinerator facility) which achieved interim status prior to November 8, 1984, interim status terminates on November 8, 1992, unless the owner or operator of the facility submits a Part II application for a RCRA permit for the facility by November 8, 1988;

5. for owners or operators of any land disposal unit that is granted authority to operate under LAC 33:V.4303.A.1, 2, or 3, on the date 12 months after the effective date of such requirement, unless the owner or operator certifies that such unit is in compliance with all applicable groundwater monitoring and financial responsibility requirements;

6. one of the following occurs:

a. final administrative disposition of a permit application is made, except an application for a remedial action plan (RAP) under LAC 33:V.Chapter 43.Subchapter H; or

b. interim status is terminated as provided in LAC 33:V.303.E.4.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:220 (March 1990), LR 16:614 (July 1990), LR 20:1000 (September 1994), LR 20:1109 (October 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:288 (February 2000).

## §4306. Imminent Hazard Action

A. Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to R.S. 30:2050.8.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:288 (February 2000).

# Subchapter A. General Facility Standards

## §4307. Applicability

A. The regulations of LAC 33:V.Chapter 43 apply to owners and operators of all hazardous waste facilities except as LAC 33:V.4301 provides otherwise.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:944 (September 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998), LR 25:484 (March 1999).

## §4309. Identification Number

A. Every facility owner or operator must apply to EPA for an EPA identification number in accordance with the EPA notification procedures.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4311. Required Notices

A. Interim status facilities must comply with LAC 33:V.1531.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:685 (April 1998).

## §4313. General Waste Analysis

A. Before an owner or operator treats, stores, or disposes of any hazardous wastes or nonhazardous wastes, if applicable, under LAC 33:V.4383.D, he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with LAC 33:V.Chapters 22 and 43.

B. The analysis may include data developed under LAC 33:V.Chapters 1, 31, 41, 49 and existing published or documented data about the hazardous waste or about waste generated from similar processes.

[Comment: For example, the facility's records of analyses performed on the waste before the effective date of these regulations or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility may be included in the data base required to comply with LAC 33:V.4313.A. The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part of the information required by LAC 33:V.4313.A, except as otherwise specified in LAC 33:V.2247.A and G. If the generator does not supply the information and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this Section.]

C. The analysis must be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis must be repeated:

1. when the owner or operator is notified or has reason to believe that the process or operation generating the hazardous wastes or nonhazardous wastes, if applicable, under LAC 33:V.4383.D has changed; and

2. for off-site facilities, when the results of the inspection required in LAC 33:V.4313.D indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

D. The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

E. The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with LAC 33:V.4313.A-D. He must keep this plan at the facility. At a minimum, the plan must specify:

1. the parameters for which each hazardous waste or nonhazardous waste, if applicable, under LAC 33:V.4383.D will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with LAC 33:V.4313.A-D;

2. the test methods which will be used to test for these parameters;

3. the sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

a. one of the sampling methods described in LAC 33:V.4999.Appendix D; or

b. an equivalent sampling method;

[NOTE: See LAC 33:V.105.H for related discussion.]

4. the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date;

5. for off-site facilities, the waste analyses that hazardous waste generators have agreed to supply;

6. where applicable, the methods that will be used to meet the additional waste analysis requirements for specific waste management methods as specified in LAC 33:V.2245, 2247, 4445, 4453, 4467, 4481, 4507, 4515, 4527, 4539, 4557, 4585, and 4727;

7. for surface impoundments exempted from land disposal restrictions under LAC 33:V.2237.A, the procedures and schedule for:

a. the sampling of impoundment contents;

b. the analysis of test data; and

c. the annual removal of residues which are not delisted under LAC 33:V.105.M or which exhibit a characteristic of hazardous waste and either:

i. do not meet applicable treatment standards of LAC 33:V.Chapter 22.Subchapter B; or

ii. where no treatment standards have been established:

(a). such residues are prohibited from land disposal under LAC 33:V.2213 or RCRA Section 3004(d); or

(b). such residues are prohibited from land disposal under LAC 33:V.Chapter 22; and

8. for owners and operators seeking an exemption to the air emission standards of Subchapter V of this Chapter in accordance with LAC 33:V.4725:

a. if direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption; and

b. if knowledge of the waste is used for the waste determination, any information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from off-site, that is used as the basis for knowledge of the waste.

F. For off-site facilities, the waste analysis plan required in LAC 33:V.4313.E must also specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

1. the procedures which will be used to determine the identity of each movement of waste managed at the facility;

2. the sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling; and

3. the procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:1057 (December 1990), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1743 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:714 (May 2001).

## §4315. Security

A. The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, unless:

1. physical contact with the waste, structures, or equipment with the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and

2. disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this Part.

B. Unless exempt under LAC 33:V.4315.A.1 and 2, a facility must have:

1. a 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the active portion of the facility; or

2. a barrier and a means to control entry as follows:

a. an artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff), which completely surrounds the active portion of a facility; and

b. a means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility).

C. The requirements of LAC 33:V.4315.B are satisfied if the facility or plant within which the active portion is located itself has a surveillance system, or a barrier and a means to control entry, which complies with the requirements of LAC 33:V.4315.B.1 or B.2.

D. Unless exempt under LAC 33:V.4315.A.1 and A.2, a sign with the legend, "Danger—Unauthorized Personnel Keep Out," must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger—Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4317. General Inspection Requirements

A. The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to release of

hazardous waste constituents to the environment or a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

B. The owner or operator must develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

1. He must keep this schedule at the facility.

2. The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).

3. The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in LAC 33:V.4425, 4437, 4440, 4455, 4470, 4485, 4502, 4519, 4529, 4541, 4555, 4565, 4567, 4577, and 4727-4739, where applicable.

C. The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

D. The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1744 (September 1998), LR 25:484 (March 1999).

## §4319. Personnel Training

A. Interim status facilities must comply with LAC 33:V.1515.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4320. Construction Quality Assurance Program

A. CQA Program

1. A construction quality assurance (CQA) program is required for all surface impoundment, waste pile, and landfill units that are required to comply with LAC 33:V.4462.A, 4476, and 4512.A. The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

2. The CQA program must address the following physical components, where applicable:

a. foundations;

b. dikes;

c. low-permeability soil liners;

d. geomembranes (flexible membrane liners);

e. leachate collection and removal systems and leak detection systems; and

f. final cover systems.

B. Written CQA Plan. Before construction begins on a unit subject to the CQA program under LAC 33:V.4320.A, the owner or operator must develop a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:

1. identification of applicable units and a description of how they will be constructed;

2. identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications; and

3. a description of inspection and sampling activities for all unit components identified in LAC 33:V.4320.A.2, including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover sampling size and locations, frequency of testing, data evaluation procedures, acceptance and rejection criteria for construction materials, plans for implementing corrective measures, and data or other information to be recorded and retained in the operating record under LAC 33:V.4357.

C. Contents of Program

1. The CQA program must include observations, inspections, tests, and measurements sufficient to ensure:

a. structural stability and integrity of all components of the unit identified in LAC 33:V.4320.A.2;

b. proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit specifications and good engineering practices and

proper installation of all components (e.g., pipes) according to design specifications; and

c. conformity of all materials used with design and other material specifications under LAC 33:V.2303, 2503, and 2903.

2. The CQA program shall include test fills for compacted soil liners, using the same compaction methods as in the full-scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of LAC 33:V.2303.C.1, 2503.L.1, and 2903.J.1 in the field. Compliance with the hydraulic conductivity requirements must be verified by using in situ testing on the constructed test fill. The test fill requirement is waived where data are sufficient to show that a constructed soil liner meets the hydraulic conductivity requirements of LAC 33:V.2303.C.1, 2503.L.1, and 2903.J.1 in the field.

D. Certification. The owner or operator of units subject to this Section must submit to the Office of Environmental Services, by certified mail or hand delivery, at least 30 days prior to receiving waste, a certification signed by the CQA officer that the CQA plan has been successfully carried out and that the unit meets the requirements of LAC 33:V.4462.A, 4476, or 4512.A. The owner or operator may receive waste in the unit after 30 days from the administrative authority's receipt of the CQA certification unless the administrative authority determines in writing that the construction is not acceptable, or extends the review period for a maximum of 30 more days, or seeks additional information from the owner or operator during this period. Documentation supporting the CQA officer's certification must be furnished to the administrative authority upon request.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2499 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2475 (October 2005), LR 33:2126 (October 2007).

### §4321. General Requirements for Ignitable, Reactive, or Incompatible Wastes

A. Interim status facilities must comply with LAC 33:V.1517.A, C, D, E, and F.

B. The treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:

1. generate extreme heat or pressure, fire or explosion, or violent reaction;

2. produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;

3. produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

4. damage the structural integrity of the device or facility containing the waste; or

5. through any like methods threaten human health or the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4322. Location Standards

A. The placement of any hazardous waste in a salt dome, salt bed formation, underground mine, or cave is prohibited.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990).

## Subchapter B. Preparedness and Prevention

### §4323. Applicability

A. Interim status facilities must comply with LAC 33:V.1511.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4325. Maintenance and Operation of Facility

A. Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4327. Required Equipment

A. Interim status facilities must comply with LAC 33:V.1511.C.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4329. Testing and Maintenance of Equipment

A. Interim status facilities must comply with LAC 33:V.1511.D.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4331. Access to Communications or Alarm Systems

A. Interim status facilities must comply with LAC 33:V.1511.E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4333. Required Aisle Space

A. Interim status facilities must comply with LAC 33:V.1511.F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4335. Arrangements with Local Authorities

A. Interim status facilities must comply with LAC 33:V.1511.G.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## Subchapter C. Contingency Plan and Emergency Procedures

### §4337. Applicability

A. The regulations of this Subchapter apply to owners and operators of all hazardous waste facilities except as provided in LAC 33:V.4307.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998).

### §4339. Purpose and Implementation of Contingency Plan

A. Interim status facilities must comply with LAC 33:V.1513.A.1 and 3.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), amended by the Office of the Secretary, Legal Affairs Division, LR 33:1626 (August 2007).

### §4341. Content of Contingency Plan

A. Interim status facilities must comply with LAC 33:V.1513.B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quantity, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984).

### §4343. Copies of Contingency Plan

A. Interim status facilities must comply with LAC 33:V.1513.C.2.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984).

### §4345. Amendment of Contingency Plan

A. The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

1. applicable regulations are revised;

2. the plan fails in an emergency;

3. the facility changes—in its design, construction, operation, maintenance, or other circumstances—in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

4. the list of emergency coordinators changes; or

5. the list of emergency equipment changes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4347. Emergency Coordinator

A. Interim status facilities must comply with LAC 33:V.1513.E.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4349. Emergency Procedures

A. Interim status facilities must comply with LAC 33:V.1513.F.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March, 1984).

## Subchapter D. Manifest System, Recordkeeping, and Reporting

### §4351. Applicability

A. The regulations in this Subchapter apply to owners and operators of both on-site and off-site facilities, except as

LAC 33:V.4307 provides otherwise. LAC 33:V.4353, 4355, and 4363 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources, nor to owners and operators of off-site facilities with respect to military munitions waste.

B. The revised manifest form and procedures in 40 CFR 260.10, 261.7, 265.70, 265.71, 265.72, and 265.76 shall be effective as of September 5, 2006. The manifest form and procedures in the July 1, 2004 CFR shall be applicable until September 5, 2006.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 32:830 (May 2006).

## §4353. Use of the Manifest System

A. Interim status facilities must comply with LAC 33:V.1516.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 17:367 (April 1991), amended by the Office of the Secretary, Legal Affairs Division, LR 32:831 (May 2006).

## §4355. Manifest Discrepancies

A. Interim status facilities must comply with LAC 33:V.1516.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 17:367 (April 1991), amended by the Office of the Secretary, Legal Affairs Division, LR 32:831 (May 2006).

## §4356. Unmanifested Waste Report

A. Interim status facilities must comply with LAC 33:V.1516.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 32:831 (May 2006).

## §4357. Operating Record

A. The owner or operator must keep a written operating record at his facility.

B. Records of each hazardous waste received, treated, stored, or disposed of at the facility must be recorded, as they become available, and maintained in the operating record for three years, unless otherwise specified in Paragraphs B.1-17 of this Section. These records shall include the following information:

1. a description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by LAC 33:V.4999.Appendix F. This information must be maintained in the operating record until closure of the facility;

2. the location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross-references to manifest document numbers, if the waste was accompanied by a manifest. This information must be maintained in the operating record until closure of the facility;

3. the estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1:

**Table 1. Units for Reporting**

| Unit of Measure | Code[1] |
|---|---|
| Gallons | G |
| Gallons per Hour | E |
| Gallons per Day | U |
| Liters | L |
| Liters per Hour | H |
| Liters per Day | V |
| Short Tons per Hour | D |
| Metric Tons per Hour | W |
| Short Tons per Day | N |
| Metric Tons per Day | S |
| Pounds per Hour | J |
| Kilograms per Hour | R |
| Cubic Yards | Y |
| Cubic Meters | C |
| Acres | B |
| Acre-feet | A |
| Hectares | Q |
| Hectare-meter | F |
| British thermal units per Hour | I |
| Pounds | P |
| Short tons | T |
| Kilograms | K |
| Tons | M |

[1] Single digit symbols are used here for data processing purposes.

4. the method(s) [by handling code(s) as specified in Table 2 of this Section] and date(s) of treatment, storage, or disposal:

**Table 2. Handling Codes for Treatment, Storage, and Disposal Methods**

Enter the handling code(s) listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

| Storage | |
|---|---|
| S01 | Container (barrel, drum, etc.) |
| S02 | Tank |
| S03 | Waste Pile |
| S04 | Surface Impoundment |
| S05 | Drip Pad |
| S06 | Containment Building (Storage) |
| S99 | Other Storage (specify) |

| Table 2. Handling Codes for Treatment, Storage, and Disposal Methods | |
|---|---|
| **Treatment** | |
| **Thermal Treatment** | |
| T06 | Liquid injection incinerator |
| T07 | Rotary kiln incinerator |
| T08 | Fluidized bed incinerator |
| T09 | Multiple hearth incinerator |
| T10 | Infrared furnace incinerator |
| T11 | Molten salt destructor |
| T12 | Pyrolysis |
| T13 | Wet air oxidation |
| T14 | Calcination |
| T15 | Microwave discharge |
| T18 | Other (specify) |
| **Chemical Treatment** | |
| T19 | Absorption mound |
| T20 | Absorption field |
| T21 | Chemical fixation |
| T22 | Chemical oxidation |
| T23 | Chemical precipitation |
| T24 | Chemical reduction |
| T25 | Chlorination |
| T26 | Chlorinolysis |
| T27 | Cyanide destruction |
| T28 | Degradation |
| T29 | Detoxification |
| T30 | Ion exchange |
| T31 | Neutralization |
| T32 | Ozonation |
| T33 | Photolysis |
| T34 | Other (specify) |
| **Physical Treatment** | |
| **Separation of Components** | |
| T35 | Centrifugation |
| T36 | Clarification |
| T37 | Coagulation |
| T38 | Decanting |
| T39 | Encapsulation |
| T40 | Filtration |
| T41 | Flocculation |
| T42 | Flotation |
| T43 | Foaming |
| T44 | Sedimentation |
| T45 | Thickening |
| T46 | Ultrafiltration |
| T47 | Other (specify) |
| **Removal of Specific Components** | |
| T48 | Absorption-molecular sieve |
| T49 | Activated carbon |
| T50 | Blending |
| T51 | Catalysis |
| T52 | Crystallization |
| T53 | Dialysis |
| T54 | Distillation |
| T55 | Electrodialysis |
| T56 | Electrolysis |
| T57 | Evaporation |
| T58 | High gradient magnetic separation |
| T59 | Leaching |
| T60 | Liquid ion exchange |
| T61 | Liquid-liquid extraction |
| T62 | Reverse osmosis |
| T63 | Solvent recovery |
| T64 | Stripping |
| T65 | Sand filter |
| T66 | Other (specify) |
| **Biological Treatment** | |
| T67 | Activated sludge |

| Table 2. Handling Codes for Treatment, Storage, and Disposal Methods | |
|---|---|
| T68 | Aerobic lagoon |
| T69 | Aerobic tank |
| T70 | Anaerobic tank |
| T71 | Composting |
| T72 | Septic tank |
| T73 | Spray irrigation |
| T74 | Thickening filter |
| T75 | Trickling filter |
| T76 | Waste stabilization pond |
| T77 | Other (specify) |
| T78 | [Reserved] |
| T79 | [Reserved] |
| **Boilers and Industrial Furnaces** | |
| T80 | Boiler |
| T81 | Cement Kiln |
| T82 | Lime Kiln |
| T83 | Aggregate Kiln |
| T84 | Phosphate Kiln |
| T85 | Coke Oven |
| T86 | Blast Furnace |
| T87 | Smelting, Melting, or Refining Furnace |
| T88 | Titanium Dioxide Chloride Process Oxidation Reactor |
| T89 | Methane Reforming Furnace |
| T90 | Pulping Liquor Recovery Furnace |
| T91 | Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid |
| T92 | Halogen Acid Furnaces |
| T93 | Other Industrial Furnaces Listed in LAC 33:V.109 (specify) |
| **Other Treatment** | |
| T94 | Containment Building (Treatment) |
| **Disposal** | |
| D79 | Underground Injection |
| D80 | Landfill |
| D81 | Land Treatment |
| D82 | Ocean Disposal |
| D83 | Surface Impoundment (to be closed as a landfill) |
| D99 | Other Disposal (specify) |
| **Miscellaneous** | |
| X01 | Open Burning/Open Detonation |
| X02 | Mechanical Processing |
| X03 | Thermal Unit |
| X04 | Geologic Repository |
| X99 | Other (specify) |

5. records and results of waste analyses and trial tests performed as specified in LAC 33:V.2237.A, 2245, 4313, 4445, 4453, 4467, 4481, 4507, 4515, 4527, 4539, 4557, and 4727;

6. summary reports and details of all incidents that require implementing the contingency plan as specified in LAC 33:V.1513.F.9;

7. records and results of inspections as required by LAC 33:V.1509.D (except these data need be kept only three years);

8. monitoring, testing, or analytical data, and corrective action where required by LAC 33:V.4320, 4367, 4375, 4433, 4437, 4440, 4449, 4451, 4455, 4470, 4472, 4474, 4483, 4485, 4489.D.1, 4497, 4498, 4499, 4501, 4502, 4519, 4529, 4557, 4559, 4587, 4589, 4725, 4727, 4729, 4731, 4733, 4735, 4737, and 4739. Maintain this information in the operating record for three years, except for records and results pertaining to groundwater monitoring and

cleanup, and response action plans for surface impoundments, waste piles, and landfills, which must be maintained in the operating record until closure of the facility;

[Comment: As required by LAC 33:V.4375, monitoring data at disposal facilities must be kept throughout the post-closure period.]

9. all closure cost estimates under LAC 33:V.4401 and, for disposal facilities, all post-closure cost estimates under LAC 33:V.4405. This information must be maintained in the operating record until closure of the facility;

10. records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal prohibition granted in accordance with LAC 33:V.2239, monitoring data required in accordance with an exemption under LAC 33:V.2241 or 2271 or the applicable notice required of a generator under LAC 33:V.2245. All of this information must be maintained in the operating record until closure of the facility;

11. for an off-site treatment facility, a copy of the notice and the certification and demonstration, if applicable, required of the generator or the owner or operator under LAC 33:V.2245 or 2247;

12. for an on-site treatment facility, the information contained in the notice (except the manifest number) and the certification and demonstration, if applicable, required by the generator or the owner or operator under LAC 33:V.2245 or 2247;

13. for an off-site land disposal facility, a copy of the notice and the certification and demonstration, if applicable, required by the generator or the owner or operator of a treatment facility under LAC 33:V.2245 or 2247;

14. for an on-site land disposal facility, the information contained in the notice (except the manifest number) and the certification and demonstration, if applicable, required by the generator or the owner or operator of a treatment facility under LAC 33:V.2245 or 2247;

15. for an off-site storage facility, a copy of the notice and the certification and demonstration, if applicable, required by the generator or the owner or operator under LAC 33:V.2245 or 2247;

16. for an on-site storage facility, the information contained in the notice (except the manifest number) and the certification and demonstration, if applicable, required by the generator or the owner or operator of a treatment facility under LAC 33:V.2245 or 2247;

17. monitoring, testing, or analytical data and corrective action data where required by LAC 33:V.4367, 4373.F, and 4373.I, and the certification as required by LAC 33:V.4441.F. This information must be maintained in the operating record until closure of the facility.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 15:378 (May 1989), LR 16:220 (March 1990), LR 17:658 (July 1991), LR 18:723 (July 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 22:837 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1744 (September 1998), LR 25:484 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1803 (October 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 33:1626 (August 2007), LR 34:633 (April 2008), LR 34:1018 (June 2008), LR 34:1899 (September 2008).

### §4359. Availability, Retention, and Disposition of Records

A. Interim status facilities must comply with LAC 33:V.1529.C.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4361. Annual Report

A. Interim status facilities must comply with LAC 33:V.1529.D.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4363. Unmanifested Waste Report

A. Interim status facilities must comply with LAC 33:V.1516.D.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4365. Additional Reports

A. In addition to submitting the biennial report and unmanifested waste reports described in LAC 33:V.4361 and 4363, the owner or operator must also report to the administrative authority:

1. releases, fires, and explosions as specified in LAC 33:V.1513.F.9;

2. groundwater contamination and monitoring data as specified in LAC 33:V.4373 and 4375;

3. facility closure as specified in LAC 33:V.4387; and

4. as otherwise required by LAC 33:V.Chapter 43.Subchapters Q, R, and V.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 17:658 (July 1991), amended by the Office

of Waste Services, Hazardous Waste Division, LR 24:1744 (September 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1002 (June 2008).

# Subchapter E. Groundwater Monitoring

## §4367. Applicability

Facilities that have interim status must comply with this Subchapter in lieu of LAC 33:V.Chapter 33.

A. The owner or operator of a surface impoundment, landfill, or land treatment facility, which is used to manage hazardous waste, must implement a groundwater monitoring program capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility, except as LAC 33:V.4301 and Subsection C of this Section provide otherwise.

B. Except as LAC 33:V.4367.C and D provide otherwise, the owner or operator must install, operate, and maintain a groundwater monitoring system which meets the requirements of LAC 33:V.4369 and must comply with LAC 33:V.4371, 4373, and 4375. This groundwater monitoring program must be carried out during the active life of the facility, and for disposal facilities, during the post-closure care period as well.

C. If an owner or operator assumes (or knows) that groundwater monitoring of indicator parameters, in accordance with LAC 33:V.4369 and 4371, would show statistically significant increases (or decreases in the case of pH) when evaluated under LAC 33:V.4373.B, he may install, operate, and maintain an alternate groundwater monitoring system (other than the one described in LAC 33:V.4371 and 4373). If the owner or operator decides to use an alternate groundwater monitoring system he must:

1. within one year after the effective date of these regulations, develop a specific plan, certified by a qualified geologist or geotechnical engineer, that satisfies the requirements of LAC 33:V.4373.G, for an alternate groundwater monitoring system. This plan is to be placed in the facility's operating record and maintained until closure of the facility;

2. not later than one year after the effective date of these regulations, initiate the determinations specified in LAC 33:V.4373.H;

3. prepare a report in accordance with LAC 33:V.4373.I and place it in the facility's operating record and maintain until closure of the facility;

4. continue to make the determinations specified in LAC 33:V.4373.H on a quarterly basis until final closure of the facility; and

5. comply with the recordkeeping and report requirements in LAC 33:V.4375.B.

D. The groundwater monitoring requirements of this Subchapter may be waived with respect to any surface impoundment that is used to neutralize wastes which are hazardous solely because they exhibit the corrosivity characteristic under LAC 33:V.4903.C or listed as hazardous wastes in LAC 33:V.4901 only for the reason that they are corrosive and the surface impoundment contains no other hazardous wastes, if the owner or operator can demonstrate that there is no potential for migration of hazardous wastes from the impoundment. The demonstration must establish, based upon consideration of the characteristics of the wastes and the impoundment, that the corrosive wastes will be neutralized to the extent that they no longer meet the corrosivity characteristic before they can migrate out of the impoundment. The demonstration must be in writing and must be certified by a qualified professional and must be approved by the administrative authority.

E. The administrative authority may replace all or part of the requirements of this Chapter applying to a regulated unit (as defined in LAC 33:V.3301) with alternative requirements developed for groundwater monitoring set out in an approved closure or post-closure plan or in an enforceable document (as defined in LAC 33:V.305.H), where the administrative authority determines that:

1. a regulated unit is situated among solid waste management units (or areas of concern), a release has occurred, and both the regulated unit and one or more solid waste management unit(s) (or areas of concern) are likely to have contributed to the release; and

2. it is not necessary to apply the requirements of this Chapter because the alternative requirements will protect human health and the environment. The alternative standards for the regulated unit must meet the requirements of LAC 33:V.4379.A and B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:484 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2499 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2126 (October 2007), LR 34:633 (April 2008), LR 34:1002 (June 2008), LR 34:1899 (September 2008).

## §4369. Groundwater Monitoring System

A. A groundwater monitoring system must be capable of yielding groundwater samples for analysis and must consist of:

1. monitoring wells (at least one) installed hydraulically upgradient (i.e., in the direction of increasing static head) from the limit of the waste management area. Their number, locations, and depths must be sufficient to yield groundwater samples that are:

a. representative of background groundwater quality in the uppermost aquifer near the facility; and

b. not affected by the facility; and

2. monitoring wells (at least three) installed hydraulically downgradient (i.e., in the direction of

decreasing static head) at the limit of the waste management area. Their number, locations, and depths must ensure that they immediately detect any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the waste management area to the uppermost aquifer;

3. the facility owner or operator may demonstrate that an alternate hydraulically downgradient monitoring well location will meet the criteria outlined below. The demonstration must be in writing and kept at the facility. The demonstration must be certified by a qualified groundwater scientist and establish that:

a. an existing physical obstacle prevents monitoring well installation at the hydraulically downgradient limit of the waste management area;

b. the selected alternate downgradient location is as close to the limit of the waste management area as practical; and

c. the location ensures detection that, given the alternate location, is as early as possible of any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the waste management area to the uppermost aquifer;

d. lateral expansion, new, or replacement units are not eligible for an alternate downgradient location under this Paragraph.

B. Separate monitoring systems for each waste management component of a facility are not required provided that provisions for sampling upgradient and downgradient water quality will detect any discharge from the waste management area.

1. In the case of a facility consisting of only one surface impoundment, landfill, or land treatment area, the waste management area is described by the waste boundary (perimeter).

2. In the case of a facility consisting of more than one surface impoundment, landfill, or land treatment area, the waste management area is described by an imaginary boundary line which circumscribes the several waste management components.

C. All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated, and packed with gravel or sand where necessary, to enable sample collection at depths where appropriate aquifer flow zones exist. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed with a suitable material (e.g., cement grout or bentonite slurry) to prevent contamination of samples and the groundwater.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995).

## §4371. Sampling and Analysis

A. The owner or operator must obtain and analyze samples from the installed groundwater monitoring system. The owner or operator must develop and follow a groundwater sampling and analysis plan. He must keep this plan at the facility. The plan must be approved by the administrative authority and must include procedures and techniques for:

1. sample collection;

2. sample preservation and shipment;

3. analytical procedures; and

4. chain of custody control.

[Comment: See "Procedures Manual for Groundwater Monitoring at Solid Waste Disposal Facilities," EPA-530/SW-611, August 1977 and "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020, March 1979 for discussions of sampling and analysis procedures.]

B. The owner or operator must determine the concentration or value of the following parameters in groundwater samples in accordance with LAC 33:V.4371.C and D:

1. parameters characterizing the suitability of the groundwater as a drinking water supply, as follows:

| Parameter | Maximum Level (mg/L unless otherwise stated) |
|---|---|
| Arsenic | 0.05 |
| Barium | 1.0 |
| Cadmium | 0.01 |
| Chromium | 0.05 |
| Fluoride | 1.4-2.4 |
| Lead | 0.05 |
| Mercury | 0.002 |
| Nitrate (as N) | 10 |
| Selenium | 0.01 |
| Silver | 0.05 |
| Endrin | 0.0002 |
| Lindane | 0.004 |
| Methoxychlor | 0.1 |
| Toxaphene | 0.005 |
| 2-4D | 0.1 |
| 2,4,5-TP Silver | 0.01 |
| Radium | 5 pCi/l |
| Gross Alpha | 15 pCi/l |
| Gross Beta | 4 millirem/yr |
| *Turbidity | 1/TU |
| Coliform Bacteria | 1/100 ml |

* Turbidity is applicable only to surface water supplies.

2. the following parameters are to be used as a basis for comparison in the event a groundwater quality assessment is required under LAC 33:V.4373.D:

a. chloride;

b. iron;

c. manganese;

d. phenols;

e. sodium;

f. sulfate;

3. parameters used as indicators of groundwater contamination:

a. pH;

b. specific conductance;

c. total organic carbon; and

d. total organic halogen.

C. For all monitoring wells, the owner or operator must establish initial background concentrations or values of all parameters as specified in LAC 33:V.4371.B quarterly for one year.

D. For each of the indicator parameters specified in LAC 33:V.4371.B.3, at least four replicate measurements must be obtained for each sample and the initial background arithmetic mean and variance must be determined by pooling the replicate measurements for the respective parameter concentrations or values in samples obtained from upgradient wells during the first year.

E. After the first year, all monitoring wells must be sampled and the samples analyzed with the following frequencies:

1. at least annually, samples must be collected to establish groundwater quality and analyzed for the parameters specified in LAC 33:V.4371.B.2; and

2. at least semi-annually samples must be collected to indicate groundwater contamination and analyzed for the parameters specified in LAC 33:V.4371.B.3;

3. the administrative authority may require the owner or operator to analyze for specific indicator parameters on a more frequent schedule.

F. Elevation of the groundwater surface at each monitoring well must be determined each time a sample is obtained.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 18:1256 (November 1992), LR 22:829 (September 1996).

## §4373. Preparation, Evaluation, and Response

A. The owner or operator must have an outline of a groundwater quality assessment program. The outline must describe a more comprehensive groundwater monitoring program (than that described in LAC 33:V.4369 and 4371) capable of determining:

1. whether hazardous waste or hazardous waste constituents have entered the groundwater;

2. the rate and extent of migration of hazardous waste or hazardous waste constituents in the groundwater; and

3. the concentrations of hazardous waste or hazardous waste constituents in the groundwater.

B. For each indicator parameter specified in LAC 33:V.4371.B.3 the owner or operator must calculate the arithmetic mean and variance, based on at least four replicate measurements on each sample, for each well monitored in accordance with LAC 33:V.4371.E.2, and compare these results with its initial background arithmetic mean. The comparison must consider, individually, each of the wells in the monitoring system, and must use the Student's t-test at the 0.01 level of significance (see LAC 33:V.3309.A.3, Table 1) to determine statistically significant increases (and decreases in the case of pH) over initial background.

C. If the comparisons for the upgradient wells made under LAC 33:V.4373.B show a significant increase (or decrease in pH), the owner or operator must submit this information in accordance with LAC 33:V.4375.A.2.

D. If the comparison for downgradient wells made under LAC 33:V.4373.B shows a significant increase (or decrease in pH), the owner or operator must then immediately obtain additional groundwater samples from those downgradient wells where a significant difference was detected, split the samples in two, and obtain analyses of all additional samples to determine whether the significant difference was a result of laboratory error.

E. If the analyses performed under LAC 33:V.4373 confirm the significant increase (or pH decrease), the owner or operator must provide written notice to the administrative authority, within seven days of the date of such confirmation, that the facility may be affecting groundwater quality.

F. Within 15 days after the notification required in Subsection E of this Section, the owner or operator must develop a specific plan, based on the outline required in Subsection A of this Section and certified by a qualified geologist or geotechnical engineer, for a groundwater quality assessment program at the facility. This plan must be placed in the facility operating record and be maintained until closure of the facility.

G. The plan to be submitted under LAC 33:V.4367.C.1 or 4373.F must specify:

1. the number, location, and depth of wells;

2. sampling and analytical methods for those hazardous wastes or hazardous waste constituents in the facility;

3. evaluation procedures, including any use of previously gathered groundwater quality information; and

4. a schedule of implementation.

H. The owner or operator must implement the groundwater quality assessment plan which satisfies the requirements of LAC 33:V.4373.G, and, at a minimum, determine:

1. the rate and extent of migration of the hazardous waste or hazardous waste constituents in the groundwater; and

2. the concentrations of the hazardous waste or hazardous waste constituents in the groundwater.

I. The owner or operator must make his first determination required in Subsection H of this Section as soon as technically feasible and prepare a report containing an assessment of the groundwater quality. This report must be placed in the facility operating record and be maintained until closure of the facility.

J. If the owner or operator determines, based on the results of the first determination under LAC 33:V.4373.H, that no hazardous waste or hazardous waste constituents from the facility have entered the groundwater, then he may reinstate the indicator evaluation program described in LAC 33:V.4371 and 4373.B. If the owner or operator reinstates the indicator evaluation program, he must notify the Office of Environmental Services, in the report submitted under LAC 33:V.4373.I.

K. Notwithstanding any other provision of this Chapter, the administrative authority may order such corrective action measures as may be necessary for groundwater protection. When it is determined, based on the groundwater quality assessment plan, that hazardous waste or hazardous waste constituents from the facility have entered the groundwater, the administrative authority shall establish a groundwater protection standard including:

1. a list of hazardous constituents, concentration limits, the compliance points and the compliance period. The administrative authority may establish alternative risk-assessment-based concentration limits. Any alternative risk-assessment-based concentration limit must be protective of human health and the environment, as demonstrated in accordance with LAC 33:I.Chapter 13;

2. within 30 days or other schedule required by the administrative authority, after the establishment of the groundwater protection standard, the owner or operator shall submit to the Office of Environmental Services a corrective action and monitoring plan;

3. within a reasonable time set by the administrative authority, corrective action measures shall be instituted by the owner or operator that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place;

4. if the owner or operator determines, based on the first determination under LAC 33:V.4373 that hazardous waste or hazardous waste constituents from the facility have entered the groundwater, he:

a. must continue to make the determinations required under LAC 33:V.4373 on a quarterly basis until final closure of the facility if the groundwater quality assessment plan was implemented prior to final closure of the facility; or

b. may cease to make the determination required under LAC 33:V.4373 if the groundwater quality assessment plan was implemented during the post-closure care period.

L. Notwithstanding any other provision of this Subchapter, any groundwater quality assessment to satisfy the requirements of LAC 33:V.4373.H, which is initiated prior to final closure of the facility, must be completed and reported in accordance with LAC 33:V.4373.I.

M. Unless the groundwater is monitored to satisfy the requirements of LAC 33:V.4373.H, the owner or operator must evaluate the data on groundwater surface elevations obtained under LAC 33:V.4371.F at least annually to determine whether the requirements under LAC 33:V.4369.A for locating the monitoring wells continue to be satisfied. If the evaluation shows that LAC 33:V.4369.A is no longer satisfied, the owner or operator must immediately modify the number, location, or depth of the monitoring wells to bring the groundwater monitoring system into compliance with this requirement.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 14:791 (November 1988), LR 18:723 (July 1992), amended by the Office of the Secretary, LR 24:2248 (December 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2499 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2126 (October 2007), LR 34:1003 (June 2008).

## §4375. Recordkeeping and Reporting

A. Unless the groundwater is monitored to satisfy the requirements of LAC 33:V.4373.H, the owner or operator must:

1. keep records throughout the active life of the facility of the analyses required in LAC 33:V.4371.C and E, the associated groundwater surface elevations required in LAC 33:V.4371.F, and the evaluations required in LAC 33:V.4373.B, and, for disposal facilities, throughout the post-closure care period as well; and

2. report the following groundwater monitoring information to the Office of Environmental Services:

a. during the first year when initial background concentrations are being established for the facility, concentrations or values of the parameters listed in LAC 33:V.4371.B.1 for each groundwater monitoring well within 15 days after completing each quarterly analysis. The owner or operator must separately identify for each monitoring well any parameters whose concentration or value has been found to exceed the maximum contaminant levels listed in LAC 33:V.4371.B.1;

b. concentrations or values of the parameters listed in LAC 33:V.4371.B.3 for each groundwater monitoring well, along with the required evaluations for these parameters under LAC 33:V.4373.B. The owner or operator must separately identify any significant differences from

initial background found in the upgradient wells, in accordance with LAC 33:V.4373.C. During the active life of the facility, this information must be submitted no later than March 1 following each calendar year; and

c. no later than March 1 following each calendar year, results of the evaluations of groundwater surface elevations under LAC 33:V.4373.M, and a description of the response to that evaluation, where applicable.

B. If the groundwater is monitored to satisfy the requirements of LAC 33:V.4373.H, the owner or operator must:

1. keep records of the analyses and evaluations specified in the plan, which satisfies the requirements of LAC 33:V.4373.G, throughout the active life of the facility, and, for disposal facilities, throughout the post-closure care period as well; and

2. annually, until final closure of the facility, submit to the Office of Environmental Services a report containing the results of his or her groundwater quality assessment program, which includes, but is not limited to, the calculated (or measured) rate of migration of hazardous waste or hazardous waste constituents in the groundwater during the reporting period. This information must be submitted no later than March 1 following each calendar year.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1520 (November 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2499 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2126 (October 2007).

# Subchapter F. Closure and Post-Closure

## §4377. Applicability

Except as LAC 33:V.4307 provides otherwise:

A. LAC 33:V.4379-4387 (which concerns closure) apply to the owners and operators of all hazardous waste management facilities; and

B. LAC 33:V.4389-4395 (which concerns post-closure care) apply to the owners and operators of:

1. all hazardous waste disposal facilities;

2. waste piles, and surface impoundments for which the owner or operator intends to remove the wastes at closure to the extent that these sections are made applicable to such facilities in LAC 33:V.4457 and 4475;

3. tank systems that are required under LAC 33:V.4442 to meet the requirements for landfills; and

4. containment buildings that are required under LAC 33:V.4705 to meet the requirements for landfills.

C. LAC 33:V.4396 applies to owners and operators of units that are subject to the requirements of LAC 33:V.305.H and are regulated under an enforceable document (as defined in LAC 33:V.305.H).

D. The administrative authority may replace all or part of the requirements of this Subchapter (and the unit-specific standards in LAC 33:V.4379.A.3) applying to a regulated unit (as defined in LAC 33:V.3301), with alternative requirements for closure set out in an approved closure or post-closure plan, or in an enforceable document (as defined in LAC 33:V.305.H), where the administrative authority determines that:

1. a regulated unit is situated among solid waste management units (or areas of concern), a release has occurred, and both the regulated unit and one or more solid waste management unit(s) (or areas of concern) are likely to have contributed to the release; and

2. it is not necessary to apply the closure requirements of this Chapter (and/or those referenced herein) because the alternative requirements will protect human health and the environment and will satisfy the closure performance standards of LAC 33:V.4379.A-A.2.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:219 (March 1990), LR 16:614 (July 1990), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998), LR 25:485 (March 1999).

## §4379. Closure Performance Standard

A. The owner or operator must close his facility in a manner that:

1. minimizes the need for further maintenance; and

2. controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated rainfall, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and

3. complies with the closure requirements of these regulations including, but not limited to, LAC 33:V.4442, 4457, 4475, 4489, 4501, 4521, 4531, 4543, and 4705.

B. As a means of satisfying the closure requirements of Paragraph A.2 of this Section, the owner or operator may demonstrate an alternative risk-assessment-based closure in accordance with LAC 33:I.Chapter 13.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 15:181 (March 1989), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1744 (September 1998),

amended by the Office of the Secretary, LR 24:2248 (December 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:633 (April 2008).

## §4381. Closure Plan; Amendment of Plan

A. Written Plan. By the effective dates of these regulations, the owner or operator of a hazardous waste management facility must have a written closure plan. Until final closure is completed and certified in accordance with LAC 33:V.4387, a copy of the most current plan must be furnished to the administrative authority upon request, including request by mail. In addition, for facilities without approved plans, it must also be provided during site inspections, on the day of inspection, to any officer employee or representative of the department who is duly designated by the administrative authority.

B. Content of Plan. The plan must identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The closure plan must include at least:

1. a description of how each hazardous waste management unit at the facility will be closed in accordance with LAC 33:V.4379; and

2. a description of how final closure of the facility will be conducted in accordance with LAC 33:V.4379. The description must identify the maximum extent of the operation which will be unclosed during the active life of the facility; and

3. the maximum inventory of hazardous wastes ever on-site over the active life of the facility for a final closure, and/or an estimate of the maximum inventory for a partial closure, and a detailed description of the methods to be used during the partial and final closure, including, but not limited to methods for removing, transporting, treating, storing or disposing of all hazardous waste, identification of, and type(s) of off-site hazardous waste management unit(s) to be used, if applicable; and

4. a detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures and soils during partial and final closure including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination necessary to satisfy the closure performance standard; and

5. a detailed description of other activities necessary during the partial and final closure periods to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, groundwater monitoring, leachate collection, and run-on and run-off control; and

6. a schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which allow tracking of the progress of partial and final closure. (For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover must be included); and

7. an estimate of the expected year of final closure for facilities that use trust funds to demonstrate financial assurance under LAC 33:V.4403 or 4407 and whose remaining operating life is less than 20 years, and for facilities without approved closure plans; and

8. for facilities where the administrative authority has applied alternative requirements at a regulated unit under LAC 33:V.4367.E, 4377.D, and/or 4397.D, either the alternative requirements applying to the regulated unit or a reference to the enforceable document containing those alternative requirements.

C. Amendment of Plan. The owner or operator may amend the closure plan at any time prior to the notification of partial or final closure of the facility. An owner or operator with an approved closure plan must submit a written request to the Office of Environmental Services to authorize a change to the approved closure plan. The written request must include a copy of the amended closure plan for approval by the administrative authority.

1. The owner or operator must amend the closure plan whenever:

a. changes in operating plans or facility design affect the closure plan; or

b. there is a change in the expected year of closure, if applicable; or

c. in conducting partial or final closure activities, unexpected events require a modification of the closure plan; or

d. the owner or operator requests the administrative authority to apply alternative requirements to a regulated unit under LAC 33:V.4367.E, 4377.D, and/or 4397.D.

2. The owner or operator must amend the closure plan at least 60 days prior to the proposed changes in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator must amend the closure plan no later than 30 days after the unexpected event. These provisions also apply to owners or operators of surface impoundments and waste piles who intended to remove all hazardous wastes at closure, but are required to close as landfills in accordance with LAC 33:V.4501.

3. An owner or operator with an approved closure plan must submit the modified plan to the Office of Environmental Services at least 60 days prior to the proposed change in facility design or operation, or no more than 60 days after an unexpected event has occurred that has affected the closure plan. If an unexpected event has occurred during the partial or final closure period, the owner or operator must submit the modified plan no more than 30

days after the unexpected event. These provisions also apply to owners or operators of surface impoundments and waste piles who intended to remove all hazardous wastes at closure but are required to close as landfills in accordance with LAC 33:V.4501. If the amendment to the plan is a Class 2 or 3 modification according to the criteria in LAC 33:V.321.C and 322, the modification to the plan will be approved according to the procedures in Paragraph D.4 of this Section.

4. The administrative authority may request modifications to the plan under the conditions described in Paragraph C.1 of this Section. An owner or operator with an approved closure plan must submit the modified plan within 60 days of the request from the Office of Environmental Services, or within 30 days if the unexpected event occurs during partial or final closure. If the amendment is considered a Class 2 or 3 modification according to the criteria in LAC 33:V.321.C and 322, the modification to the plan will be approved in accordance with the procedures in Paragraph D.4 of this Section.

D. Notification of Partial Closure and Final Closure

1. The owner or operator must submit the closure plan to the Office of Environmental Services at least 180 days prior to the date on which he expects to begin closure of the first surface impoundment, waste pile, land treatment, or landfill unit, or final closure if it involves such a unit, whichever is earlier. The owner or operator must submit the closure plan to the administrative authority at least 45 days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace. The owner or operator must submit the closure plan to the administrative authority at least 45 days prior to the date on which he expects to begin final closure of a facility with only tanks, container storage, or incinerator units. Owners or operators with approved closure plans must notify the administrative authority in writing at least 60 days prior to the date on which they expect to begin closure of a surface impoundment, waste pile, landfill, or land treatment unit, or final closure of a facility involving such a unit. Owners or operators with approved closure plans must notify the administrative authority in writing at least 45 days prior to the date on which they expect to begin partial or final closure of a boiler or industrial furnace. Owners or operators with approved closure plans must notify the administrative authority in writing at least 45 days prior to the date on which they expect to begin final closure of a facility with only tanks, container storage, or incinerator units.

2. The date when he or she "expects to begin closure" either:

a. within 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous wastes. If the owner or operator of a hazardous waste management unit can demonstrate to the administrative authority that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he or she has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable interim status requirements, the administrative authority may approve an extension to this one-year limit; or

b. for units meeting the requirements of LAC 33:V.4383.D, no later than 30 days after the date on which the hazardous waste management unit receives the known final volume of nonhazardous wastes or, if there is a reasonable possibility that the hazardous waste management unit will receive additional nonhazardous wastes, no later than one year after the date on which the unit received the most recent volume of nonhazardous wastes. If the owner or operator can demonstrate to the administrative authority that the hazardous waste management unit has the capacity to receive additional nonhazardous wastes and he has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable interim status requirements, the administrative authority may approve an extension to this one-year limit.

3. The owner or operator must submit his closure plan to the Office of Environmental Services no later than 15 days after:

a. termination of interim status except when a permit is issued simultaneously with termination of interim status; or

b. issuance of a judicial decree or final order under R.S. 30:2025 to cease receiving hazardous wastes or close.

4. The administrative authority will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the plan and request modifications to the plan no later than 30 days from the date of the notice. He will also, in response to a request or at his own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning a closure plan. The administrative authority will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The administrative authority will approve, modify, or disapprove the plan within 90 days of its receipt. If the administrative authority does not approve the plan he shall provide the owner or operator with a detailed written statement of reasons for the refusal and the owner or operator must modify the plan or submit a new plan for approval within 30 days after receiving such written statement. The administrative authority will approve or modify this plan in writing within 60 days. If the administrative authority modifies this plan, this modified plan becomes the approved closure plan. The administrative authority must assure that the approved plan is consistent with LAC 33:V.4377-4389 and the applicable requirements of LAC 33:V.Subchapter E, LAC 33:V.4441, 4457, 4475, 4489, 4501, 4521, 4531, 4543, and 4705. A copy of the modified plan with a detailed

statement of reasons for the modifications must be mailed to the owner or operator.

E. Removal of Wastes and Decontamination or Dismantling of Equipment. Nothing in this Section shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 16:614 (July 1990), LR 17:362 (April 1991), LR 17:478 (May 1991), LR 18:723 (July 1992), LR 18:1375 (December 1992), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:485 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2500 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2475 (October 2005), LR 33:2127 (October 2007), LR 34:633 (April 2008).

## §4383. Closure; Time Allowed for Closure

A. Within 90 days after receiving the final volume of hazardous wastes or the final volume of nonhazardous wastes, if the owner or operator complies with all applicable requirements in LAC 33:V.4383.D and E, at a hazardous waste management unit or facility, or within 90 days after approval of the closure plan, whichever is later, the owner or operator must treat, remove from the unit or facility, or dispose of on-site all hazardous wastes in accordance with the approved closure plan. The administrative authority may approve a longer period if the owner or operator demonstrates that:

1. the activities required to comply with this Subsection will, of necessity, take him longer than 90 days to complete; or

2. the hazardous waste management unit or facility has the capacity to receive additional wastes, or has the capacity to receive non-hazardous wastes if the facility owner or operator receives administrative authority allowance pursuant to LAC 33:V.4383.D and complies with LAC 33:V.4383.D and E and:

a. there is a reasonable likelihood that he or a person other than the owner or operator will recommence operation of the hazardous waste management unit or the facility within one year; and

b. closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

3. he has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with interim status requirements.

B. The owner or operator must complete partial and final closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes or the final volume of nonhazardous wastes, if the owner or operator complies with all applicable requirements in LAC 33:V.4383.D and E, at the hazardous waste management unit or facility or 180 days after approval of the closure plan, if that is later. The administrative authority may approve an extension to the closure period if the owner or operator demonstrates that:

1. either the closure activities will, of necessity, take him longer than 180 days to complete; or

2. the hazardous waste management unit has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the facility owner or operator receives administrative authority allowance pursuant to LAC 33:V.4383.D and complies with LAC 33:V.4383.D and E and:

a. there is a reasonable likelihood that he or a person other than the owner or operator will recommence operation of the hazardous waste management unit or facility within one year; and

b. closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

3. he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous waste management units including compliance with applicable interim status requirements.

C. The demonstrations referred to in LAC 33:V.4383.A and B must be made as follows:

1. the demonstrations in LAC 33:V.4383.A must be made at least 30 days prior to the expiration of the 90 day period in LAC 33:V.4383.A; and

2. the demonstrations in LAC 33:V.4383.B must be made at least 30 days prior to the expiration of the 180-day period in LAC 33:V.4383.B, unless the owner or operator is otherwise subject to the deadlines in LAC 33:V.4383.D.

D. The administrative authority may allow an owner or operator to receive non-hazardous wastes in a landfill, land treatment, or surface impoundment unit after the final receipt of hazardous wastes at that unit if the following conditions are met.

1. The owner or operator submits an amended Part II application, or a Part II application if not previously required, and demonstrates that:

a. the unit has the existing design capacity as indicated on the Part I application to receive non-hazardous wastes;

b. there is a reasonable likelihood that the owner or operator or another person will receive non-hazardous wastes in the unit within one year after the final receipt of hazardous wastes;

c. the non-hazardous wastes will not be incompatible with any remaining wastes in the unit or with the facility design and operating requirements of the unit or facility under LAC 33:V.Chapter 43;

d. closure of the hazardous waste management unit would be incompatible with continued operation of the unit or facility; and

e. the owner or operator is operating and will continue to operate in compliance with all applicable interim status requirements.

2. The Part II application includes an amended waste analysis plan, groundwater monitoring and response program, human exposure assessment required under LAC 33:V.503.A.1, and closure and post-closure plans, and updated cost estimates and demonstrations of financial assurance for closure and post-closure care as necessary and appropriate to reflect any changes due to the presence of hazardous constituents in the non-hazardous wastes and changes in closure activities, including the expected year of closure if applicable under LAC 33:V.4381.B.7, as a result of the receipt of non-hazardous wastes following the final receipt of hazardous wastes.

3. The Part II application is amended, as necessary and appropriate, to account for the receipt of non-hazardous wastes following receipt of the final volume of hazardous wastes.

4. The Part II application and the demonstrations referred to in LAC 33:V.4383.D.1 and 2 are submitted to the administrative authority no later than 180 days prior to the date on which the owner or operator of the facility receives the known final volume of hazardous wastes, or no later than 90 days after the effective date of this rule, whichever is later.

E. In addition to the requirements in LAC 33:V.4383.D, an owner or operator of a hazardous waste surface impoundment that is not in compliance with the liner and leachate collection system requirements in LAC 33:V.Chapter 29 must do the following.

1. Submit with the Part II application:

a. a contingent corrective measures plan; and

b. a plan for removing hazardous wastes in compliance with LAC 33:V.4383.E.2.

2. Remove all hazardous wastes from the unit by removing all hazardous liquids and removing all hazardous sludges to the extent practicable without impairing the integrity of the liner(s), if any.

3. Removal of hazardous wastes must be completed no later than 90 days after the final receipt of hazardous wastes. The administrative authority may approve an extension to this deadline if the owner or operator demonstrates that the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete and that an extension will not pose a threat to human health and the environment.

4. If a release that is a statistically significant increase (or decrease in the case of pH) in hazardous constituents over background levels is detected in accordance with the requirements in LAC 33:V.Chapter 43.Subchapter E, the owner or operator of the unit:

a. must implement corrective measures in accordance with the approved contingent corrective measures plan required by LAC 33:V.4383.E.1 no later than one year after detection of the release, or approval of the contingent corrective measures plan, whichever is later;

b. may receive wastes at the unit following detection of the release only if the approved corrective measures plan includes a demonstration that continued receipt of wastes will not impede corrective action; and

c. may be required by the administrative authority to implement corrective measures in less than one year or to cease receipt of wastes until corrective measures have been implemented if necessary to protect human health and the environment.

5. During the period of corrective action, the owner or operator shall provide semiannual reports to the Office of Environmental Services that describe the progress of the corrective action program, compile all groundwater monitoring data, and evaluate the effect of the continued receipt of non-hazardous wastes on the effectiveness of the corrective action.

6. The administrative authority may require the owner or operator to commence closure of the unit if the owner or operator fails to implement corrective action measures in accordance with the approved contingent corrective measures plan within one year as required in LAC 33:V.4383.E.4, or fails to make substantial progress in implementing corrective action and achieving the facility's background levels.

7. If the owner or operator fails to implement corrective measures as required in LAC 33:V.4383.E.4 or if the administrative authority determines that substantial progress has not been made pursuant to LAC 33:V.4383.E.6, he or she shall do the following.

a. The administrative authority will notify the owner or operator in writing that the owner or operator must begin closure in accordance with the deadline in LAC 33:V.4383.A and B and provide a detailed statement of reasons for this determination.

b. The administrative authority will provide the owner or operator and the public, through a newspaper notice, with the opportunity to submit written comments on the decision no later than 20 days after the date of the notice.

c. If the administrative authority receives no written comments, the decision will become final five days after the close of the comment period. The administrative authority will notify the owner or operator that the decision is final, and that a revised closure plan, if necessary, must be submitted within 15 days of the final notice, and that closure

must begin in accordance with the deadlines in LAC 33:V.4383.A and B.

d. If the administrative authority receives written comments on the decision, he or she shall make a final decision within 30 days after the end of the comment period and provide the owner or operator in writing and the public through a newspaper notice with a detailed statement of reasons for the final decision. If the administrative authority determines that substantial progress has not been made, closure must be initiated in accordance with the deadlines in LAC 33:V.4383.A and B.

e. The final determinations made by the administrative authority under LAC 33:V.4383.E.7.c and d are not subject to administrative appeal.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 14:791 (November 1988), LR 17:478 (May 1991), LR 18:1375 (December 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2500 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2127 (October 2007).

## §4385. Disposal or Decontamination of Equipment, Structures and Soils

A. During the partial and final closure periods, all contaminated equipment, structures, and soil must be properly disposed of, or decontaminated unless specified otherwise in LAC 33:V.4442, 4457, 4475, 4489, 4501, 4601, or 4705. By removing all hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that hazardous waste in accordance with all applicable requirements of LAC 33:V.Chapter 11.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:614 (July 1990), amended by the Office of the Secretary, LR 24:2248 (December 1998).

## §4387. Certification of Closure

A. Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of completion of final closure, the owner or operator must submit to the Office of Environmental Services, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent, qualified professional engineer. Documentation supporting the independent professional engineer's certification must be furnished to the administrative authority upon request until he releases the owner or operator from the financial assurance requirements for closure under LAC 33:V.4403.H.

B. Survey Plat. No later than the submission of the certification of closure of each hazardous waste disposal unit, an owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Office of Environmental Services a survey plat indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use must contain a note, prominently displayed, that states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable LAC 33:V.Chapter 35 or 43 regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2501 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2475 (October 2005), LR 33:2128 (October 2007), LR 34:1003 (June 2008).

## §4389. Post-Closure Care and Use of Property

A. Post-closure care for each hazardous waste management unit subject to the requirements of LAC 33:V.4389-4395 must begin after completion of closure of the unit and continue for 30 years after that date. It must consist of at least the following:

1. monitoring and reporting in accordance with the requirements of LAC 33:V.Chapter 43.Subchapters E, J, K, L, and M; and

2. maintenance and monitoring of waste containment systems in accordance with the requirements of LAC 33:V.Chapter 43.Subchapters E, J, K, L, and M.

B. Any time preceding closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular hazardous waste disposal unit, the administrative authority may:

1. shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if he finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or groundwater monitoring results, characteristics of the hazardous waste, application of advanced technology, or alternative disposal treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure); or

2. extend the post-closure care period applicable to the hazardous waste management unit or facility, if he finds that the extended period is necessary to protect human health and

the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

C. The owner or operator may elect to demonstrate a shortened post-closure care period meets the requirements of Paragraph B.1 of this Section by using risk assessment methodology. The risk assessment must demonstrate that the shortened post-closure care period is protective of human health and the environment in accordance with LAC 33:I.Chapter 13.

D. The administrative authority may require, at partial and final closure, continuation of any of the security requirements of LAC 33:V.4315 during part or all of the post-closure period when:

1. hazardous wastes may remain exposed after completion of partial or final closure; or

2. access by the public or domestic livestock may pose a hazard to human health.

E. Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring systems, unless the administrative authority finds that the disturbance:

1. is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

2. is necessary to reduce a threat to human health or the environment.

F. All post-closure care activities must be in accordance with the provisions of the approved post-closure plan as specified in LAC 33:V.4391.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 18:723 (July 1992), amended by the Office of the Secretary, LR 24:2248 (December 1998).

## §4391. Post-Closure Plan; Amendment of Plan

A. Written Plan. By May 19, 1988, the owner or operator of a hazardous waste disposal unit must have a written post-closure plan. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous wastes at closure must prepare a post-closure plan and submit it to the Office of Environmental Services within 90 days of the date that the owner or operator or administrative authority determines that the hazardous waste management unit or facility must be closed as a landfill, subject to the requirements of LAC 33:V.4389-4395.

B. Until final closure of the facility, a copy of the most current post-closure plan must be furnished to the administrative authority upon request, including request by mail. In addition, for facilities without approved post-closure plan, it must also be provided during site inspections, on the day of inspection, to any officer, employee or representative of the agency who is duly designated by the administrative authority. After final closure has been certified, the person or office specified in LAC 33:V.4381.C.3 must keep the approved post-closure plan during the post-closure period.

C. For each hazardous waste management unit subject to the requirements of this Subchapter, the post-closure plan must identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:

1. a description of the planned monitoring activities and frequencies at which they will be performed, to comply with LAC 33:V.Chapter 43.Subchapters E, J, K, L, and M, during the post-closure care period; and

2. a description of the planned maintenance activities, and frequencies at which they will be performed, to ensure:

a. the integrity of the cap and final cover or other containment systems in accordance with the requirements of LAC 33:V.Chapter 43.Subchapters J, K, L, and M; and

b. the function of the monitoring equipment in accordance with the requirements of LAC 33:V.Chapter 43.Subchapters J, K, L, and M; and

3. the name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period;

4. for facilities subject to LAC 33:V.4396, provisions that satisfy the requirements of LAC 33:V.4396.A and B; and

5. for facilities where the administrative authority has applied alternative requirements at a regulated unit under LAC 33:V.4367.E, 4377.D, and/or 4397.D, either the alternative requirements that apply to the regulated unit or a reference to the enforceable document containing those requirements.

D. Amendment of Plan. The owner or operator may amend the post-closure plan any time during the active life of the facility or during the post-closure care period. An owner or operator with an approved post-closure plan must submit a written request to the Office of Environmental Services to authorize a change to the approved plan. The written request must include a copy of the amended post-closure plan for approval by the administrative authority.

1. The owner or operator must amend the post-closure plan whenever:

a. changes in operating plans or facility design affect the post-closure plan;

b. events which occur during the active life of the facility, including partial and final closures, affect the post-closure plan; or

c. the owner or operator requests the administrative authority to apply alternative requirements to a regulated unit under LAC 33:V.3301.G, 3501.D, and/or 3707.D.

2. The owner or operator must amend the post-closure plan at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the post-closure plan.

3. An owner or operator with an approved post-closure plan must submit the modified plan to the Office of Environmental Services at least 60 days prior to the proposed change in facility design or operation, or no more than 60 days after an unexpected event has occurred that has affected the post-closure plan. If an owner or operator of a surface impoundment or a waste pile who intended to remove all hazardous wastes at closure in accordance with LAC 33:V.4457.B or 4475.A, is required to close as a landfill in accordance with LAC 33:V.4501, the owner or operator must submit a post-closure plan within 90 days of the determination by the owner or operator or administrative authority that the unit must be closed as a landfill. If the amendment to the post-closure plan is a Class 2 or 3 modification according to the criteria in LAC 33:V.321.C and 322, the modification to the plan will be approved according to the procedures in Subsection F of this Section.

4. The administrative authority may request modifications to the plan under the conditions described in Paragraph D.1 of this Section. An owner or operator with an approved post-closure plan must submit the modified plan no later than 60 days after the request from the administrative authority. If the amendment to the plan is considered a Class 2 or 3 modification according to the criteria in LAC 33:V.321.C and 322, the modifications to the post-closure plan will be approved in accordance with the procedures in Subsection F of this Section. If the administrative authority determines that an owner or operator of a surface impoundment or waste pile who intended to remove all hazardous wastes at closure must close the facility as a landfill, the owner or operator must submit a post-closure plan for approval to the Office of Environmental Services within 90 days of the determination.

E. The owner or operator of a facility with hazardous waste management units subject to these requirements must submit his post-closure plan to the administrative authority at least 180 days before the date he expects to begin partial or final closure of the first hazardous waste disposal unit. The date he "expects to begin closure" of the first hazardous waste disposal unit must be either within 30 days after the date on which the hazardous waste management unit receives the known final volume of hazardous waste, or if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous wastes. The owner or operator must submit the post-closure plan to the Office of Environmental Services no later than 15 days after:

1. termination of interim status (except when a permit is issued to the facility simultaneously with termination of interim status); or

2. issuance of a judicial decree or final orders under Louisiana Environmental Quality Act to cease receiving wastes or close.

F. The administrative authority will provide the owner or operator and the public through a newspaper notice, the opportunity to submit written comments on the post-closure plan and request modifications to the plan no later than 30 days from the date of the notice. The administrative authority will also, in response to a request or at the administrative authority's own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning a post-closure plan. The administrative authority will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The administrative authority will approve, modify, or disapprove the plan within 90 days of its receipt. If the administrative authority does not approve the plan, he or she shall provide the owner or operator with a detailed written statement of reasons for the refusal, and the owner or operator must modify the plan or submit a new plan for approval within 30 days after receiving such written statement. If the administrative authority modifies the plan, this modified plan becomes the approved post-closure plan. The administrative authority must ensure that the approved post-closure plan is consistent with LAC 33:V.4389-4395. A copy of the modified plan with a detailed statement of reasons for the modifications must be mailed to the owner or operator.

G. The post-closure plan and length of the post-closure care period may be modified any time prior to the end of the post-closure care period in either of the following two ways.

1. The owner or operator or any member of the public may petition the administrative authority to extend or reduce the length or alter the requirements of the post-closure care period applicable to a hazardous waste management unit or facility based on cause.

a. The petition must include evidence demonstrating that:

i. the secure nature of the hazardous waste management unit or facility makes the post-closure care requirement(s) unnecessary or supports reduction of the post-closure care period specified in the current post-closure plan (e.g., leachate or groundwater monitoring results, characteristics of the wastes, application of advanced technology, or alternative disposal, treatment, or reuse techniques indicate that the facility is secure); or

ii. the requested extension in the post-closure care period or alteration of post-closure care requirements is necessary to prevent threats to human health and the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes

at levels which may be harmful to human health and the environment).

b. A petition will be considered by the administrative authority only when it presents new and relevant information not previously considered by the administrative authority. Whenever the administrative authority is considering a petition, the administrative authority will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments within 30 days of the date of the notice. The administrative authority will also, in response to a request or at the administrative authority's own discretion, hold a public hearing whenever a hearing might clarify one or more issues concerning the post-closure plan. The administrative authority will give the public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for written public comments, and the two notices may be combined.) After considering the comments, the administrative authority will issue a final determination, based upon the criteria set forth in LAC 33:V.4391.G.1.

c. If the administrative authority denies the petition, he will send the petitioner a brief written response giving a reason for the denial.

2. The administrative authority may tentatively decide to modify the post-closure plan if he or she decides that modification is necessary to prevent threats to human health and the environment. The administrative authority may propose to extend or reduce the length of or alter the requirements of the post-closure care period applicable to a hazardous waste management unit or facility based on cause or alter the requirements of the post-closure care period based on cause.

a. The administrative authority will provide the owner or operator and the affected public, through a newspaper notice, the opportunity to submit written comments within 30 days of the date of the notice and the opportunity for a public hearing as in LAC 33:V.4391.G.1. After considering the comments, the administrative authority will issue a final determination.

b. The administrative authority will base his or her final determination upon the same criteria required for petitions under LAC 33:V.4391.G.1.a. Where appropriate, a modification of the post-closure plan may include the temporary suspension rather than permanent deletion of one or more post-closure care requirements. At the end of the specified period of suspension, the administrative authority would then determine whether the requirement(s) should be permanently discontinued or reinstated to prevent threats to human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 14:791 (November 1988), LR 16:614 (July 1990), LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 25:485 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2501 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2476 (October 2005), LR 33:2128 (October 2007).

## §4393. Post-Closure Notices

A. No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Office of Environmental Services a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed of before January 12, 1981, the owner or operator must identify the type, location and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.

B. Within 60 days of certification of closure of the first hazardous waste disposal unit and within 60 days of certification of closure of the last hazardous waste disposal unit, the owner or operator must:

1. record, in accordance with state law, a notation on the deed to the facility property, or on some other instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property that:

a. the land has been used to manage hazardous wastes; and

b. its use is restricted under LAC 33:V.Chapter 43.Subchapter F; and

c. the survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by LAC 33:V.4387 and 4393.A have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the Office of Environmental Services; and

2. submit to the administrative authority a certification signed by the owner or operator that he has recorded the notation specified in LAC 33:V.4393.B.1 and a copy of the document in which the notation has been placed, to the administrative authority.

C. If the owner or operator or any subsequent owner or operator or any subsequent owner of the land upon which a hazardous waste disposal unit was located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, and all contaminated structures, equipment, and soils, he must request a modification to the approved post-closure plan in accordance with the requirements of LAC 33:V.4391.G. The owner or operator must demonstrate that the removal of hazardous wastes will satisfy the criteria of LAC 33:V.4389.C. By removing hazardous waste, the owner or operator may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of this Chapter. If the owner or operator is granted approval to conduct the removal activities, the

owner or operator may request that the administrative authority approve either:

1. the removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

2. the addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 18:723 (July 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2502 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2476 (October 2005), LR 33:2129 (October 2007).

### §4395. Certification of Completion of Post-Closure Care

A. No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Office of Environmental Services, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and an independent, qualified professional engineer. Documentation supporting the independent professional engineer's certification must be furnished to the administrative authority upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under LAC 33:V.4407.H.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2502 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2477 (October 2005), LR 33:2129 (October 2007), LR 34:1003 (June 2008).

### §4396. Post-Closure Requirements for Facilities That Obtain Enforceable Documents in Lieu of Post-Closure Permits

A. Owners and operators who are subject to the requirement to obtain a post-closure permit under LAC 33:V.305, but who obtain enforceable documents in lieu of post-closure permits, as provided under LAC 33:V.305.H, must comply with the following requirements:

1. submit information about the facility in accordance with LAC 33:V.528;

2. facility-wide corrective action in accordance with LAC 33:V.3322; and

3. LAC 33:V.Chapter 33.

B.1. The administrative authority, in issuing enforceable documents under this Section in lieu of permits, will assure a meaningful opportunity for public involvement which, at a minimum, includes public notice and opportunity for public comment:

a. when the department becomes involved in a remediation at the facility as a regulatory or enforcement matter;

b. on the proposed preferred remedy and the assumptions upon which the remedy is based, in particular those related to land use and site characterization; and

c. at the time of a proposed decision that remedial action is complete at the facility. These requirements must be met before the administrative authority may consider that the facility has met the requirements of LAC 33:V.305.H, unless the facility qualifies for a modification to these public involvement procedures under Paragraph B.2 or 3 of this Section.

2. If the administrative authority determines that even a short delay in the implementation of a remedy would adversely affect human health or the environment, the administrative authority may delay compliance with the requirements of Paragraph B.1 of this Section and implement the remedy immediately. However, the administrative authority must assure involvement of the public at the earliest opportunity and, in all cases, upon making the decision that additional remedial action is not needed at the facility.

3. The administrative authority may allow a remediation initiated prior to October 22, 1998, to substitute for corrective action required under a post-closure permit even if the public involvement requirements of Paragraph B.1 of this Section have not been met, so long as the administrative authority assures that notice and comment on the decision that no further remediation is necessary to protect human health and the environment takes place at the earliest reasonable opportunity after October 22, 1998.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 25:486 (March 1999).

## Subchapter G. Financial Requirements

### §4397. Applicability

A. The requirements of LAC 33:V.3719, 4401, 4403, 4411, and 4413 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this Section or in LAC 33:V.4307.

B. The requirements of LAC 33:V.4405 and 4407 apply only to owners and operators of:

1. disposal facilities;

2. tank systems that are required under LAC 33:V.4442 to meet the requirements for landfills; and

3. containment buildings that are required under LAC 33:V.4705 to meet the requirements for landfills.

C. States and the federal government are exempt from the requirements of this Subchapter.

D. The administrative authority may replace all or part of the requirements of this Chapter applying to a regulated unit with alternative requirements for financial assurance set out in the permit or in an enforceable document (as defined in LAC 33:V.305.H), where the administrative authority:

1. prescribes alternative requirements for the regulated unit under LAC 33:V.4367.E and/or 4377.D; and

2. determines that it is not necessary to apply the requirements of this Subchapter because the alternative financial assurance requirements will protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 13:651 (November 1987), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998), LR 25:486 (March 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 34:73 (January 2008).

## §4399. Definitions of Terms as Used in This Subpart

A. General Terms

1. *Closure Plan*—the plan for closure prepared in accordance with the requirements of LAC 33:V.4381.

2. *Current Closure Cost Estimate*—the most recent of the estimates prepared in accordance with LAC 33:V.4401.

3. *Current Post-Closure Cost Estimate*—the most recent of the estimates prepared in accordance with LAC 33:V.4405.

4. *Parent Corporation*—a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a *subsidiary* of the parent corporation.

5. *Post-Closure Plan*—the plan for post-closure care prepared in accordance with the requirements of LAC 33:V.4389-4395.

6. The following terms are used in the specifications for the financial tests for closure, post-closure care, and liability coverage. The definitions are intended to assist in the understanding of these regulations and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.

a. *Assets*—all existing and all probable future economic benefits obtained or controlled by a particular entity.

b. *Current Assets*—cash or other assets, or resources commonly identified as those which are reasonably expected to be realized in cash, or sold, or consumed during the normal operating cycle of the business.

c. *Current Liabilities*—obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

d. *Independently Audited*—an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

e. *Liabilities*—probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

f. *Net Working Capital*—current assets minus current liabilities.

g. *Net Worth*—total assets minus total liabilities and is equivalent to owner's equity.

h. *Tangible Net Worth*—the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

i. *Current Plugging and Abandonment Cost Estimate*—the most recent of the estimates prepared in accordance with the applicable Louisiana Department of Natural Resources (LDNR) regulations.

7. *Current Plugging and Abandonment Costs*—the most recent of the cost estimates prepared in accordance with 40 CFR 144.62, Office of Conservation financial assurance regulations, or other substantially equivalent state programs.

8. *Substantial Business Relationship*—the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A *substantial business relationship* must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the administrative authority.

B. Insurance-Related Terms. In the liability insurance requirements the terms bodily injury and property damage shall have the meanings given these terms by applicable state law. However, these terms do not include those liabilities which, consistent with standard industry practice, are excluded from coverage in liability policies for bodily injury and property damage. The department intends the meanings of other terms used in the liability insurance requirements are to be consistent with their common meanings within the insurance industry. The definitions of several of the terms given below are intended to assist in the understanding of these regulations and are not intended to limit their meanings in a way that conflicts with general insurance industry usage.

1. *Accidental Occurrence*—an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.

2. *Legal Defense Costs*—any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

3. *Nonsudden Accidental Occurrence*—an occurrence which takes place over time and involves continuous or repeated exposure.

4. *Sudden Accidental Occurrence*—an occurrence which is not continuous or repeated in nature.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:219 (March 1990), LR 18:723 (July 1992).

## §4401. Cost Estimate for Closure

A. The owner or operator must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in LAC 33:V.4379, 4381, 4383, 4385, and 4387 and applicable closure requirements in LAC 33:V.4442, 4457, 4475, 4489, 4501, 4521, 4531, 4543, and 4705.

1. The estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see LAC 33:V.4399); and

2. the closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary or the owner or operator. (See definition of *Parent Corporation* in LAC 33:V.4399.) The owner or operator may use costs for on-site disposal if he can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.

3. The closure cost estimate may not incorporate any salvage value that may be realized by the sale of hazardous wastes, or non-hazardous wastes if applicable under LAC 33:V.4383.D, facility structures or equipment, land or other assets associated with the facility at the time of partial or final closure.

4. The owner or operator may not incorporate a zero cost for hazardous wastes, or non-hazardous wastes if applicable under LAC 33:V.4383.D that might have economic value.

B. During the active life of the facility, the owner or operator must adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instruments used to comply with LAC 33:V.4403. For an owner or operator using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the administrative authority as specified in LAC 33:V.4403.E.3. The adjustment may be made by recalculating the closure cost estimate in current dollars or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in LAC 33:V.4401.B.1 and 2. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

1. The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

2. Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

C. During the active life of the facility, the owner or operator must revise the closure cost estimate no later than 30 days after a revision that increases the cost of a closure has been made to the closure plan. If the owner or operator has an approved closure plan, the closure cost estimate must be revised no later than 30 days after the administrative authority has approved the request to modify the closure plan if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in LAC 33:V.4401.B.

D. The owner or operator must keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with LAC 33:V.4401.A and C and, when this estimate has been adjusted in accordance with LAC 33:V.4401.B, the latest adjusted closure estimate.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 17:478 (May 1991), LR 18:723 (July 1992), LR 21:266 (March 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 34:634 (April 2008).

## §4403. Financial Assurance for Closure

By the effective date of these regulations an owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from the options as specified in Subsections A-E of this Section.

A. Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Section by establishing a closure trust fund that conforms to the requirements of this Paragraph, and submitting an originally signed duplicate of the trust agreement to the Office of Environmental Services. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in LAC 33:V.3719.A, and the trust agreement must be accompanied by a formal certification of acknowledgement (for example, see LAC 33:V.3719.A.2). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current closure cost estimate covered by the agreement.

3. Payments into the trust fund must be made annually by the owner or operator over the 20-years beginning with the effective date of these regulations or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the *pay-in period*. The payments into the closure trust fund must be made as follows.

a. The first payment must be made by the effective date of these regulations except as provided in LAC 33:V.4403.A.5. The first payment must be at least equal to the current closure cost estimate, except as provided in LAC 33:V.4403.F, divided by the number of years in the pay-in period.

b. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by this formula.

$$Next\ Payment = \frac{CE - CV}{Y}$$

where:

CE = current closure cost estimate

CV = current value of the trust fund

Y = number of years remaining in the pay-in period

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in LAC 33:V.4403.A.3.

5. If the owner or operator establishes a closure trust fund after having used one or more alternate mechanisms specified in LAC 33:V.4403, his first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made as specified in LAC 33:V.4403.A.3.

6. After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this Section to cover the difference.

7. If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the Office of Environmental Services for release of the amount in excess of the current closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this Section for all or part of the trust fund, he may submit a written request to the Office of Environmental Services for release of the amount in excess of the current closure cost estimate covered by the trust fund.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in LAC 33:V.4403.A.7 or 8 the administrative authority will instruct the trustee to release to the owner or operator such funds as the administrative authority specifies in writing.

10. After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursements for partial or final closure expenditures by submitting itemized bills to the Office of Environmental Services. The owner or operator may request reimbursement for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. No later than 60 days after receiving bills for partial or final closure activities, the administrative authority will instruct the trustees to make reimbursements in those amounts as the administrative authority specifies in writing, if the administrative authority determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the administrative authority has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with LAC 33:V.4407.H that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the administrative authority does not instruct the trustee to make such reimbursements, he will provide to the owner or operator a detailed written statement of reasons.

11. The administrative authority will agree to termination of the trust when:

a. an owner or operator substitutes alternate financial assurance as specified in LAC 33:V.4403; or

b. the administrative authority releases the owner or operator from the requirements of LAC 33:V.4403 in accordance with LAC 33:V.4403.H.

B. Surety Bond Guaranteeing Payment into a Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Section by obtaining a surety bond that conforms to

the requirements of this Paragraph and submitting the bond to the Office of Environmental Services. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

2. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.B.

3. The owner or operator who uses a surety bond to satisfy the requirements of LAC 33:V.4403 must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements specified in LAC 33:V.4403.A except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the surety bond; and

b. until the standby trust fund is funded pursuant to the requirements of LAC 33:V.4403, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.4403.A;

ii. updating of Schedule A of the trust agreement to show current closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The bond must guarantee that the owner or operator will:

a. fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin final closure is issued by the administrative authority or a U.S. district court or other court of competent jurisdiction; or

c. provide alternate financial assurance as specified in LAC 33:V.4403 and obtain the administrative authority's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the administrative authority of a notice of cancellation of the bond from the surety.

5. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the current closure cost estimate, except as provided in LAC 33:V.4403.F.

7. Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Section to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

8. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Office of Environmental Services. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts.

9. The owner or operator may cancel the bond if the administrative authority has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in LAC 33:V.4403.

C. Closure Letter of Credit

1. An owner or operator may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this Paragraph and submitting the letter to the Office of Environmental Services. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.

2. The wording of the letter of credit must be identical to the wording specified in LAC 33:V.3719.D.

3. An owner or operator who uses a letter of credit to satisfy the requirements of LAC 33:V.4403 must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the administrative authority will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements of the trust fund specified in LAC 33:V.4403.A, except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the letter of credit; and

b. unless the standby trust fund is funded pursuant to the requirements of LAC 33:V.4403, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.4403.A;

ii. updating of Schedule A of the trust agreement (see LAC 33:V.3719.A) to show current closure cost estimates;

iii. annual valuation as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the hazardous waste facility identification number, name and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit.

5. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the administrative authority by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the administrative authority have received the notice, as evidenced by the return receipts.

6. The letter of credit must be issued in an amount at least equal to the current closure cost estimate, except as provided in LAC 33:V.4403.F.

7. Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Section to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

8. Following a determination that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other interim status requirements when required to do so, the administrative authority may draw on the letter of credit.

9. If the owner or operator does not establish alternate financial assurance as specified in this Section and obtain written approval of such alternate assurance from the administrative authority within 90 days after receipt by both the owner or operator and the Office of Environmental Services of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the administrative authority may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the administrative authority will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this Section and obtain written approval of such assurance from the administrative authority.

10. The administrative authority will return the letter of credit to the issuing institution for termination when:

a. an owner or operator substitutes alternate financial assurance as specified in LAC 33:V.4403; or

b. the administrative authority releases the owner or operator from the requirements of LAC 33:V.4403 in accordance with LAC 33:V.4403.H.

D. Closure Insurance

1. An owner or operator may satisfy the requirements of this Section by obtaining closure insurance that conforms to the requirements of this Paragraph and submitting a certificate of such insurance to the administrative authority. By the effective date of these regulations the owner or operator must submit to the Office of Environmental Services a letter from an insurer stating that the insurer is considering issuance of closure insurance conforming to the requirements of this Paragraph to the owner or operator. Within 90 days after the effective date of these regulations, the owner or operator must submit the certificate of insurance to the Office of Environmental Services or establish other financial assurance as specified in this Section. At a minimum, the insurer must be licensed to transact the business of insurance, or be eligible to provide insurance as an excess or surplus lines insurer, in one or more states, and authorized to transact business in Louisiana.

2. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.E.

3. The closure insurance policy must be issued for a face amount at least equal to the current closure cost estimate, except as provided in LAC 33:V.4403.F. The term *face amount* means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

4. The closure insurance policy must guarantee that funds will be available to close the facility whenever final closure occurs. The policy must also guarantee that once final closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the administrative authority to such party or parties as the administrative authority specifies.

5. After beginning final closure, an owner or operator, or any other person authorized to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the administrative authority. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for closure activities, the administrative authority will determine whether the closure expenditures are in accordance with the closure plan or otherwise justified, and if so, he will instruct the insurer to make reimbursement in such amounts as the administrative authority specifies in writing. If the administrative authority has reason to believe

that the cost of closure will be significantly greater than the face amount of the policy, he may withhold reimbursement of such amounts as he deems prudent until he determines, in accordance with LAC 33:V.4403.H, that the owner or operator is no longer required to maintain financial assurance for closure of the facility. If the administrative authority does not instruct the insurer to make such reimbursements, he will provide to the owner or operator a detailed written statement of reasons.

6. The owner or operator must maintain the policy in full force and effect until the administrative authority consents to termination of the policy by the owner or operator as specified in Paragraph D.10 of this Section. Failure to pay the premium, without substitution of alternate financial assurance as specified in this Section, will constitute a significant violation of these regulations, warranting such remedy as the administrative authority deems necessary. Such violation will be deemed to begin upon receipt by the Office of Environmental Services of a notice of future cancellation, termination, or failure to renew, due to nonpayment of the premium, rather than upon the date of expiration.

7. Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent in not unreasonably refused.

8. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Office of Environmental Services. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the administrative authority and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

a. the administrative authority deems the facility abandoned; or

b. interim status is terminated or revoked;

c. closure is ordered by the administrative authority or a U.S. district court or other courts of competent jurisdiction; or

d. the owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

e. the premium due is paid.

9. Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Section to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the administrative authority.

10. The administrative authority will give written consent to the owner or operator that he may terminate the insurance policy when:

a. an owner or operator substitutes alternate financial assurance as specified in LAC 33:V.4403; or

b. the administrative authority releases the owner or operator from the requirements of LAC 33:V.4403 in accordance with LAC 33:V.4403.H.

E. Financial Test and Corporate Guarantee for Closure

1. An owner or operator may satisfy the requirements of LAC 33:V.4403 by demonstrating that he passes a financial test as specified in this Paragraph. To pass this test the owner or operator must meet the criteria of LAC 33:V.4403.E.1.a or b.

a. The owner or operator must have:

i. two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.10; and a ratio of current assets to current liabilities greater than 1.5; and

ii. net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

b. The owner or operator must have:

i. a current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

ii. tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

2. The phrase *current closure and post-closure cost estimates* as used in Paragraph E.1 of this Section refers to

the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (see LAC 33:V.3719.F). The phrase *current plugging and abandonment cost estimates* as used in Paragraph E.1 of this Section refers to the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer [40 CFR 144.70(f)].

3. To demonstrate that he meets this test, the owner or operator must submit the following items to the Office of Environmental Services:

a. a letter signed by the owner's or operator's chief financial officer and worded as specified in LAC 33:V.3719.F; and

b. a copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

c. a special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

i. he has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

ii. in connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

4. The owner or operator may obtain an extension of the time allowed for submission of the items specified in LAC 33:V.4403.E.3 if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the chief financial officer of the owner or operator must send, by the effective date of these regulations, a letter to the administrative authority. This letter from the chief financial officer must:

a. request the extension;

b. certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

c. specify for each facility to be covered by the test the Hazardous Waste Facility Identification Number, name, address, and current closure and post-closure cost estimates to be covered by the test;

d. specify the date ending the owner's or operator's last complete fiscal year before the effective date of these regulations;

e. specify the date, no later than 90 days after the end of such fiscal year, when he will submit the documents specified in LAC 33:V.4403.E.3; and

f. certify that the year-end financial statement of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

5. After the initial submission of items specified in Paragraph E.3 of this Section, the owner or operator must send updated information to the Office of Environmental Services within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in Paragraph E.3 of this Section.

6. If the owner or operator no longer meets the requirements of Paragraph E.1 of this Section, he must send notice to the Office of Environmental Services of intent to establish alternate financial assurance as specified in this Section. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

7. The administrative authority may, based on a reasonable belief that the owner or operator may no longer meet the requirements of LAC 33:V.4403.E.1, require reports of financial condition at any time from the owner or operator in addition to those specified in LAC 33:V.4403.E.3. If the administrative authority finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of LAC 33:V.4403.E.1, the owner or operator must provide alternate financial assurance as specified in LAC 33:V.4403 within 30 days after notification of such a finding.

8. The administrative authority may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see LAC 33:V.4403.E.3). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in LAC 33:V.4403 within 30 days after notification of the disallowance.

9. The owner or operator is no longer required to submit the items specified in LAC 33:V.4403.E.3 when:

a. an owner or operator substitutes alternate financial assurance as specified in LAC 33:V.4403; or

b. the administrative authority releases the owner or operator from the requirements of LAC 33:V.4403 in accordance with LAC 33:V.4403.H.

10. An owner or operator may meet the requirements of LAC 33:V.4403 by obtaining a written guarantee.

a. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a *substantial business relationship* with the owner or operator. The guarantor must

meet the requirements for owners or operators in LAC 33:V.4403.E.1-8 and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in LAC 33:V.3719.H. A certified copy of the guarantee must accompany the items sent to the administrative authority as specified in LAC 33:V.4403.E.3. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a *substantial business relationship* with the owner or operator, this letter must describe this *substantial business relationship* and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

i. if the owner or operator fails to perform final closure of a facility covered by the guarantee in accordance with the closure plan and other interim status requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in LAC 33:V.4403.A in the name of the owner or operator;

ii. the guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the administrative authority. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts;

iii. if the owner or operator fails to provide alternate financial assurance as specified in LAC 33:V.4403 and obtain the written approval of such alternate assurance from the administrative authority within 90 days after receipt by administrative authority of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the owner or operator.

F. Use of Multiple Financial Mechanisms. An owner or operator may satisfy the requirements of this Section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in Subsections A-F of this Section, respectively, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The administrative authority may use any or all of the mechanisms to provide for closure of the facility.

G. Use of a Financial Mechanism for Multiple Facilities. An owner or operator may use a financial assurance mechanism specified in this Section to meet the requirements of this Section for more than one facility. Evidence of financial assurance submitted to the Office of Environmental Services must include a list showing, for each facility, the EPA identification number, name, address, and the amount of funds for closure assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing the funds available through the mechanism for closure of any of the facilities covered by the mechanism, the administrative authority may direct only the amount of funds designated for that particular facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

H. Release of the Owner or Operator from the Requirements of this Section. Within 60 days after receiving certifications from the owner or operator and an independent, qualified professional engineer that closure has been completed in accordance with the approved closure plan and after receiving the certification required under LAC 33:V.4393.B.2 for facilities subject to LAC 33:V.4393, the administrative authority will notify the owner or operator in writing that he is no longer required by this Section to maintain financial assurance for final closure of the particular facility, unless the administrative authority has reason to believe that the final closure has not been in accordance with the approved closure plan or that the owner or operator has failed to comply with the applicable requirements of LAC 33:V.4393. The administrative authority shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan or that the owner or operator has failed to comply with the applicable requirements of LAC 33:V.4393.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 14:791 (November 1988), LR 16:219 (March 1990), LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1520 (November 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2502 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2477 (October 2005), LR 33:2129 (October 2007), LR 34:1003 (June 2008).

## §4405. Cost Estimate for Post-Closure Care

A. The owner or operator of a hazardous waste disposal unit must have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in LAC 33:V.4389-4395, LAC 33:V.4457, 4475, 4489, and 4501.

1. The post-closure cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A third party is a party who is neither a parent nor subsidiary of the owner or operator. (See definition of *parent corporation* in LAC 33:V.4399.)

2. The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under LAC 33:V.4389.

B. During the active life of the facility, the owner or operator must adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with LAC 33:V.4407. For owners or operators using the financial test or corporate guarantee, the post-closure care cost estimate must be updated for inflation no later than 30 days after the close of the firm's fiscal year and before submission of updated information to the administrative authority as specified in LAC 33:V.4407.D.5. The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business as specified in LAC 33:V.4405.B.1 and 2. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

1. The first adjustment is made by multiplying the latest adjusted post-closure cost estimate by the inflator factor. The result is the adjusted post-closure cost estimate.

2. Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.

C. During the active life of the facility, the owner or operator must revise the post-closure cost estimate no later than 30 days after a revision to the post-closure plan which increases the cost of post-closure care. If the owner or operator has an approved post-closure plan, the post-closure cost estimate must be revised no later than 30 days after the administrative authority has approved the request to modify the plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate must be adjusted for inflation as specified in LAC 33:V.4405.B.

D. The owner or operator must keep the following at the facility during the operating life of the facility: the latest post-closure cost estimate prepared in accordance with LAC 33:V.4405.A and C and, when this estimate has been adjusted in accordance with LAC 33:V.4405.B, the latest adjusted post-closure cost estimate.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 18:723 (July 1992).

## §4407. Financial Assurance for Post-Closure Care

An owner or operator of each hazardous waste disposal unit must establish financial assurance for post-closure care of the facility. He must choose from the options as specified in Subsections A-E of this Section.

A. Post-Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Subsection by establishing a post-closure trust fund that conforms to the requirements of this Paragraph and submitting an originally signed duplicate of the trust agreement to the Office of Environmental Services. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in LAC 33:V.3719.A.1, and the trust agreement must be accompanied by a formal certification of acknowledgement (for example, see LAC 33:V.3719.A.2). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current post-closure cost estimate covered by the agreement.

3. Payments into the trust fund must be made annually by the owner or operator over the 20 years beginning with the effective date of these regulations or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the *pay-in period*. The payments in to the post-closure trust fund must be made as follows.

a. The first payment must be made by the effective date of these regulations, except as provided in LAC 33:V.4407.A.5. The first payment must be at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.4407.F, divided by the number of years in the pay-in period.

b. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by this formula.

$$\textit{Next Payment} = \frac{\text{CE - CV}}{Y}$$

where:

CE = current post-closure cost estimate

CV = current value of the trust fund

Y = number of years remaining in the pay-in period

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current post-closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in LAC 33:V.4407.A.3.

5. If the owner or operator establishes a post-closure trust fund after having used one or more alternate mechanisms specified in LAC 33:V.4407, his first payment must be in at least the amount that the fund would contain if

the trust fund were established initially and annual payments made as specified in LAC 33:V.4407.A.3.

6. After the pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in LAC 33:V.4407 to cover the difference.

7. During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the Office of Environmental Services for release of the amount in excess of the current post-closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this Section for all or part of the trust fund, he may submit a written request to the Office of Environmental Services for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in LAC 33:V.3711.G or H, the administrative authority will instruct the trustee to release to the owner or operator such funds as the administrative authority specifies in writing.

10. During the period of post-closure care, the administrative authority may approve a release of funds if the owner or operator demonstrates to the administrative authority that the value of the trust fund exceeds the remaining cost of post-closure care.

11. An owner or operator, or any other person authorized to perform post-closure care, may request reimbursement for the post-closure expenditures by submitting itemized bills to the Office of Environmental Services. Within 60 days after receiving bills for post-closure activities, the administrative authority will instruct the trustee to make reimbursements in those amounts as the administrative authority specifies in writing, if the administrative authority determines that the post-closure expenditures are in accordance with the approved post-closure plan or otherwise justified. If the administrative authority does not instruct the trustee to make such reimbursements, he will provide the owner or operator with a detailed statement of reasons.

12. The administrative authority releases the owner or operator from the requirements of LAC 33:V.4407.A in accordance with LAC 33:V.4407.H.

B. Surety Bond Guaranteeing Payment into a Post-Closure Trust Fund

1. An owner or operator may satisfy the requirements of this Subsection by obtaining a surety bond that conforms to the requirements of this Paragraph and submitting the bond to the Office of Environmental Services. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury.

2. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.B.

3. The owner or operator who uses a surety bond to satisfy the requirements of LAC 33:V.4407.B must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements specified in LAC 33:V.4407.A, except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the surety bond; and

b. until the standby trust fund is funded pursuant to the requirements of LAC 33:V.4407.B, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.4407.A.3;

ii. updating of Schedule A of the trust agreement (LAC 33:V.3719.A) to show current post-closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The bond must guarantee that the owner or operator will:

a. fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin final closure is issued by the administrative authority becomes final, or within 15 days after an order to begin final closure is issued by a court of competent jurisdiction; or

c. provide alternate financial assurance as specified in LAC 33:V.4407.B and obtain the administrative authority's written approval of the assurance provided within days after receipt by both the owner or operator and the administrative authority of a notice of cancellation of the bond from the surety.

5. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.4407.F.

7. Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Subsection to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the administrative authority.

8. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Office of Environmental Services. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts.

9. The owner or operator may cancel the bond if the administrative authority has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in LAC 33:V.4407.B.

C. Post-Closure Letter of Credit

1. An owner or operator may satisfy the requirements of this Subsection by obtaining an irrevocable standby letter of credit that conforms to the requirements of this Paragraph and by submitting the letter to the Office of Environmental Services. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

2. The wording of the letter of credit must be identical to the wording specified in LAC 33:V.3719.D.

3. An owner or operator who uses a letter of credit to satisfy the requirements of LAC 33:V.4407.C must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the administrative authority will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the administrative authority. This standby trust fund must meet the requirements of the trust fund specified in LAC 33:V.4407.A, except that:

a. an originally signed duplicate of the trust agreement must be submitted to the administrative authority with the letter of credit; and

b. unless the standby trust fund is funded pursuant to the requirements of LAC 33:V.4407.C, the following are not required by these regulations:

i. payments into the trust fund as specified in LAC 33:V.4407.A;

ii. updating of Schedule A of the trust agreement (see LAC 33:V.3719.A) to show current post-closure cost estimates;

iii. annual valuations as required by the trust agreement; and

iv. notices of nonpayment as required by the trust agreement.

4. The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the hazardous waste facility identification number, name and address of the facility, and the amount of funds assured for post-closure care of the facility by the letter of credit.

5. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Office of Environmental Services, by certified mail, of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator, and the administrative authority have received the notice, as evidenced by the return receipts.

6. The letter of credit must be issued in an amount at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.4407.F.

7. Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current post-closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the administrative authority.

8. During the period of post-closure care, the administrative authority may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the administrative authority that the amount exceeds the remaining cost of post-closure care.

9. Following a final administrative determination by the administrative authority that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the administrative authority may draw on the letter of credit.

10. If the owner or operator does not establish alternate financial assurance as specified in this Section and obtain written approval of such alternate assurance from the administrative authority within 90 days after receipt by both

the owner or operator and the Office of Environmental Services of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the administrative authority will draw on the letter of credit. The administrative authority may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the administrative authority will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this Section and obtain written approval of such assurance from the administrative authority.

11. The administrative authority will return the letter of credit to the issuing institution for termination when:

a. an owner or operator substitutes alternate financial assurance as specified in LAC 33:V.4407; or

b. the administrative authority releases the owner or operator from the requirements of LAC 33:V.4407 in accordance with LAC 33:V.4407.H.

D. Post-Closure Insurance

1. An owner or operator may satisfy the requirements of this Subsection by obtaining post-closure insurance that conforms to the requirements of this Paragraph and submitting a certificate of such insurance to the Office of Environmental Services. The owner or operator must submit to the administrative authority a letter from an insurer stating that the insurer is considering issuance of post-closure insurance conforming to the requirements of this Paragraph to the owner or operator. Within 90 days after the effective date of these regulations, the owner or operator must submit the certificate of insurance to the administrative authority or establish other financial assurance as specified in this Section. At a minimum, the insurer must be licensed to transact the business of insurance, or be eligible to provide insurance as an excess or surplus lines insurer in one or more states, and authorized to transact insurance business in Louisiana.

2. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.E.

3. The post-closure insurance policy must be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in LAC 33:V.4407.F. The term *face amount* means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

4. The post-closure insurance policy must guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The policy must also guarantee that once post-closure care begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the administrative authority, to such party or parties as the administrative authority specifies.

5. An owner or operator or any other person authorized to perform post-closure care may request reimbursement for post-closure expenditures by submitting itemized bills to the Office of Environmental Services. Within 60 days after receiving bills for post-closure activities, the administrative authority will instruct the insurer to make reimbursements in those amounts as the administrative authority specifies in writing, if the administrative authority determines that the post-closure expenditures are in accordance with the approved post-closure plan or otherwise justified. If the administrative authority does not instruct the insurer to make such reimbursements, he will provide a detailed written statement of reasons.

6. The owner or operator must maintain the policy in full force and effect until the administrative authority consents to termination of the policy by the owner or operator as specified in LAC 33:V.4407.D.11. Failure to pay the premium, without substitution of alternate financial assurance as specified in LAC 33:V.4407, will constitute a significant violation of these regulations, warranting such remedy as the administrative authority deems necessary. Such violation will be deemed to begin upon receipt by the administrative authority of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

7. Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

8. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Office of Environmental Services. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the administrative authority and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

a. the administrative authority deems the facility abandoned; or

b. interim status is terminated or revoked;

c. closure is ordered by the administrative authority, or a U.S. District Court; or

d. the owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

e. the premium due is paid.

9. Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Office of Environmental Services or obtain other financial assurance as specified in this Section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the administrative authority.

10. Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rates or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26 week treasury securities.

11. The administrative authority will give written consent to the owner or operator that he may terminate the insurance policy when:

a. an owner or operator substitutes alternate financial assurance as specified in LAC 33:V.4407; or

b. the administrative authority releases the owner or operator from the requirements of LAC 33:V.4407 in accordance with LAC 33:V.4407.H.

E. Financial Test and Guarantees for Post-Closure Care

1. An owner or operator may satisfy the requirements of LAC 33:V.4407.E by demonstrating that he passes a financial test as specified in this Paragraph. To pass this test the owner or operator must meet the criteria of LAC 33:V.4407.E.1.a or b.

a. The owner or operator must have:

i. two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.10; and a ratio of current assets to current liabilities greater than 1.5; and

ii. net working capital and tangible net worth each at least six times the sum of the current closure and post-closure costs estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

b. The owner or operator must have:

i. a current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

ii. tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

iii. tangible net worth of at least $10 million; and

iv. assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

2. The phrase *current closure and post-closure cost estimates* as used in Paragraph E.1 of this Section refers to the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (see LAC 33:V.3719.F). The phrase *current plugging and abandonment cost estimates* as used in Paragraph E.1 of this Section refers to the cost estimates required to be shown in Paragraphs 1-4 of the letter from the owner's or operator's chief financial officer [40 CFR 144.70(f)].

3. To demonstrate that he meets this test, the owner or operator must submit the following items to the Office of Environmental Services:

a. a letter signed by the owner's or operator's chief financial officer and worded as specified in LAC 33:V.3719.F; and

b. a copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

c. a special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

i. he has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

ii. in connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

4. The owner or operator may obtain an extension of the time allowed for submission of the documents specified in Paragraph E.3 of this Section if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer must send, by the effective date of these regulations, a letter to the Office of Environmental Services. This letter from the chief financial officer must:

a. request the extension;

b. certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

c. specify for each facility to be covered by the test the EPA identification number, name, address, and current closure and post-closure cost estimates to be covered by the test;

d. specify the date ending the owner's or operator's latest complete fiscal year before the effective date of these regulations;

e. specify the date, no later than 90 days after the end of such fiscal year, when he will submit the documents specified in LAC 33:V.4407.E.3; and

f. certify that the year-end financial statement of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

5. After the initial submission of items specified in Paragraph E.3 of this Section, the owner or operator must send updated information to the Office of Environmental Services within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in Paragraph E.3 of this Section.

6. If the owner or operator no longer meets the requirements of Paragraph E.1 of this Section, he must send notice to the Office of Environmental Services of intent to establish alternate financial assurance as specified in this Section. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

7. The administrative authority may, based on a reasonable belief that the owner or operator may no longer meet the requirements of LAC 33:V.4407.E.1, require reports of financial condition at any time from the owner or operator in addition to those specified in LAC 33:V.4407.E.3. If the administrative authority finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of LAC 33:V.4407.E.1, the owner or operator must provide alternate financial assurance as specified in LAC 33:V.4407 within 30 days after notification of such a finding.

8. The administrative authority may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see LAC 33:V.4407.E.3). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. Based on the application, the circumstances, and the accessibility of the applicant's assets, the administrative authority may disallow the use of this test. The owner or operator must provide alternate financial assurance as specified in LAC 33:V.4407 within 30 days after notification of the disallowance.

9. During the period of post-closure care, the administrative authority may approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the administrative authority that the amount of the cost estimate exceeds the remaining cost of post-closure care.

10. The owner or operator is no longer required to submit the items specified in LAC 33:V.4407.E.3 when:

a. an owner or operator substitutes alternate financial assurance as specified in LAC 33:V.4407; or

b. the administrative authority releases the owner or operator from the requirements of LAC 33:V.4407 in accordance with LAC 33:V.4407.H.

11. An owner or operator may meet the requirements of LAC 33:V.4407.E by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a *substantial business relationship* with the owner or operator. The guarantor must meet the requirements for an owner or operator in LAC 33:V.4407.E.1-9 and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in LAC 33:V.3719.H. A certified copy of the guarantee must accompany the items sent to the administrative authority specified in LAC 33:V.4407.E.3. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a *substantial business relationship* with the owner or operator, this letter must describe this *substantial business relationship* and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

a. if the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in LAC 33:V.4407.A in the name of the owner or operator;

b. the corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Office of Environmental Services. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the administrative authority, as evidenced by the return receipts; and

c. if the owner or operator fails to provide alternate financial assurance as specified in LAC 33:V.4407 and obtain the written approval of such alternate assurance from the administrative authority within 90 days after receipt by

both the owner or operator and the administrative authority of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

F. Use of Multiple Financial Mechanisms. An owner or operator may satisfy the requirements of this Subsection by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in Subsections A, B, C, and D of this Section, respectively, except that it is the combination of mechanisms rather than the single mechanism which must provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The administrative authority may use any or all of the mechanisms to provide for post-closure care of the facility.

G. Use of a Financial Mechanism for Multiple Facilities. An owner or operator may use a financial assurance mechanism specified in this Subsection to meet the requirements of this Subsection for more than one facility. Evidence of financial assurance submitted to the Office of Environmental Services must include a list showing, for each facility, the EPA identification number, name, address, and the amount of funds for post-closure assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the administrative authority may direct only the amount of funds designated for that particular facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

H. Release of the Owner or Operator from the Requirements of this Section. Within 60 days after receiving certifications from the owner or operator and an independent, qualified professional engineer that the post-closure care period has been completed in accordance with the approved post-closure plan, the administrative authority will notify the owner or operator in writing that he is no longer required by this Section to maintain financial assurance for post-closure care of that unit, unless the administrative authority has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The administrative authority will provide the owner or operator a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 13:433 (August 1987), LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1521 (November 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2504 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2479 (October 2005), LR 33:2131 (October 2007), LR 34:1003 (June 2008).

## §4409. Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care

A. An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in both LAC 33:V.4403 and 4407. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism has been established and maintained for financial assurance of closure and post-closure care.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4411. Liability Requirements

A. Coverage for Sudden Accidental Occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in LAC 33:V.4411.A.1-6.

1. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this Paragraph.

a. Each insurance policy must be amended by attachment of the hazardous waste facility liability endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in LAC 33:V.3719.I. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.J. The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Office of Environmental Services. If requested by the administrative authority, the owner or operator must provide a signed duplicate original of the insurance policy.

b. Each insurance policy must be issued by an insurer which, at a minimum, is authorized to transact business in Louisiana and in one or more states and is licensed to transact the business of insurance or is eligible to provide insurance as an excess or surplus lines insurer, in

one or more states, and authorized to transact business in Louisiana.

2. An owner or operator may meet the requirements of this Section by passing a financial test or using the guarantee for liability coverage as specified in LAC 33:V.4411.F-G.

3. An owner or operator may meet the requirements of this Section by obtaining a letter of credit for liability coverage as specified in LAC 33:V.4411.H.

4. An owner or operator may meet the requirements of this Section by obtaining a surety bond for liability coverage as specified in LAC 33:V.4411.I.

5. An owner or operator may meet the requirements of this Section by obtaining a trust fund for liability coverage as specified in LAC 33:V.4411.J.

6. An owner or operator may demonstrate the required liability coverage through the use of combinations of financial test, insurance, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this Section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this Paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

7. An owner or operator shall notify the Office of Environmental Services in writing within 30 days whenever:

a. a claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in LAC 33:V.4411.A.1-6; or

b. a Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under LAC 33:V.4411.A.1-6; or

c. a final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under LAC 33:V.4411.A.1-6.

B. Coverage for Non-Sudden Accidental Occurrences. An owner or operator of a surface impoundment, landfill, or land treatment facility which is used to manage hazardous waste, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by non-sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for non-sudden accidental occurrences in the amount of at least $3 million per occurrence with an annual aggregate of at least $6 million, exclusive of legal defense costs. An owner or operator who must meet the requirements of this Section may combine the required per-occurrence coverage levels for sudden and non-sudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and non-sudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and non-sudden accidental occurrences must maintain liability coverage in the amount of at least $4 million per occurrence and $8 million annual aggregate. This liability coverage may be demonstrated as specified in LAC 33:V.4411.B.1-6.

1. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this Paragraph.

a. Each insurance policy must be amended by attachment of the hazardous waste facility liability endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in LAC 33:V.3719.I. The wording of the certificate of insurance must be identical to the wording specified in LAC 33:V.3719.J. The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Office of Environmental Services. If requested by the administrative authority, the owner or operator must provide a signed duplicate original of the insurance policy.

b. Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer in one or more states, and authorized to transact business in Louisiana.

2. An owner or operator may meet the requirements of LAC 33:V.4411.B by passing a financial test or using the corporate guarantee for liability coverage as specified in LAC 33:V.4411.F and G.

3. An owner or operator may meet the requirements of this Section by obtaining a letter of credit for liability coverage as specified in LAC 33:V.4411.H.

4. An owner or operator may meet the requirements of this Section by obtaining a surety bond for liability coverage as specified in LAC 33:4411.I.

5. An owner or operator may meet the requirements of this Section by obtaining a trust fund for liability coverage as specified in LAC 33:V.4411.J.

6. An owner or operator may demonstrate the required liability coverage through use of combinations of the financial test, insurance, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with

the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this Section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this Paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

7. An owner or operator shall notify the Office of Environmental Services in writing within 30 days whenever:

a. a claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in LAC 33:V.4411.B.1-6; or

b. a Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under LAC 33:V.4411.B.1-6; or

c. a final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under LAC 33:V.4411.B.1-6.

C. Request for Variance. If an owner or operator can demonstrate to the satisfaction of the administrative authority that the levels of financial responsibility required by LAC 33:V.4411.A or B are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the administrative authority. The request for a variance must be submitted in writing to the administrative authority. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the administrative authority's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The administrative authority may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the administrative authority to determine a level of financial responsibility other than that required by LAC 33:V.4411.A or B. The administrative authority will process a variance request as if it were a permit modification request. Notwithstanding any other provision, the administrative authority may hold a public hearing at his discretion or whenever he finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to grant a variance.

D. Adjustments by the Administrative Authority. If the administrative authority determines that the levels of financial responsibility required by LAC 33:V.4411.A or B are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the administrative authority may adjust the level of financial responsibility required by LAC 33:V.4411.A or B as may be necessary to protect human health and the environment. This adjusted level will be based on the administrative authority's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the administrative authority determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, he may require that an owner or operator of the facility comply with LAC 33:V.4411.B. An owner or operator must furnish to the administrative authority, within a reasonable time, any information which the administrative authority requests to determine whether cause exists for such adjustments of level or type of coverage. The administrative authority will process an adjustment of the level of required coverage as if it were a permit modification. Notwithstanding any other provision, the administrative authority may hold a public hearing at his discretion or whenever he finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to adjust the level or type of required coverage.

E. Period of Coverage. Within 60 days after receiving certifications from the owner or operator and an independent, qualified professional engineer that final closure has been completed in accordance with the approved closure plan, the administrative authority will notify the owner or operator in writing that he is no longer required by this Section to maintain liability coverage for that facility, unless the administrative authority has reason to believe that closure has not been in accordance with the approved closure plan.

F. Financial Test for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by demonstrating that he passes a financial test as specified in LAC 33:V.4411.F. To pass this test the owner or operator must meet the criteria of LAC 33:V.4411.F.1.a or b.

a. The owner or operator must have:

i. net working capital and tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

ii. tangible net worth of at least $10 million; and

iii. assets located in the United States amounting to either at least 90 percent of his total assets or at least six times the amount of liability coverage to be demonstrated by this test.

b. The owner or operator must have:

i. a current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

ii. tangible net worth of at least $10 million; and

iii. tangible net worth at least six times the amount of liability coverage to be demonstrated by this test ; and

iv. assets located in the United States amounting to either at least 90 percent of his total assets or at least six times the amount of liability coverage to be demonstrated by this test.

2. The phrase *amount of liability coverage* as used in LAC 33:V.4411.F.1 refers to the annual aggregate amounts for which coverage is required under LAC 33:V.4411.A and B.

3. To demonstrate that he meets this test, the owner or operator must submit the following three items to the Office of Environmental Services.

a. A letter signed by the owner's or operator's chief financial officer and worded as specified in LAC 33:V.3719.G. If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by LAC 33:V.3707.F, 3711.F, 4403.E, and 4407.E, and liability coverage, he must submit the letter specified in LAC 33:V.3719.G to cover both forms of financial responsibility; a separate letter as specified in LAC 33:V.3719.F is not required.

b. A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

c. A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

i. he has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

ii. in connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

4. The owner or operator may obtain a one-time extension of the time allowed for submission of the documents specified in Paragraph F.3 of this Section if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the chief financial officer for the owner or operator must send a letter to the Office of Environmental Services. This letter from the chief financial officer must:

a. request the extension;

b. certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

c. specify for each facility to be covered by the test the EPA identification number, name, address, the amount of liability coverage and, when applicable, current closure and post-closure cost estimates to be covered by the test;

d. specify the date ending the owner's or operator's last complete fiscal year before the effective date of these regulations;

e. specify the date, no later than 90 days after the end of such fiscal year, when he will submit the documents specified in LAC 33:V.4411.F.3; and

f. certify that the year-end financial statement of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

5. After the initial submission of items specified in Paragraph F.3 of this Section, the owner or operator must send updated information to the Office of Environmental Services within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in Paragraph F.3 of this Section.

6. If the owner or operator no longer meets the requirements of Paragraph F.1 of this Section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this Section. Evidence of liability coverage must be submitted to the Office of Environmental Services within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

7. The administrative authority may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see LAC 33:V.4411.F.3). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. The owner or operator must provide evidence of insurance for the entire amount of required liability coverage as specified in LAC 33:V.4411 within 30 days after notification of disallowance.

G. Guarantee for Liability Coverage

1. Subject to LAC 33:V.4411.G.2, an owner or operator may meet the requirements of this Section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a *substantial business relationship* with the owner or operator. The guarantor must meet the requirements for owners or operators in LAC 33:V.4411.F.1-6. The wording of the guarantee must be identical to the wording specified in LAC 33:V.3719.H.2. A certified copy of the guarantee must accompany the items sent to the administrative authority as specified in LAC 33:V.4411.F.3. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is

a firm with a *substantial business relationship* with the owner or operator, this letter must describe this *substantial business relationship* and the value received in consideration of the guarantee.

a. If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or non-sudden accidental occurrences or both, arising from the operation of facilities covered by this corporate guarantee or fails to pay an amount agreed upon in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

b. Reserved.

2. In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this Section only if the attorney general or insurance commissioner of the state in which the guarantor is incorporated and the attorney general or insurance commissioner of Louisiana have submitted written statements to the department that a guarantee executed as described in this Section and LAC 33:V.3719.H.2 is a legally valid and enforceable obligation in that state.

3. In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this Section only if the non-U.S. corporation has identified a registered agent for service of process in Louisiana and in the state in which it has its principal place of business, and if the attorney general or insurance commissioner of Louisiana and the state in which the guarantor corporation has its principal place of business have submitted written statements to the department that a guarantee executed as described in this Section and LAC 33:V.3719.H.2 is a legally valid and enforceable obligation in that state.

H. Letter of Credit for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this Subsection and submitting a copy of the letter of credit to the Office of Environmental Services.

2. The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.

3. The wording of the letter of credit must be identical to the wording specified in LAC 33:V.3719.K.

4. An owner or operator who uses a letter of credit to satisfy the requirements of this Section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

5. The wording of the standby trust fund must be identical to the wording specified in LAC 33:V.3719.N.

I. Surety Bond for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by obtaining a surety bond that conforms to the requirements of this Subsection and submitting a copy of the bond to the Office of Environmental Services.

2. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

3. The wording of the surety bond must be identical to the wording specified in LAC 33:V.3719.L.

4. A surety bond may be used to satisfy the requirements of this Section only if the attorney general or insurance commissioners of the state in which the surety is incorporated and the attorney general or insurance commissioner of Louisiana have submitted written statements to the department that a surety bond executed as described in this Section and LAC 33:V.3719.L is a legally valid and enforceable obligation in that state.

J. Trust Fund for Liability Coverage

1. An owner or operator may satisfy the requirements of this Section by establishing a trust fund that conforms to the requirements of this Subsection and submitting an originally signed duplicate of the trust agreement to the Office of Environmental Services.

2. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

3. The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this Section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the fund, must either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in this Section to cover the difference. For purposes of this Paragraph, *the full amount of the liability coverage to be provided* means the amount of coverage for sudden and/or non-sudden occurrences required to be provided by the owner or operator by this Section, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

4. The wording of the trust fund must be identical to the wording specified in LAC 33:V.3719.M.

K. Notwithstanding any other provision of LAC 33:V.Chapter 43, an owner or operator using liability insurance to satisfy the requirements of this Section may use, until October 16, 1982, a Hazardous Waste Facility Liability Endorsement or Certificate of Liability Insurance that does not certify that the insurer is licensed to transact the business of insurance, or eligible as an excess or surplus lines insurer, in one or more states.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:433 (August 1987), LR 16:399 (May 1990), LR 18:723 (July 1992), repromulgated LR 19:627 (May 1993), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1521 (November 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2506 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2481 (October 2005), LR 33:2133 (October 2007), LR 34:1004 (June 2008).

### §4413. Incapacity of Owners or Operators, Guarantors, or Financial Institutions

A. An owner or operator must notify the Office of Environmental Services by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in LAC 33:V.4403.E and 4407.E must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee (see LAC 33:V.3719.H).

B. An owner or operator who fulfills the requirements of LAC 33:V.4403, 4407, or 4411 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within 60 days after such an event.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2507 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2482 (October 2005), LR 33:2134 (October 2007).

## Subchapter H. Containers

### §4417. Applicability

A. Owners and operators of all hazardous waste facilities with interim status that store hazardous wastes in containers are subject to the requirements of this Chapter and LAC 33:V.Chapter 21 as indicated below.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4419. Condition of Containers

A. Interim status facilities are subject to the requirements of LAC 33:V.2103.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4421. Compatibility of Waste with Containers

A. Interim status facilities are subject to the requirements of LAC 33:V.2105.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4423. Management of Containers

A. Interim status facilities are subject to the requirements of LAC 33:V.2107.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4425. Inspections

A. Interim status facilities are subject to the requirements of LAC 33:V.2109.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4427. Special Requirements for Ignitable or Reactive Waste

A. Interim status facilities are subject to the requirements of LAC 33:V.2113.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4429. Special Requirements for Incompatible Wastes

A. Interim status facilities are subject to the requirements of LAC 33:V.2115.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4430. Air Emission Standards

A. The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of Subchapters Q, R, and V of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1745 (September 1998).

## Subchapter I. Tanks

### §4431. Applicability

A. The regulations of this Subchapter apply to owners or operators of facilities that use tank systems for storing or treating hazardous waste, except as otherwise provided in this Section and in LAC 33:V.4433 or in 4301 and 105.F.

1. Tank systems that are used to store or treat hazardous waste that contains no free liquids and that are situated inside a building with an impermeable floor are exempted from the requirements of LAC 33:V.4437. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test must be used: Method 9095B (Paint Filter Liquids Test) as described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.

2. *Tank systems*, including *sumps*, as defined in LAC 33:V.109, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in LAC 33:V.4437.A.

3. *Tanks*, *sumps* and other collection devices used in conjunction with *drip pads*, as defined in LAC 33:V.109 and regulated under LAC 33:V.Chapter 43.Subchapter S, must meet the requirements of this Subchapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 16:614 (July 1990), LR 18:1375 (December 1992), LR 22:829 (September 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1019 (June 2008).

### §4433. Assessment of Existing Tank System's Integrity

A. For each existing tank system that does not have secondary containment meeting the requirements of these regulations, the owner or operator must determine that the tank system is not leaking or unfit for use. Except as provided in Subsection C of this Section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified professional engineer in accordance with LAC 33:V.513 that attests to the tank system's integrity by November 20, 1988.

B. This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following:

1. design standard(s), if available, according to which the tank and ancillary equipment were constructed;

2. hazardous characteristics of the waste(s) that have been or will be handled;

3. existing corrosion protection measures;

4. documented age of the tank system, if available, (otherwise, an estimate of the age); and

5. results of a leak test, internal inspection, or other tank integrity examination such that:

a. for non-enterable underground tanks, this assessment must consist of a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects;

b. for other than non-enterable underground tanks and for ancillary equipment, this assessment must be either a leak test, as described in Subparagraph B.5.a of this Section, or an internal inspection and/or other tank integrity examination certified by an independent, qualified professional engineer in accordance with LAC 33:V.513 that addresses cracks, leaks, corrosion, and erosion.

C. Tank systems that store or treat materials that became hazardous wastes subsequent to July 14, 1986 must conduct this assessment within 12 months after the date that the waste became a hazardous waste.

D. If, as a result of the assessment conducted in accordance with LAC 33:V.4431, a tank system is found to be leaking or unfit for use, the owner or operator must comply with the requirements of LAC 33:V.4441.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 18:723 (July 1992), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1004 (June 2008).

### §4435. Design and Installation of New Tank Systems or Components

A. Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by an independent, qualified professional engineer in accordance with LAC 33:V.513 attesting that the system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include, at a minimum, the following information:

1. design standard(s) according to which the tank(s) and ancillary equipment is or will be constructed;

2. hazardous characteristics of the waste(s) to be handled;

3. for new tank systems or components in which the external shell of a metal tank or any external metal component of the tank systems is or will be in contact with the soil or with the water, a determination by a corrosion expert of:

a. factors affecting the potential for corrosion, including but not limited to:

i. soil moisture content;

ii. soil pH;

iii. soil sulfides level;

iv. soil resistivity;

v. structure to soil potential;

vi. influence of nearby underground metal structures (e.g., piping);

vii. stray electric current; and

viii. existing corrosion-protection measures (e.g., coating, cathodic protection); and

b. the type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

i. corrosion-resistant materials of construction such as special alloys, fiberglass-reinforced plastic;

ii. corrosion-resistant coating (such as epoxy or fiberglass) with cathodic protection (e.g., impressed current or sacrificial anodes); and

iii. electrical isolation devices such as insulating joints and flanges;

4. for underground tank system components that are likely to be affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

5. design consideration to ensure that:

a. tank foundations will maintain the load of a full tank;

b. tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone; and

c. tank systems will withstand the effects of frost heave.

B. The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified professional engineer, either of whom is trained and experienced in the proper installation of tank systems, must inspect the system or component for the presence of any of the following items:

1. weld breaks;

2. punctures;

3. scrapes of protective coatings;

4. cracks;

5. corrosion;

6. other structural damage or inadequate construction or installation.

All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

C. New tank systems or components and piping that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is carefully installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

D. All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed in use.

E. Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction.

F. The owner or operator must provide the type and degree of corrosion protection necessary, based on the information provided under LAC 33:V.4435.A.3, to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

G. The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of LAC 33:V.4435.B-F to attest that the tank was properly designed and installed and that repairs, pursuant to LAC 33:V.4435.B and D were performed. These written statements must also include the certification statement as required in this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 18:723 (July 1992), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1004 (June 2008).

**§4437. Containment and Detection of Releases**

A. In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this Section must be provided (except as provided in Subsections F and G of this Section):

1. for all new and existing tank systems or components, prior to their being put into service;

2. for tank systems that store or treat materials that become hazardous wastes, within two years of the hazardous waste listing, or when the tank system has reached 15 years of age, whichever comes later.

B. Secondary containment systems must be:

1. designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, or surface water at any time during the use of the tank system; and

2. capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

C. To meet the requirements of Subsection B of this Section, secondary containment systems must be at a minimum:

1. constructed of or lined with materials that are compatible with the waste to be placed in the tank systems and must have sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from nearby vehicular traffic);

2. placed on a foundation or base capable of providing support to the secondary containment systems and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift;

3. provide with a leak detection system that is designed and operated so that it will detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the existing detection technology or site conditions will not allow detection of a release within 24 hours;

4. sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health or the environment, if removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

D. Secondary containment for tanks must include one or more of the following devices:

1. a liner (external to the tank);

2. a vault;

3. a double-walled tank; or

4. an equivalent device as approved by the administrative authority.

E. In addition to the requirements of Subsections B-D of this Section, secondary containment systems must satisfy the following requirements.

1. External liner systems must be:

a. designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

b. designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

c. free of cracks or gaps; and

d. designed and installed to completely surround the tank and cover all surrounding earth likely to come into contact with the waste if released from the tank(s) (i.e., capable of preventing lateral as well as vertical migration of the waste).

2. Vault systems must be:

a. designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

b. designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

c. constructed with chemical-resistant water stops in place at all joints (if any);

d. provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;

e. provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:

i. meets the characteristics of ignitable waste under LAC 33:V.4903.B; or

ii. meets the characteristics of reactive waste under LAC 33:V.4903.D and may form an ignitable or explosive vapor; and

iii. provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

3. Double-walled tanks must be:

a. designed as an integral structure (i.e., an inner tank within an outer shell) so that any release from the inner tank is contained by the outer shell;

b. protected, if constructed of metal, from both corrosion of the primary tank interior and external surface of the outer shell; and

c. provided with a built-in, continuous leak detection system capable of detecting a release within 24 hours or at the earliest practicable time, if the owner or operator can demonstrate to the administrative authority and the administrative authority concurs, that the existing leak detection technology or site conditions will not allow detection of a release within 24 hours.

F. Ancillary equipment must be provided with full secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of Subsections B and C of this Section, except for:

1. aboveground piping (exclusive of flanges, joints, valves, and connections) that are visually inspected for leaks on a daily basis;

2. welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;

3. sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks on a daily basis; and

4. pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

G. The owner or operator may obtain a variance from the requirements of this Section if the administrative authority finds, as a result of a demonstration by the owner or operator, either that alternative design and operating practices together with location characteristics will prevent the migration of hazardous waste or hazardous constituents into the groundwater or surface water at least as effectively as a secondary containment during the active life of the tank system or that in the event of a release that does migrate to groundwater or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with this Subsection, be exempted from the secondary containment requirements of this Section. Application for a variance as allowed in this Subsection does not waive compliance with the requirements of this Chapter for new tank systems.

1. In deciding whether to grant a variance based on a demonstration of equivalent protection of groundwater and surface water, the administrative authority will consider:

a. the nature and quantity of the waste;

b. the proposed alternate design and operation;

c. the hydrogeologic setting of the facility, including the thickness of soils between the tank system and groundwater; and

d. all other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to groundwater or surface water.

2. In deciding whether to grant a variance, based on a demonstration of no substantial present or potential hazard, the administrative authority will consider:

a. the potential adverse effects on groundwater, surface water, and land quality taking into account:

i. the physical and chemical characteristics of the waste in the tank system, including its potential for migration;

ii. the hydrogeological characteristics of the facility and surrounding land;

iii. the potential for health risks caused by human exposure to waste constituents;

iv. the potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

v. the persistence and permanence of the potential adverse effects;

b. the potential adverse effects of a release on groundwater quality, taking into account:

i. the quantity and quality of groundwater and the direction of groundwater flow;

ii. the proximity and withdrawal rates of water in the area;

iii. the current and future uses of groundwater in the area; and

iv. the existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;

c. the potential adverse effects of a release on surface water quality, taking into account:

i. the quantity and quality of groundwater and the direction of groundwater flow;

ii. the patterns of rainfall in the region;

iii. the proximity of the tank system to surface waters;

iv. the current and future uses of surface waters in the area and any water quality standards established for those surface waters; and

v. the existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality; and

d. the potential adverse effects of a release on the land surrounding the tank system, taking into account:

i. the patterns of rainfall in the region; and

ii. the current and future uses of the surrounding land.

3. The owner or operator of a tank system, for which a variance from secondary containment has been granted in accordance with the requirements of Paragraph G.1 of this Section, at which a release of a hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control (as established in the variance), must:

a. comply with the requirements of LAC 33:V.4441, except LAC 33:V.4441.D; and

b. decontaminate or remove contaminated soil to the extent necessary to:

i. enable the tank system, for which the variance was granted, to resume operation with the capability for the detection of and response to releases at least equivalent to the capability it had prior to the release; and

ii. prevent the migration of hazardous waste or hazardous constituents to groundwater or surface water; or

c. if contaminated soil cannot be removed or decontaminated in accordance with Subparagraph G.3.b of this Section, comply with the requirements of LAC 33:V.1915.B.

4. The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of Paragraph G.1 of this Section, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), must:

a. comply with the requirements of LAC 33:V.4441.B-D; and

b. prevent the migration of hazardous waste or hazardous constituents to groundwater or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed, or if groundwater has been contaminated, the owner or operator must comply with the requirements of LAC 33:V.4442;

c. if repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of Subsections A-F of this Section or reapply for a variance from secondary containment and meet the requirements for new tank systems in LAC 33:V.4435 if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed, and groundwater or surface water has not been contaminated.

H. The following procedures must be followed in order to request a variance from secondary containment.

1. The Office of Environmental Services must be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in Subsection G of this Section according to the following schedule:

a. for existing tank systems, at least 24 months prior to the date that secondary containment must be provided in accordance with Subsection A of this Section; and

b. for new tank systems, at least 30 days prior to entering into a contract for installation of the tank system.

2. As part of the notification, the owner or operator must also submit to the Office of Environmental Services a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in Paragraph G.1 or 2 of this Section.

3. The demonstration for a variance must be completed and submitted to the Office of Environmental Services within 180 days after notifying the administrative authority of intent to conduct the demonstration.

4. The administrative authority will inform the public, through a newspaper notice, of the availability of the demonstration for a variance. The notice shall be placed in a daily or weekly major local newspaper of general circulation and shall provide at least 30 days from the date of the notice for the public to review and comment on the demonstration for a variance. The administrative authority also will hold a public hearing, in response to a request or at his own discretion, whenever such a hearing might clarify one or more issues concerning the demonstration for a variance. Public notice of the hearing will be given at least 30 days prior to the date of the hearing and may be given at the same time as notice of the opportunity for the public to review and comment on the demonstration. These two notices may be combined.

5. The administrative authority will approve or disapprove the request for a variance within 90 days of receipt of the demonstration from the owner or operator and will notify in writing the owner or operator and each person who submitted written comments or requested notice of the variance decision. If the demonstration for a variance is incomplete or does not include sufficient information, the 90-day time period will begin when the administrative authority receives a complete demonstration, including all information necessary to make a final determination. If the public comment period in Paragraph H.4 of this Section is extended, the 90-day time period will be similarly extended.

I. All tank systems, until such time as secondary containment meeting the requirements of this Section is provided, must comply with the following.

1. For non-enterable underground tanks, a leak test that meets the requirements of LAC 33:V.4433 must be conducted at least annually.

2. For other than non-enterable underground tanks and for all ancillary equipment, an annual leak test, as described in Paragraph I.1 of this Section, or an internal inspection or other tank integrity examination by an independent, qualified professional engineer that addresses cracks, leaks,

corrosion, and erosion must be conducted at least annually. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed.

3. The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with Paragraphs I.1-2 of this Section.

4. If a tank system or component is found to be leaking or unfit-for-use as a result of the leak test or assessment in Paragraphs I.1-2 of this Section, the owner or operator must comply with the requirements of LAC 33:V.4441.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 14:790 (November 1988), LR 16:614 (July 1990), LR 18:723 (July 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2507 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2482 (October 2005), LR 33:2134 (October 2007), LR 34:1004 (June 2008), LR 34:1899 (September 2008).

## §4438. Special Requirements for Generators of between 100 and 1,000 kg/month That Accumulate Hazardous Waste in Tanks

A. The requirements of this Section apply to small quantity generators of more than 100 kg, but less than 1,000 kg, of hazardous waste in a calendar month, that accumulate hazardous waste in tanks for less than 180 days (or 270 days if the generator must ship the waste greater than 200 miles), and do not accumulate over 6,000 kg on-site at any time.

B. Generators of between 100 and 1,000 kg/month hazardous waste must comply with the following general operating requirements:

1. treatment or storage of hazardous waste in tanks must comply with LAC 33:V.4321.B;

2. hazardous wastes or treatment reagents must not be placed in a tank if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life;

3. uncovered tanks must be operated to ensure at least 60 centimeters (2 feet) of freeboard, unless the tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank) with a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank; and

4. where hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow (e.g., waste feed cutoff system or by-pass system to a stand-by tank).

[NOTE: These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure (e.g., a malfunction in the treatment process, a crack in the tank, etc.)]

C. Except as noted in Subsection D of this Section, generators who accumulate between 100 and 1,000 kg/month of hazardous waste in tanks must inspect, where present:

1. discharge control equipment (e.g., waste feed cutoff systems, by-pass systems, and drainage systems) at least once each operating day to ensure that it is in good working order;

2. data gathered from monitoring equipment (e.g., pressure and temperature gauges) at least once each operating day to ensure that the tank is being operated according to its design;

3. the level of waste in the tank at least once each operating day to ensure compliance with Paragraph B.3 of this Section;

4. the construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams; and

5. the construction materials of, and the area immediately surrounding, discharge confinement structures (e.g., dikes) at least weekly to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).

[NOTE: As required by LAC 33:V.4317.C, the owner or operator must remedy any deterioration or malfunction he finds.]

D. Generators who accumulate between 100 and 1,000 kg/month of hazardous waste in tanks or tank systems that have full secondary containment and that either use leak detection equipment to alert facility personnel to leaks, or implement established workplace practices to ensure that leaks are promptly identified, must inspect at least weekly, where applicable, the areas identified in Paragraphs C.1-5 of this Section. Use of the alternate inspection schedule must be documented in the facility's operating record. This documentation must include a description of the established workplace practices at the facility.

E. Generators of between 100 and 1,000 kg/month accumulating hazardous waste in tanks must, upon closure of the facility, remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

[NOTE: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with LAC 33:V.109.*Hazardous Waste*.4 or 5, that any solid waste removed from the tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of LAC 33:V.Chapters 11, 13, and 43.]

F. Generators of between 100 and 1,000 kg/month must comply with the following special requirements for ignitable or reactive waste:

1. ignitable or reactive waste must not be placed in a tank, unless:

a. the waste is treated, rendered, or mixed before or immediately after placement in a tank so that the resulting waste, mixture, or dissolution of material no longer meets

the definition of ignitable or reactive waste under LAC 33:V.4903.B or D, and LAC 33:V.4321.B is complied with; or

b. the waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

c. the tank is used solely for emergencies.

2. the owner or operator of a facility that treats or stores ignitable or reactive waste in covered tanks must comply with the buffer zone requirements for tanks contained in Tables 2-1 through 2-6 of the National Fire Protection Association's *Flammable and Combustible Liquids Code*, (1977 or 1981) (incorporated by reference, see LAC 33:V.110).

G. Generators of between 100 and 1,000 kg/month must comply with the following special requirements for incompatible wastes:

1. incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank, unless LAC 33:V.4321.B is complied with; and

2. hazardous waste must not be placed in an unwashed tank that previously held an incompatible waste or material, unless LAC 33:V.4321.B is complied with.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 27:714 (May 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1005 (June 2008).

## §4439. General Operating Requirements

A. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment system to rupture, leak, corrode, or otherwise fail.

B. The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or secondary containment systems. These include at a minimum:

1. spill prevention controls (e.g., check valves, dry disconnect couplings);

2. overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and

3. maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

C. The owner or operator must comply with the requirements of LAC 33:V.4441 if a leak or spill occurs in the tank system.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), amended by the Office of the Secretary, Legal Affairs Division, LR 34:634 (April 2008).

## §4440. Inspections

A. The owner or operator must inspect, where present, at least once each operating day data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design.

B. Except as noted under Subsection C of this Section, the owner or operator must inspect at least once each operating day:

1. overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order;

2. the aboveground portions of the tank system, if any, to detect corrosion or releases of waste; and

3. the construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment structure (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

C. Owners or operators of tank systems that either use leak detection equipment to alert facility personnel to leaks, or implement established workplace practices to ensure that leaks are promptly identified, must inspect at least weekly those areas described in Paragraphs B.1-3 of this Section. Use of the alternate inspection schedule must be documented in the facility's operating record. This documentation must include a description of the established workplace practices at the facility.

D. Ancillary equipment that is not provided with secondary containment, as described in LAC 33:V.4437.F.1-4, must be inspected at least once each operating day.

E. The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:

1. the proper operation of the cathodic protection system must be confirmed within six months after initial installation, and annually thereafter; and

2. all sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (i.e., every other month).

F. The owner or operator must document in the operating record of the facility an inspection of those items in Subsections A and B of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR

13:651 (November 1987), LR 18:723 (July 1992), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1005 (June 2008).

### §4441. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements.

A. Cessation of Use; Prevent Flow or Addition of Wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

B. Removal of Waste from Tank System or Secondary Containment System

1. If the release was from the tank system, the owner or operator must, within 24 hours after detection of the leak or, if the owner or operator demonstrates that it is not possible, at the earliest practicable time remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

2. If the release was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

C. Containment of Visible Releases to the Environment. The owner or operator must immediately conduct a visual inspection of the release and, based upon that inspection:

1. prevent further migration of the leak or spill to soils or surface water; and

2. remove, and properly dispose of, any visible contamination of the soil or surface water.

D. Notification, Reports

1. Any release to the environment, except as provided in LAC 33:V.4441.D.2, must be reported to the administrative authority within 24 hours of detection. If the release has been reported pursuant to LAC 33:V.105.A, that report will satisfy this requirement.

2. A leak or spill of hazardous waste that is:

a. less than or equal to a quantity of one pound; and

b. immediately contained and cleaned up is exempted from the requirements of this Subsection.

3. Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the administrative authority:

a. likely route of migration of the release;

b. characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

c. results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these dates must be submitted to the administrative authority as soon as they become available;

d. proximity to downgradient drinking water, surface water, and population areas; and

e. description of response actions taken or planned.

E. Provision of Secondary Containment, Repair, or Closure

1. Unless the owner or operator satisfies the requirements of LAC 33:V.4441.E.2-4, the tank system must be closed in accordance with LAC 33:V.4442.

2. If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

3. If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

4. If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of LAC 33:V.4437 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of LAC 33:V.4441.F are satisfied. If a component is replaced to comply with the requirements of this Subsection, that component must satisfy the requirements for new tank systems or components in LAC 33:V.4435 and 4437. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with LAC 33:V.4437 prior to being returned to use.

F. Certification of Major Repairs. If the owner or operator has repaired a tank system in accordance with Subsection E of this Section, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified professional engineer in accordance with LAC 33:V.513 that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification is to be placed in the operating record and maintained until closure of the facility.

[NOTE: The administrative authority may, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the

environment, issue an order requiring corrective action or such other response as deemed necessary to protect human health or the environment.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 16:614 (July 1990), LR 18:723 (July 1992), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1006 (June 2008).

### §4442. Closure and Post-Closure Care

A. Interim status facilities are subject to the requirements of LAC 33:V.1915.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 15:182 (March 1989).

### §4443. Special Requirements for Ignitable or Reactive Wastes

A. Interim status facilities are subject to the requirements of LAC 33:V.1917.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 15:182 (March 1989).

### §4444. Special Requirements for Incompatible Wastes

A. Interim status facilities are subject to requirements of LAC 33:V.1919.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 14:790 (November 1988), LR 15:182 (March 1989).

### §4445. Waste Analysis and Trial Tests

A. In addition to performing the waste analysis required by LAC 33:V.4313, the owner or operator must, whenever a tank system is to be used to treat chemically or to store a hazardous waste that is substantially different from waste previously treated or stored in that tank system; or treat chemically a hazardous waste with a substantially different process than any previously used in that tank system:

1. conduct waste analysis and trial treatment or storage test (e.g., benchscale or pilot-plant scale tests); or

2. obtain written, documented information on similar waste under similar operating conditions to show that the proposed treatment or storage will meet the requirements of LAC 33:V.4439.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 13:651 (November 1987), LR 15:182 (March 1989).

### §4446. Air Emission Standards

A. The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of Subchapters Q, R, and V of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1745 (September 1998).

## Subchapter J. Surface Impoundments

### §4447. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste, except as LAC 33:V.4307 provides otherwise.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998).

### §4449. Action Leakage Rate

A. The owner or operator of surface impoundment units subject to LAC 33:V.4462.A must submit a proposed action leakage rate to the Office of Environmental Services when submitting the notice required under LAC 33:V.4462.B. Within 60 days of receipt of the notification, the administrative authority will establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this Section, or extend the review period for up to 30 days. If no action is taken by the administrative authority before the original 60- or the extended 90-day review periods, the action leakage rate will be approved as proposed by the owner or operator.

B. The administrative authority shall approve an action leakage rate for surface impoundment units subject to LAC 33:V.4462.A. The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

C. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or

monthly flow rate from the monitoring data obtained under LAC 33:V.4455.B to an average daily flow rate (gallons per acre per day) for each sump. Unless the administrative authority approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period and, if the unit closes in accordance with LAC 33:V.4457.A.2, monthly during the post-closure care period when monthly monitoring is required under LAC 33:V.4455.B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2508 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2482 (October 2005), LR 33:2134 (October 2007).

### §4452. Response Actions

**[Formerly §4451]**

A. The owner or operator of surface impoundment units subject to LAC 33:V.4462.A must develop and keep on-site until closure of the facility a response action plan. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in Subsection B of this Section.

B. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

1. notify the administrative authority in writing of the exceedence within seven days of the determination;

2. submit a preliminary written assessment to the administrative authority within 14 days of the determination as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

3. determine to the extent practicable the location, size, and cause of any leak;

4. determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

5. determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

6. within 30 days after the notification that the action leakage rate has been exceeded, submit to the administrative authority the results of the analyses specified in Paragraphs B.3-5 of this Section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the administrative authority a report summarizing the results of any remedial actions taken and actions planned.

C. To make the leak and/or remediation determinations in Paragraphs B.3-5 of this Section, the owner or operator must:

1. assess the sources of liquids and amounts of liquids by source;

2. conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the sources of liquids and possible location of any leaks, and the hazard and mobility of the liquids; and

3. assess the seriousness of any leaks in terms of potential for escaping into the environment; or

4. document why such assessments are not needed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2508 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2483 (October 2005), LR 33:2135 (October 2007), LR 34:1006 (June 2008).

### §4453. Waste Analysis and Trial Tests

A. In addition to the waste analyses required by LAC 33:V.1519, whenever a surface impoundment is to be used to:

1. chemically treat a hazardous waste which is substantially different from waste previously treated in that impoundment; or

2. chemically treat hazardous waste with a substantially different process than any previously used in that impoundment.

B. The owner or operator must, before treating the different waste or using the different process:

1. conduct waste analyses and trial treatment tests (e.g., bench scale or pilot-plant scale tests); or

2. obtain written, documented information on similar treatment of similar waste under similar operating conditions; to show that this treatment will comply with LAC 33:V.4321.B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984).

### §4455. Monitoring and Inspection

A. The owner or operator must inspect:

1. the freeboard level at least once each operating day to ensure compliance with LAC 33:V.4449; and

2. the surface impoundment, including dikes and vegetation surrounding the them, at least once a week to

detect any leaks, deterioration, or failures in the impoundment.

B. An owner or operator required to have a leak detection system under LAC 33:V.4462.A must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

1. After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

2. *Pump Operating Level*—a liquid level proposed by the owner or operator and approved by the administrative authority based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed pump operating level will be in accordance with LAC 33:V.4449.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995).

## §4456. Air Emission Standards

A. The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of Subchapters R and V of this Chapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1745 (September 1998).

## §4457. Closure and Post-Closure

A. At closure, the owner or operator must:

1. remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless LAC 33:V.4905.A.4 applies; or

2. if some waste residues or contaminated materials are left in place at final closure, the owner or operator must either:

a. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment; or

b. close the impoundment and provide post-closure care in accordance with Subsection B of this Section.

B. If the owner or operator elects to comply with Subparagraph A.2.b of this Section, he must close the impoundment and provide post-closure care for a landfill under LAC 33:V.4501, including the following:

1. eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

2. stabilize remaining wastes to a bearing capacity sufficient to support the final cover; and

3. cover the surface impoundment with a final cover designed and constructed to:

a. provide long-term minimization of the migration of liquids through the closed impoundment;

b. function with minimum maintenance;

c. promote drainage and minimize erosion or abrasion of the cover;

d. accommodate settling and subsidence so that the cover's integrity is maintained; and

e. have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

C. In addition to the requirements of LAC 33:V.4501, during the post-closure care period, the owner or operator of a surface impoundment in which wastes, waste residues, or contaminated materials remain after closure in accordance with the provisions of Subparagraph A.2.b of this Section must:

1. maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events;

2. maintain and monitor the leak detection system in accordance with LAC 33:V.2903.J.3.d and 4 and 4455.B and comply with all other applicable leak detection system requirements of this Chapter;

3. maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.4367; and

4. prevent run-on and run-off from eroding or otherwise damaging the final cover.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 10:200 (March 1984), amended LR 15:470 (June 1989), LR 18:723 (July 1992), LR 21:266 (March 1995), amended by the Office of the Secretary, LR 24:2249 (December 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:634 (April 2008).

**§4459. Special Requirements for Ignitable or Reactive Waste**

A. Ignitable or reactive waste must not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of LAC 33:V.Chapter 22 and:

1. the waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that the resulting waste, mixture, or dissolution of material no longer meets the characteristics of ignitable or reactive waste under LAC 33:V.4903.B and D, and 4321.B is complied with; or

2. the surface impoundment is used solely for emergencies.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:1057 (December 1990), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1900 (September 2008).

**§4461. Special Requirements for Incompatible Wastes**

A. Incompatible wastes or incompatible wastes and materials must not be placed in the same surface impoundment, unless LAC 33:V.4321.B is complied with.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:723 (July 1992).

**§4462. Design Requirements**

A. The owner or operator of each new surface impoundment unit, each lateral expansion of a surface impoundment unit, and each replacement of an existing surface impoundment unit must install two or more liners and a leachate collection and removal system between the liners and operate the leachate collection and removal system in accordance with LAC 33:V.2903.J, unless exempted under LAC 33:V.2903.C, K, or L.

B. The owner or operator of each unit referred to in Subsection A of this Section must notify the Office of Environmental Services at least 60 days prior to receiving waste. The owner or operator of each facility submitting notice must file a Part II application within six months of the receipt of such notice.

C. The owner or operator of any replacement surface impoundment unit is exempt from LAC 33:V.4462.A if:

1. the existing unit was constructed in compliance with the design standards of Section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

2. there is no reason to believe that the liner is not functioning as designed.

D. The double liner requirement set forth in LAC 33:V.4462.A may be waived by the administrative authority for any monofill, if:

1. the monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the Toxicity Characteristic in LAC 33:V.4903.E (Hazardous Waste Numbers D004-D017 only); and

2. the monofill meets the requirements of LAC 33:V.4462.D.2.a or b:

a. the monofill meets the following criteria:

i. the monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this Section the term *liner* means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste or hazardous constituents from migrating beyond the liner to adjacent subsurface soil, groundwater, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of LAC 33:V.4462.A on the basis of a liner designed, constructed, installed, and operated to prevent hazardous waste or hazardous constituents from passing beyond the liner, at the closure of such impoundment the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment must comply with appropriate post-closure requirements, including but not limited to groundwater monitoring and corrective action;

ii. the monofill is located more than 1/4 mile from an *underground source of drinking water* (as that term is defined in LAC 33:V.109);

iii. the monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with permits;

b. the owner or operator demonstrates that the monofill is located, designed, and operated so as to assure that there will be no migration of any hazardous waste or hazardous constituents into groundwater or surface water at any future time.

E. In the case of any unit in which the liner and leachate collection system has been installed pursuant to the requirements of LAC 33:V.4462.A and in good faith compliance with LAC 33:V.4462.A and with guidance documents governing liners and leachate collection systems under LAC 33:V.4462.A, no liner or leachate collection system which is different from that which was so installed pursuant to LAC 33:V.4462.A will be required for such unit

by the administrative authority when issuing the first permit to such facility, except that the administrative authority will not be precluded from requiring installation of a new liner when the administrative authority has reason to believe that any liner installed pursuant to the requirements of LAC 33:V.4462.A is leaking.

F. A surface impoundment must maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action, or a storm. Except as provided in LAC 33:V.4462.B, there must be at least 2 feet (60 cm) of freeboard.

G. A freeboard level less than 2 feet (60 cm) may be maintained if the owner or operator obtains certification by a qualified engineer that alternate design features or operating plans will, to the best of his knowledge and opinion, prevent overtopping of the dike. The certification, along with a written identification of these alternate design features or operating plans which prevent overtopping, must be maintained at the facility.

H. Surface impoundments that are newly subject to RCRA Section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste must be in compliance with LAC 33:V.4462.A, C, and D not later than 48 months after the promulgation of the additional listing or characteristic. This compliance period shall not be cut short as the result of the promulgation of land disposal prohibitions under LAC 33:V.Chapter 22 or the granting of an extension to the effective date of a prohibition in accordance with LAC 33:V.2239, within this 48-month period.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 17:368 (April 1991), LR 18:723 (July 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2508 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2483 (October 2005), LR 33:2135 (October 2007), LR 34:1006 (June 2008).

# Subchapter K. Waste Piles

## §4463. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities that treat or store hazardous waste in piles, except as LAC 33:V.4307 provides otherwise. Alternatively, a pile of hazardous waste may be managed as a landfill under LAC 33:V.Chapter 43.Subchapter M.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998).

## §4465. Protection from Wind

A. The owner or operator of a pile containing hazardous waste which could be subject to dispersal by wind must cover or otherwise manage the pile so that wind dispersal is controlled.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4467. Waste Analysis

A. In addition to the waste analyses required by LAC 33:V.1519, the owner or operator must analyze a representative sample of waste from each incoming movement before adding the waste to any existing pile, unless:

1. the only wastes the facility receives which are amenable to piling are compatible with each other; or

2. the waste received is compatible with the waste in the pile to which it is to be added.

B. The analysis conducted must differentiate between the types of hazardous waste the owner or operator places in piles, so that the mixing of incompatible waste does not inadvertently occur. The analysis must include a visual comparison of color and texture.

C. As required by LAC 33:V.1519, the waste analysis plan must include analyses needed to comply with LAC 33:V.2311 and 2313.

D. As required by LAC 33:V.1529, the owner or operator must place the results of this analysis in the operating record of the facility.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4469. Containment

A. If collected leachate or run-off is discharged through a point source to waters of the United States, it is subject to the requirements of Section 402 of the Clean Water Act, as amended. If a leachate or run-off from a pile is a hazardous waste, then either:

1. the pile must be placed on an impermeable base that is compatible with the waste under the conditions of treatment or storage;

2. the owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-year storm;

3. the owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm; and

4. empty, or otherwise expeditiously manage, collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems to maintain design capacity of the system; or

5. the pile must be protected from precipitation and run-on by some other means and no liquids or waste containing free liquids may be placed in the pile.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4470. Monitoring and Inspection

A. An owner or operator required to have a leak detection system under LAC 33:V.4476 must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

### §4471. Special Requirements for Ignitable or Reactive Waste

A. Ignitable or reactive wastes must not be placed in a pile unless the waste and pile satisfy all applicable requirements of LAC 33:V.Chapter 22, and:

1. addition of the waste to an existing pile results in the waste or mixture no longer meeting the definition of *ignitable* or *reactive waste* under LAC 33:V.109 and complies with LAC 33:V.4321.B; or

2. the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:1057 (December 1990).

### §4472. Response Actions

A. The owner or operator of waste pile units subject to LAC 33:V.4476 must develop and keep on-site until closure of the facility a response action plan. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in Subsection B of this Section.

B. If the flow rate into the leak determination system exceeds the action leakage rate for any sump, the owner or operator must:

1. notify the administrative authority in writing of the exceedence within seven days of the determination;

2. submit a preliminary written assessment to the administrative authority within 14 days of the determination as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

3. determine to the extent practicable the location, size, and cause of any leak;

4. determine whether waste receipts should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

5. determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

6. within 30 days after the notification that the action leakage rate has been exceeded, submit to the administrative authority the results of the analyses specified in LAC 33:V.4472.B.3-5, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the administrative authority a report summarizing the results of any remedial actions taken and actions planned.

C. To make the leak and/or remediation determinations in LAC 33:V.4472.B.3-5, the owner or operator must:

1. assess the sources of liquids and amounts of liquids by source;

2. conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the sources of liquids and possible location of any leaks, and the hazard and mobility of the liquids; and

3. assess the seriousness of any leaks in terms of potential for escaping into the environment; or

4. document why such assessments are not needed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2508 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2483 (October 2005), LR 33:2135 (October 2007), LR 34:1006 (June 2008).

### §4473. Special Requirements for Incompatible Wastes

A. Owners or operators having interim status for waste piles used to manage incompatible wastes must comply with the requirements of LAC 33:V.2313.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4474. Action Leakage Rates

A. The owner or operator of waste pile units subject to LAC 33:V.4476 must submit a proposed action leakage rate

to the Office of Environmental Services when submitting the notice required under LAC 33:V.4476. Within 60 days of receipt of the notification, the administrative authority will establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this Section, or extend the review period for up to 30 days. If no action is taken by the administrative authority before the original 60- or the extended 90-day review periods, the action leakage rate will be approved as proposed by the owner or operator.

B. The administrative authority shall approve an action leakage rate for waste pile units subject to LAC 33:V.4476. The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

C. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly flow rate from the monitoring data obtained under LAC 33:V.4470, to an average daily flow rate (gallons per acre per day) for each sump. Unless the administrative authority approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2508 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2483 (October 2005), LR 33:2135 (October 2007).

### §4475. Closure and Post-Closure Care

A. At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste if they are identified as such in LAC 33:V.Chapter 49; or

B. if, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection A of this Section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must either:

1. close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills. (LAC 33:V.Chapter 43.Subchapter M); or

2. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:723 (July 1992), amended by the Office of the Secretary, LR 24:2249 (December 1998).

### §4476. Design and Operating Requirements

A. The owner or operator of each new waste pile on which construction commences after January 29, 1992, each lateral expansion of a waste pile unit on which construction commences after July 29, 1992, and each such replacement of an existing waste pile unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system above and between such liners, and operate the leachate collection and removal systems, in accordance with LAC 33:V.2303.C, unless exempted under LAC 33:V.2303.D-F, and must comply with the procedures of LAC 33:V.4462.B. *Construction commences* is as defined in LAC 33:V.109.*Existing Facilities*.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 21:266 (March 1995).

## Subchapter L. Land Treatment

### §4477. Applicability

A. The regulations in this Subchapter apply to owners and operators of hazardous waste land treatment facilities with interim status, except as LAC 33:V.4307 provides otherwise.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998).

### §4479. General Operating Requirements

A. Hazardous waste must not be placed in or on a land treatment facility unless the waste can be made less hazardous or non-hazardous by biological degradation or chemical reactions occurring in or on the soil.

B. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portions of the facility during peak discharge from at least a 25-year storm.

C. The owner or operator must design, construct, operate, and maintain a run-off management system capable of collecting and controlling a water volume at least equivalent to a 24-hour, 25-year storm.

D. Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

E. If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator must manage the unit to control wind dispersal.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 18:723 (July 1992).

### §4481. Waste Analysis

A. In addition to the waste analyses required by LAC 33:V.1519, before placing a hazardous waste in or on a land treatment facility, the owner or operator must:

1. determine the concentration in the waste of any substances which equal or exceed the maximum concentrations listed in LAC 33:V.4903, Table 5, that cause the waste to exhibit the Toxicity Characteristic;

2. determine the concentrations of any substances which cause the waste to be listed in LAC 33:V.4901 as a hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 17:369 (April 1991).

### §4483. Food-Chain Crops

A. No produce may be allowed to grow on a landfarm. Additionally, grasses and other cover plants may not be used for grazing or hay production for domestic livestock.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4485. Unsaturated Zone (Zone of Aeration) Monitoring

A. The owner or operator must have in writing, and must implement, an unsaturated zone monitoring plan which is designed to:

1. detect the vertical migration of hazardous waste and hazardous waste constituents under the active portion of the land treatment facility; and

2. provide information on the background concentrations of the hazardous waste and hazardous waste constituents in similar but untreated soils nearby. This background monitoring must be conducted before or in conjunction with the monitoring required in Paragraph A.1 of this Section.

B. The unsaturated zone monitoring plan must include, at a minimum:

1. soil monitoring using soil cores; and

2. soil-pore water monitoring using devices such as lysimeters.

C. To comply with Paragraph A.1 of this Section, the owner or operator must demonstrate in his unsaturated zone monitoring plan that:

1. the depth at which soil and soil-pore water samples are to be taken is below the depth to which the waste is incorporated into the soil;

2. the number of soil and soil-pore water samples to be taken is based on the variability of:

a. the hazardous waste constituents as identified in LAC 33:V.4481.A.1 and 2, in the waste and in the soil; and

b. the soil type(s); and

3. the frequency and timing of soil and soil-pore water sampling is based on the frequency, time, and rate of waste application, proximity to groundwater, and soil permeability.

D. The owner or operator must keep at the facility his unsaturated zone monitoring plan, and the rationale used in developing this plan.

E. The owner or operator must analyze the soil and soil-pore water samples for the hazardous waste constituents that were found in the waste during the waste analysis under LAC 33:V.4481.A.1 and 2.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4487. Recordkeeping

A. Interim status facilities are subject to the requirements of LAC 33:V.2713.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4489. Closure and Post-Closure

A. In the closure plan under LAC 33:V.4381.A and the post-closure plan under LAC 33:V.4391, the owner or

operator must address the following objectives and indicate how they will be achieved:

1. control of the migration of hazardous waste and hazardous waste constituents from the land treatment area into the groundwater;

2. control of the release of contaminated run-off from the facility into surface water; and

3. control of the release of airborne particulate contaminants caused by wind erosion;

4. complies with food-chain crops, LAC 33:V.4483.

B. The owner or operator must consider at least the following factors in addressing the closure and post-closure care objectives of LAC 33:V.4489.A:

1. type and amount of hazardous waste and hazardous waste constituents applied to the land treatment facility;

2. the mobility and the expected rate of migration of the hazardous waste and hazardous waste constituents;

3. site location, topography, and surrounding land use, with respect to the potential effects of pollutant migration (e.g., proximity to groundwater, surface water, and drinking water sources);

4. climate, including amount, frequency, and pH of precipitation;

5. geological and soil profiles, and surface and subsurface hydrology, of the site, and soil characteristics, including cation exchange capacity, total organic carbon, and pH;

6. unsaturated zone monitoring information obtained under LAC 33:V.4485; and

7. type, concentration, and depth of migration of hazardous waste constituents in the soil as compared to their background concentrations.

C. The owner or operator must consider at least the following methods in addressing the closure and post-closure care objectives of LAC 33:V.4489.A:

1. removal of contaminated soils;

2. placement of a final cover, considering:

a. functions of the cover (e.g., infiltration control, erosion, and run-off control, and wind erosion control);

b. characteristics of the cover, including material final surface contours, thickness, porosity, and permeability, slope, length of run of slope, and type of vegetation on the cover; and

3. groundwater monitoring.

D. In addition to the requirements of LAC 33:V.Chapter 43.Subchapter F, during the closure period the owner or operator of a land treatment facility must:

1. continue unsaturated zone monitoring in a manner and frequency specified in the closure plan, except that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone;

2. maintain the run-on control system required under LAC 33:V.2703.C;

3. maintain the run-off management system required under LAC 33:V.2703.D; and

4. control particulate matter which may be subject to wind dispersal.

E. For the purpose of complying with LAC 33:V.4387, when closure is completed the owner or operator may submit to the Office of Environmental Services certification both by the owner or operator and by an independent, qualified soil scientist in lieu of an independent, qualified professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

F. In addition to the requirements of LAC 33:V.4389, during the post-closure care period the owner or operator of a land treatment unit must:

1. continue soil-pore monitoring by collecting and analyzing samples in a manner and frequency specified in the post-closure plan;

2. restrict access to the unit as appropriate for its post-closure use;

3. assure that growth of food-chain crops complies with LAC 33:V.2709; and

4. control wind dispersal of hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 18:723 (July 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2509 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2483 (October 2005), LR 33:2135 (October 2007), LR 34:1006 (June 2008).

## §4491. Special Requirements for Ignitable or Reactive Waste

A. Interim status facilities are subject to the requirements of LAC 33:V.2715.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4493. Special Requirements for Incompatible Wastes

A. Interim status facilities are subject to the requirements of LAC 33:V.2717.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

# Subchapter M. Landfills

## §4495. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as LAC 33:V.4307 provides otherwise. A waste pile used as a disposal facility is a landfill and is governed by this Subchapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1109 (June 1998).

## §4497. Action Leakage Rate

A. The owner or operator of landfill units subject to LAC 33:V.4512.A must submit a proposed action leakage rate to the administrative authority when submitting the notice required under LAC 33:V.4512.B. Within 60 days of receipt of the notification, the administrative authority will establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this Section, or extend the review period for up to 30 days. If no action is taken by the administrative authority before the original 60- or the extended 90-day review periods, the action leakage rate will be approved as proposed by the owner or operator.

B. The administrative authority shall approve an action leakage rate for landfill units subject to LAC 33:V.4512.A. The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

C. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under LAC 33:V.4502 to an average daily flow rate (gallons per acre per day) for each sump. Unless the administrative authority approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period and monthly during the post-closure care period when monthly monitoring is required under LAC 33:V.4502.B.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 34:634 (April 2008).

## §4498. Response Actions

A. The owner or operator of landfill units subject to LAC 33:V.4512.A must develop and keep on-site until closure of the facility a response action plan. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in Subsection B of this Section.

B. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

1. notify the administrative authority in writing of the exceedence within seven days of the determination;

2. submit a preliminary written assessment to the administrative authority within 14 days of the determination as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

3. determine to the extent practicable the location, size, and cause of any leak;

4. determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

5. determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

6. within 30 days after the notification that the action leakage rate has been exceeded, submit to the administrative authority the results of the analyses specified in LAC 33:V.4498.B.3-5, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the administrative authority a report summarizing the results of any remedial actions taken and actions planned.

C. To make the leak and/or remediation determinations in LAC 33:V.4498.B.3-5, the owner or operator must:

1. assess the sources of liquids and amounts of liquids by source;

2. conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the sources of liquids and possible location of any leaks, and the hazard and mobility of the liquids; and

3. assess the seriousness of any leaks in terms of potential for escaping into the environment; or

4. document why such assessments are not needed.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by

the Office of the Secretary, Legal Affairs Division, LR 34:1007 (June 2008).

### §4499. Surveying and Recordkeeping

A. Interim status facilities must comply with LAC 33:V.2509.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4501. Closure and Post-Closure

A. At final closure of the landfill or upon closure of any cell, the owner or operator must place a final cover over the landfill or cell, and the closure plan under LAC 33:V.4381 must specify the function and design of the cover. In the post-closure plan under LAC 33:V.4391, the owner or operator must include the post-closure care requirements of LAC 33:V.4501.D.

B. In the closure and post-closure plans, the owner or operator must address the following objectives and indicate how they will be achieved:

1. control pollutant migration from the facility via groundwater, surface water, and air;

2. control surface water infiltration, including prevention of pooling;

3. provide long-term minimization of migration of liquids through the closed landfill;

4. function with minimum maintenance;

5. promote drainage and minimize erosion or abrasion of the cover;

6. accommodate settling and subsidence so that the cover's integrity is maintained; and

7. have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

C. The owner or operator must consider at least the following factors in addressing the closure and post-closure care objectives of LAC 33:V.4501.B:

1. type and amount of hazardous waste and hazardous waste constituents in the landfill;

2. the mobility and the expected rate of migration of the hazardous waste and hazardous waste constituents;

3. site location, topography, and surrounding land use, with respect to the potential effects of pollutant migration (e.g., proximity to groundwater, surface water, and drinking water sources);

4. climate, including amount, frequency, and pH of precipitation;

5. characteristics of the cover including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover; and

6. geological and soil profiles and surface and subsurface hydrology of the site.

D. In addition to the requirements of LAC 33:V.4389, during the post-closure care period, the owner or operator of a hazardous waste landfill must:

1. maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events;

2. maintain and monitor the leachate collection, removal, and treatment system (if there is one present in the landfill) to prevent excess accumulation of leachate in the system. If the collected leachate is a hazardous waste under LAC 33:V.Chapter 49, it must be managed as a hazardous waste in accordance with all applicable requirements of LAC 33:V.Chapters 11, 13 and 43. If the collected leachate is discharged through a point source to waters of the United States, it is subject to the requirements of Section 402 of the Clean Water Act, as amended;

3. maintain and monitor the leak detection system in accordance with LAC 33:V.2503.K.4.d, K.5, and 4502.B and comply with all other applicable leak detection system requirements of LAC 33:V.Chapter 43;

4. maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.4367;

5. prevent run-on and run-off from eroding or otherwise damaging the final cover;

6. maintain and monitor the gas collection and control system (if there is one present in the landfill) to control the vertical and horizontal escape of gases;

7. protect and maintain surveyed benchmarks used in complying with LAC 33:V.2509 subject to authority of LAC 33:V.4499; and

8. restrict access to the landfill as appropriate for its post-closure use.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 21:266 (March 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 33:1627 (August 2007).

### §4502. Monitoring and Inspection

A. An owner or operator required to have a leak detection system under LAC 33:V.4512.A must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

B. After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump

stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period, the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

C. *Pump Operating Level*—a liquid level proposed by the owner or operator and approved by the administrative authority based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed pump operating level will be in accordance with LAC 33:V.4497.A.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995).

## §4503. Special Requirements for Ignitable or Reactive Waste

A. Except as provided in LAC 33:V.4503.B and in LAC 33:V.4511, ignitable or reactive waste must not be placed in a landfill, unless the waste and landfill meet all applicable requirements of LAC 33:V.Chapter 22, and the waste is treated, rendered, or mixed before or immediately after placement in a landfill so that:

1. the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste in LAC 33:V.4903.B or D; and

2. LAC 33:V.4321.B is complied with.

B. Except for prohibited wastes subject to treatment standards in LAC 33:V.Chapter 22, ignitable wastes in containers may be landfilled without meeting the requirements of LAC 33:V.4503.A, provided that the wastes are disposed of in such a way that they are protected from any material or conditions which may cause them to ignite. At a minimum, ignitable wastes:

1. must be disposed of in non-leaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause ignition of the wastes;

2. must be covered daily with soil or other non-combustible material to minimize the potential for ignition of the wastes; and

3. must not be disposed of in cells that contain, or will contain, other wastes which may generate heat sufficient to cause ignition of the waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:1057 (December 1990), LR 18:723 (July 1992), LR 20:1000 (September 1994).

## §4505. Special Requirements for Incompatible Wastes

A. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same landfill cell, unless LAC 33:V.4321.B is complied with.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4507. Special Requirements for Liquid Waste

A. The placement of bulk or noncontainerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.

B. Containers holding free liquids must not be placed in a landfill unless:

1. all free-standing liquid:

a. has been removed by decanting or other methods;

b. has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or

c. has been otherwise eliminated; or

2. the container is very small, such as an ampule; or

3. the container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or

4. the container is a lab pack as defined in LAC 33:V.4511 and is disposed of in accordance with LAC 33:V.4511.

C. To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095B (Paint Filter Liquids Test) as described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.

D. The date for compliance with Subsection A of this Section is November 19, 1981. The date for compliance with Subsection B of this Section is March 22, 1982.

E. Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in Paragraph E.1 of this Section; materials that pass one of the tests in Paragraph E.2 of this Section; or materials that are determined by EPA to be nonbiodegradable through the petition process in LAC 33:V.105.

1. Nonbiodegradable Sorbents. The following materials are nonbiodegradable sorbents:

a. inorganic minerals, other inorganic materials, and elemental carbon (e.g., aluminosilicates, clays, smectites,

Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas [illite], vermiculites, zeolites, calcium carbonate [organic free limestone]; oxides/hydroxides, alumina, lime, silica [sand], diatomaceous earth, perlite [volcanic glass]; expanded volcanic rock, volcanic ash, cement kiln dust, fly ash, rice hull ash, and activated charcoal/activated carbon); or

b. high molecular weight synthetic polymers (e.g., polyethylene, high-density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene, and tertiary butyl copolymers). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or

c. mixtures of these nonbiodegradable materials.

2. Tests for Nonbiodegradable Sorbents

a. The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)-Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi; or

b. the sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)-Standard Practice for Determining Resistance of Plastics to Bacteria; or

c. the sorbent material is determined to be nonbiodegradable under OECD test 301B: [$CO_2$ Evolution (Modified Sturm Test)].

F. The placement of any liquid that is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the administrative authority or the administrative authority determines that:

1. the only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains or may reasonably be anticipated to contain hazardous waste; and

2. placement in such owner's or operator's landfill will not present a risk of contamination of any *underground source of drinking water*, as defined in LAC 33:V.109.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), LR 21:266 (March 1995), LR 22:829 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:686 (April 1998), amended by the Office of the Secretary, Legal Affairs Division, LR 34:634 (April 2008), LR 34:1007 (June 2008).

## §4509. Special Requirements for Containers

A. Interim status facilities must comply with LAC 33:V.2517.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4511. Disposal of Small Containers of Hazardous Waste in Overpacked Drums (Lab Packs)

A. Lab packs may be placed in a landfill if the following requirements are met.

1. Hazardous waste must be packaged in non-leaking inside containers. The inside containers must be designed and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the contained waste. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the Louisiana Department of Public Safety (LDPS) hazardous materials/hazardous waste regulations (LAC 33:V.Subpart 2.Chapter 101), if those regulations specify a particular inside container for the waste.

2. The inside containers must be overpacked in an open head LDPS specification metal shipping container (LAC 33:V.Subpart 2.Chapter 101) of no more than 416-liter (110-gallon) capacity and surrounded by, at a minimum, a sufficient quantity of sorbent material to completely sorb all of the liquid contents of the inside containers. The metal outer container must be full after packing with inside containers and sorbent material.

3. The sorbent material used must not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers in accordance with LAC 33:V.4321.B.

4. *Incompatible wastes*, as defined in LAC 33:V.109, must not be placed in the same outside container.

5. *Reactive wastes*, other than cyanide- or sulfide-bearing waste, as defined in LAC 33:V.109, must be treated or rendered nonreactive prior to packaging in accordance with Paragraphs A.1, 2, 3, 4, and 6 of this Section. Cyanide- and sulfide-bearing reactive waste may be packed in accordance with Paragraphs A.1, 2, 3, 4, and 6 of this Section without first being treated or rendered nonreactive.

6. Such disposal is in compliance with the requirements of LAC 33:V.Chapter 22. Persons who incinerate lab packs according to the requirements in LAC 33:V.2227.C.1 may use fiber drums in place of metal outer containers. Such fiber drums must meet the specifications of the Louisiana Department of Public Safety and Corrections or its successor agency in LAC 33:V.Subpart 2.Chapter 101, the DOT specifications in 49 CFR 173.12, and be overpacked according to the requirements in Paragraph A.2 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 16:1057 (December 1990), LR 18:723 (July 1992), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1745 (September 1998).

### §4512. Design and Operating Requirements

A. The owner or operator of each new landfill unit, each lateral expansion of a landfill unit, and each replacement of an existing landfill unit, must install two or more liners and a leachate collection and removal system above and between such liners and operate the leachate collection and removal systems, in accordance with LAC 33:V.2503.L, unless exempted by Subsection C, D, or E of this Section.

B. The owner or operator of each unit referred to in Subsection A of this Section must notify the Office of Environmental Services at least 60 days prior to receiving waste. The owner or operator of each facility submitting notice must file a Part II application within six months of the receipt of such notice.

C. The owner or operator of any replacement landfill unit is exempt from LAC 33:V.4512.A if:

1. the existing unit was constructed in compliance with the design standards of Section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

2. there is no reason to believe that the liner is not functioning as designed.

D. The double liner requirement set forth in Subsection A of this Section may be waived by the administrative authority for any monofill, if it meets the requirements specified in Paragraphs D.1 and 2 of this Section.

1. The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents that would render the wastes hazardous for reasons other than the toxicity characteristics in LAC 33:V.4903.E, with EPA Hazardous Waste Numbers D004-D017.

2. The monofill meets the criteria of either LAC 33:V.4512.D.2.a or b below.

a. The monofill:

i. has at least one liner for which there is no evidence that such liner is leaking;

ii. is located more than 1/4 mile from an *underground source of drinking water* (as that term is defined in LAC 33:V.109); and

iii. is in compliance with generally applicable groundwater monitoring requirements for facilities with permits.

b. The owner or operator demonstrates that the monofill is located, designed, and operated so as to assure that there will be no migration of any hazardous waste or hazardous waste constituents into groundwater or surface water at any future time.

E. In the case of any unit in which the liner and leachate collection system have been installed pursuant to the requirements of LAC 33:V.4512.A and in good faith compliance with LAC 33:V.4512.A and with guidance documents governing liners and leachate collection systems under LAC 33:V.4512.A, no liner or leachate collection system which is different from that which was so installed pursuant to LAC 33:V.4512.A will be required for such unit by the administrative authority when issuing the first permit to such facility, except that the administrative authority will not be precluded from requiring installation of a new liner when the administrative authority has reason to believe that any liner installed pursuant to the requirements of LAC 33:V.4512.A is leaking.

F. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 25-year storm.

G. The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

H. Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

I. The owner or operator of a landfill containing hazardous waste which is subject to dispersal by wind must cover or otherwise manage the landfill so that wind dispersal of the hazardous waste is controlled.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 18:723 (July 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2509 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2483 (October 2005), LR 33:2135 (October 2007), LR 34:634 (April 2008), LR 34:1007 (June 2008).

## Subchapter N. Incinerators

### §4513. Applicability

A. The regulations in this Section apply to owners or operators of hazardous waste *incinerators* (as defined in LAC 33:V.109) except as LAC 33:V.4307 provides otherwise.

B. Integration of the MACT Standards

1. Except as provided by Paragraphs B.2 and 3 of this Section, the standards of this Chapter no longer apply when an owner or operator demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR Part 63, Subpart EEE, as incorporated by reference at LAC 33:III.5122, by conducting a comprehensive performance test and submitting to the administrative authority a notification of compliance under 40 CFR 63.1207(j) and 63.1210(d) documenting compliance with the requirements of 40 CFR Part 63, Subpart EEE.

2. The following requirements continue to apply even where the owner or operator has demonstrated compliance with the MACT requirements of 40 CFR Part 63, Subpart

EEE, LAC 33:V.4521 (closure), and the applicable requirements of LAC 33:V.4301.A-C, G, and I, 4306, and Chapter 43 (Subchapters A-G, R, and V).

3. LAC 33:V.4517.A, generally prohibiting burning of hazardous waste during startup and shutdown, remains in effect if the owner or operator elects to comply with LAC 33:V.2001.B.1.a to minimize emissions of toxic compounds from startup and shutdown.

C. Owners or operators of incinerators burning hazardous waste are exempt from all of the requirements of this Section, except LAC 33:V.4521 (Closure), provided that the owner or operator has documented, in writing, that the waste would not reasonably be expected to contain any of the hazardous constituents listed in LAC 33:V.3105, Table 1, and such documentation is retained at the facility, if the waste to be burned is:

1. listed as a hazardous waste in LAC 33:V.4901, solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both; or

2. listed as a hazardous waste in LAC 33:V.4901, solely because it is reactive (Hazard Code R) for characteristics other than those listed in LAC 33:V.4903.D.4 and 5, and will not be burned when other hazardous wastes are present in the combustion zone; or

3. a hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the tests for characteristics of hazardous wastes under LAC 33:V.4903; or

4. a hazardous waste solely because it possesses the reactivity characteristics described by LAC 33:V.4903.D.1-3 and 6-8, and will not be burned when other hazardous wastes are present in the combustion zone.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:737 (September 1989), amended LR 16:220 (March 1990), LR 18:1375 (December 1992), LR 20:1000 (September 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:303 (March 2001), LR 29:324 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 34:635 (April 2008).

## §4515. Waste Analysis

A. In addition to the waste analyses required by LAC 33:V.1519, the owner or operator must sufficiently analyze any waste which has not previously been burned in his incinerator to establish steady state (normal) operating conditions (including waste and auxiliary fuel feed and air flow) and to determine the type of pollutants which might be emitted. At a minimum, the analysis must determine:

1. heating value of the waste;

2. halogen and sulfur content in the waste; and

3. concentrations in the waste of lead and mercury, unless the owner or operator has written, documented data that show that the element is not present.

B. The owner or operator must place the results from each waste analysis, or the documented information, in the operating record of the facility, as required by LAC 33:V.1529.B.6.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4517. General Operating Requirements

A. During start-up and shutdown of an incinerator, the owner or operator must not feed hazardous waste unless the incinerator is at steady state (normal) conditions of operation, including steady state operating temperature and air flow.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4519. Monitoring and Inspections

A. The owner or operator must conduct, as a minimum, the following monitoring and inspections when incinerating hazardous waste:

1. monitoring of instruments which relate to combustion and emission control (e.g., those instruments measuring waste feed, auxiliary fuel feed, air flow, incinerator temperature, scrubber flow, scrubber pH, and relevant level controls) at least every 15 minutes. Appropriate corrections to maintain steady state combustion conditions must be made immediately either automatically or by the operator; and

2. daily inspection of the complete incinerator and associated equipment (e.g., pumps, valves, conveyors, pipes, etc.) for leaks, spills, and fugitive emissions. Also, all emergency shutdown controls and system alarms must be inspected daily to assure proper operation.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

## §4521. Closure

A. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including but not limited to ash, scrubber waters, and scrubber sludges) from the incinerator. Unless the owner or operator can demonstrate, in accordance with LAC 33:V.Chapter 49 that the residue removed from his incinerator is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of these regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4522. Interim Status Incinerators Burning Particular Hazardous Wastes

A. Owners or operators of incinerators subject to LAC 33:V.Chapter 43.Subchapter N may burn EPA Hazardous Wastes F020, F021, F022, F023, F026, or F027 if they receive a certification from the administrative authority that they can meet the performance standards of LAC 33:V.Chapter 31 when they burn these wastes.

B. The following standards and procedures will be used in determining whether to certify an incinerator.

1. The owner or operator will submit an application to the Office of Environmental Services containing applicable information in LAC 33:V.529 and 3115 demonstrating that the incinerator can meet the performance standards in LAC 33:V.Chapter 31 when they burn these wastes.

2. The administrative authority will issue a tentative decision as to whether the incinerator can meet the performance standards in LAC 33:V.Chapter 31. Notification of this tentative decision will be provided by newspaper advertisement and radio broadcast in the jurisdiction where the incinerator is located. The administrative authority will accept comment on the tentative decision for 60 days. The administrative authority also may hold a public hearing upon request or at his discretion.

3. After the close of the public comment period, the administrative authority will issue a decision whether or not to certify the incinerator.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 20:1000 (September 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2509 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2484 (October 2005), LR 33:2136 (October 2007).

## Subchapter O. Thermal Treatment

### §4523. Applicability

A. The regulations in this Subpart apply to owners or operators of facilities that thermally treat hazardous waste in devices other than enclosed devices using controlled flame combustion, except as LAC 33:V.4307 provides otherwise. Thermal treatment in enclosed devices using controlled flame combustion is subject to the requirements of LAC 33:V.Chapter 31 and Subchapter N of LAC 33:V.Chapter 43 if the unit is an incinerator, and LAC 33:V.Chapter 30, if the unit is a *boiler* or an *industrial furnace* as defined in LAC 33:V.109.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:1139 (December 1985), LR 21:266 (March 1995), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1110 (June 1998).

### §4525. General Operating Requirements

A. Before adding hazardous waste, the owner or operator must bring his thermal treatment process to steady state (normal) conditions of operation, including steady state operating temperature, using auxiliary fuel or other means, unless the process is a non-continuous (batch) thermal treatment process which requires a complete thermal cycle to treat a discrete quantity of hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4527. Waste Analysis

A. In addition to the waste analyses required by LAC 33:V.1519, the owner or operator must sufficiently analyze any waste which he has not previously treated in his thermal process to enable him to establish steady state (normal) or other appropriate (for a non-continuous process) operating conditions (including waste and auxiliary fuel feed) and to determine the type of pollutants which might be emitted. As required by LAC 33:V.1529, the owner or operator must place the results from each waste analysis, or the documented information, in the operating record of the facility. At a minimum, the analysis must determine:

1. heating value of the waste;

2. halogen content and sulfur content in the waste; and

3. concentrations in the waste of lead and mercury, unless the owner or operator has written, documented data that show that the element is not present.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4529. Monitoring and Inspections

A. The owner or operator must conduct, as a minimum, the following monitoring and inspections when thermally treating hazardous waste:

1. existing instruments which relate to temperature and emission control (if an emission control device is present), must be monitored at least every 15 minutes. Appropriate corrections to maintain steady state or other appropriate thermal treatment conditions must be made immediately, either automatically or by the operator. Instruments which relate to temperature and emission control would normally include those measuring waste feed, auxiliary fuel feed, treatment process temperature, and relevant process flow and level controls;

2. visual observation of the stack plume (emissions), where present, at least hourly for normal appearance (color and opacity). The operator must immediately make any indicated operating corrections necessary to return any visible emissions to their normal appearance; and

3. inspection of the complete thermal treatment process and associated equipment (pumps, valves, conveyors, pipes, etc.) at least daily for leaks, spills, and fugitive emissions, and all emergency shutdown controls and system alarms must be checked to assure proper operation.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4531. Closure

A. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash) from the thermal treatment process or equipment.

B. At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with LAC 33:V.Chapter 49, that any solid waste removed from his thermal treatment process or equipment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of these regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4533. Open Burning; Waste Explosives

A. Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives. Waste explosives include waste which has the potential to detonate and bulk military propellants which cannot safely be disposed of through other modes of treatment. Detonation is an explosion in which chemical transformation passes through the material faster than the speed of sound (0.33 kilometers/second at sea level). Owners or operators choosing to open burn or detonate waste explosives must do so in accordance with the following table and in a manner that does not threaten human health or the environment.

| Pounds of Waste Explosives or Propellants | Minimum Distance from Open Burning or Detonation to the Property of Others | |
|---|---|---|
| 0 to 100 | 204 meters | (670 feet) |
| 101 to 1,000 | 380 meters | (1,250 feet) |
| 1,001 to 10,000 | 530 meters | (1,730 feet) |
| 10,001 to 30,000 | 680 meters | (2,260 feet) |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4534. Interim Status Thermal Treatment Devices Burning Particular Hazardous Waste

A. Owners or operators of thermal treatment devices subject to this Subchapter may burn EPA Hazardous Wastes F020, F021, F022, F023, F026, or F027 if they receive a certification from the administrative authority that they can meet the performance standards of LAC 33:V.Chapter 31 when they burn these wastes.

B. The following standards and procedures will be used in determining whether to certify a thermal treatment unit.

1. The owner or operator will submit an application to the Office of Environmental Services containing the applicable information in LAC 33:V.529 and 3115 demonstrating that the thermal treatment unit can meet the performance standard in LAC 33:V.Chapter 31 when they burn these wastes.

2. The administrative authority will issue a tentative decision as to whether the thermal treatment unit can meet the performance standards in LAC 33:V.Chapter 31. Notification of this tentative decision will be provided by newspaper advertisement and radio broadcast in the jurisdiction where the thermal treatment device is located. The administrative authority will accept comment on the tentative decision for 60 days. The administrative authority also may hold a public hearing upon request or at his discretion.

3. After the close of the public comment period, the administrative authority will issue a decision whether or not to certify the thermal treatment unit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:220 (March 1990), amended LR 20:1000 (September 1994), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2509 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2484 (October 2005), LR 33:2136 (October 2007).

## Subchapter P. Chemical, Physical, and Biological Treatment

### §4535. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities which treat hazardous wastes by chemical, physical, or biological methods in other than tanks, surface impoundments, and land treatment facilities, except as LAC 33:V.4307 provides otherwise. Chemical, physical, and biological treatment of hazardous waste in tanks, surface impoundments, and land treatment facilities must comply with the requirements of LAC 33:V.Chapter 43.Subchapters I, J, and L, respectively.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR

10:496 (July 1984), LR 18:723 (July 1992), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1110 (June 1998).

### §4537. General Operating Requirements

A. Chemical, physical, or biological treatment of hazardous waste must comply with LAC 33:V.4321.

B. Hazardous wastes or treatment reagents must not be placed in the treatment process or equipment if they could cause the treatment process or equipment to rupture, leak, corrode, or otherwise fail before the end of its intended life.

C. Where hazardous waste is continuously fed into a treatment process or equipment, the process or equipment must be equipped with a means to stop this inflow (e.g., a waste feed cut off system or by-pass system to a standby containment device). These systems are intended to be used in the event of a malfunction in the treatment process or equipment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4539. Waste Analysis and Trial Tests

A. As required by LAC 33:V.1519.A.1, the waste analysis plan must include analyses needed to comply with LAC 33:V.4545 and 4547. As required by LAC 33:V.1529, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility. In addition to the waste analysis required by LAC 33:V.1519.A.1, the owner or operator must conduct waste analyses and trial treatment tests (e.g., bench scale or pilot plant scale tests), or obtain written, documented information on similar treatment of similar waste under similar operating conditions, to show that this proposed treatment will meet all applicable requirements of LAC 33:V.4537.A and B, before treating the different waste or using the different method, whenever:

1. a hazardous waste which is substantially different from waste previously treated in a treatment process or equipment at the facility is to be treated in that process or equipment; or

2. a substantially different process than any previously used at the facility is to be used to chemically treat hazardous waste.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4541. Inspections

A. The owner or operator of a treatment facility must inspect, where present:

1. discharge control and safety equipment (e.g., waste feed cut-off systems, by-pass systems, drainage systems, and pressure relief systems) at least once each operating day, to ensure good working order;

2. data gathered from monitoring equipment (e.g., pressure and temperature gauges), at least once each operating day, to ensure that the treatment process or equipment is being operated according to its design;

3. the construction materials of the treatment process or equipment, at least weekly, to detect corrosion or leaking of fixtures or seams; and

4. the construction materials of, and the area immediately surrounding, discharge confinement structures (e.g., dikes), at least weekly, to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).

B. As required by LAC 33:V.1509.C, the owner or operator must remedy any deterioration or malfunction he finds.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4543. Closure

A. At closure, all hazardous waste and hazardous waste residues must be removed from treatment processes or equipment, discharge control equipment, and discharge confinement structures. At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with LAC 33:V.Chapter 49, that any solid waste removed from this treatment process or equipment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of these regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984).

### §4545. Special Requirements for Ignitable or Reactive Waste

A. Ignitable or reactive waste must not be placed in a treatment process or equipment unless:

1. the waste is treated, rendered, or mixed before or immediately after placement in the treatment process or equipment so that the resulting waste, mixture, or dissolution of material no longer meets the characteristics of ignitable or reactive waste under LAC 33:V.4903.B and D, and 4321.B is complied with; or

2. the waste is treated in such a way that it is protected from any material or conditions which may cause the waste to ignite or react.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste,

Hazardous Waste Division, LR 10:200 (March 1984), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1900 (September 2008).

### §4547. Special Requirements for Incompatible Wastes

A. Incompatible wastes, or incompatible wastes and materials must not be placed in the same treatment process or equipment, unless LAC 33:V.4321 is complied with.

B. Hazardous waste must not be placed in unwashed treatment equipment which previously held an incompatible waste or material, unless LAC 33:V.4321 is complied with.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 18:723 (July 1992).

## Subchapter Q. Air Emission Standards for Process Vents

### §4549. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in LAC 33:V.4301).

B. Except for LAC 33:V.1711.D and E, as referenced in LAC 33:V.4557, this Subchapter applies to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations of at least 10 ppmw, if these operations are conducted in one of the following:

1. a unit that is subject to the permitting requirements of LAC 33:V.Chapters 3, 5, 7, 27, 31, and 43;

2. a unit (including a hazardous waste recycling unit) that is not exempt from permitting under LAC 33:V.1109.E.1 (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of LAC 33:V.Chapters 3, 5, 7, 27, 31, and 43; or

3. a unit that is exempt from permitting under the provisions of LAC 33:V.1109.E.1 (i.e., a 90-day tank or container) and is not a recycling unit under the requirements of LAC 33:V.4105.

[NOTE: The requirements of LAC 33:V.4553-4559 apply to process vents on hazardous waste recycling units previously exempt under LAC 33:V.4115.A. Other exemptions under LAC 33:V.105.D and 4307 are not affected by these requirements.]

C. The requirements of this Subchapter do not apply to the process vents at a facility where the facility owner or operator certifies that all of the process vents that would otherwise be subject to this Subchapter are equipped with and operating air emission controls in accordance with the process vent requirements of an applicable Clean Air Act regulation codified under 40 CFR Part 60, Part 61, or Part 63. The documentation of compliance under regulations at 40 CFR Part 60, Part 61, or Part 63 shall be kept with, or made readily available with, the facility operating record.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 18:723 (July 1992), LR 20:1000 (September 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1745 (September 1998), LR 25:486 (March 1999).

### §4551. Definitions

A. As used in this Subchapter, all terms shall have the meanings given them in LAC 33:V.1703.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4553. Standards: Process Vents

A. Interim status facilities are subject to the requirements of LAC 33:V.1707.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4555. Standards: Closed-Vent Systems and Control Devices

A. Interim status facilities are subject to the requirements of LAC 33:V.1709.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4557. Test Methods and Procedures

A. Interim status facilities are subject to the requirements of LAC 33:V.1711.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4559. Recordkeeping Requirements

A. Interim status facilities are subject to the requirements of LAC 33:V.1713.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

# Subchapter R. Air Emission Standards for Equipment Leaks

## §4561. Applicability

A. The regulations in this Subchapter apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in LAC 33:V.4307).

B. Except as provided in LAC 33:V.1743.K, as referenced in LAC 33:V.4509, this Subchapter applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight that are managed in one of the following:

1. a unit that is subject to the permitting requirements of LAC 33:V.Chapters 3, 5, 7, 27, 31, and 43;

2. a unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of LAC 33:V.1109.E.1 (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of LAC 33:V.Chapters 3, 5, 7, 27, 31, and 43; or

3. a unit that is exempt from permitting under the provisions of LAC 33:V.1109.E.1 (i.e., a 90-day tank or container) and is not a recycling unit under the provisions of LAC 33:V.4105.

C. Each piece of equipment to which this Subchapter applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

D. Equipment that is in vacuum service is excluded from the requirements of LAC 33:V.4565 through 4581 if it is identified as required in LAC 33:V.1743.G.5, as referenced in LAC 33:V.4589.

E. Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year is excluded from the requirements of LAC 33:V.4565-4581 if it identified, as required in LAC 33:V.4589.

F. Purged coatings and solvents from surface coating operations subject to the national emission standards for hazardous air pollutants (NESHAP) for the surface coating of automobiles and light-duty trucks at LAC 33:III.5122 (40 CFR Part 63, Subpart IIII), are not subject to the requirements of this Subchapter.

[NOTE: The requirements of LAC 33:V.4565-4589 apply to equipment associated with hazardous waste recycling units previously exempt under LAC 33:V.4115.A. Other exemptions under LAC 33:V.105.D and 4307 are not affected by these requirements.]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991), amended LR 20:1000 (September 1994), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1745 (September 1998), LR 25:486 (March 1999), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2541 (October 2005).

## §4563. Definitions

A. As used in this Subchapter, all terms shall have the meanings given them in LAC 33:V.1703.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §4565. Standard: Pumps in Light Liquid Service

A. Interim status facilities are subject to the requirements of LAC 33:V.1719.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §4567. Standard: Compressors

A. Interim status facilities are subject to the requirements of LAC 33:V.1721.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §4569. Standards: Pressure Relief Devices in Gas/Vapor Service

A. Interim status facilities are subject to the requirements of LAC 33:V.1723.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §4571. Standards: Sampling Connection Systems

A. Interim status facilities are subject to the requirements of LAC 33:V.1725.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## §4573. Standards: Open-Ended Valves or Lines

A. Interim status facilities are subject to the requirements of LAC 33:V.1727.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4575. Standards: Valves in Gas/Vapor Service or in Light Liquid Service

A. Interim status facilities are subject to the requirements of LAC 33:V.1729.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4577. Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors

A. Interim status facilities are subject to the requirements of LAC 33:V.1731.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4579. Standards: Delay of Repair

A. Interim status facilities are subject to the requirements of LAC 33:V.1733.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4581. Standards: Closed-Vent Systems and Control Devices

A. Interim status facilities are subject to the requirements of LAC 33:V.1735.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4583. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak

A. Interim status facilities are subject to the requirements of LAC 33:V.1737.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4585. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair

A. Interim status facilities are subject to the requirements of LAC 33:V.1739.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4587. Test Methods and Procedures

A. Interim status facilities are subject to the requirements of LAC 33:V.1741.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

### §4589. Recordkeeping Requirements

A. Interim status facilities are subject to the requirements of LAC 33:V.1743.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:658 (July 1991).

## Subchapter S. Drip Pads

### §4591. Applicability

A. Interim status facilities are subject to the requirements of LAC 33:V.2801.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992).

### §4593. Assessment of Existing Drip Pad Integrity

A. Interim status facilities are subject to the requirements of LAC 33:V.2803.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992).

### §4595. Design and Installation of New Drip Pads

A. Interim status facilities are subject to the requirements of LAC 33:V.2811.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992).

### §4597. Design and Operating Requirements

A. Interim status facilities are subject to the requirements of LAC 33:V.2805.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992).

### §4599. Inspections

A. Interim status facilities are subject to the requirements of LAC 33:V.2807.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992).

### §4601. Closure

A. Interim status facilities are subject to the requirements of LAC 33:V.2809.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 18:1375 (December 1992).

## Subchapter T. Containment Buildings

### §4701. Applicability

A. The requirements of this Subchapter apply to owners or operators who store or treat hazardous waste in units designed and operated under LAC 33:V.4703. The owner or operator is not subject to the definition of land disposal in RCRA Section 3004(k) provided that the unit:

1. is a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the units and to prevent failure due to pressure gradients, settlement, compression, uplift, physical contact with the hazardous wastes to which they are exposed, climatic conditions, and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;

2. has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel and handling equipment within the unit;

3. if it is used to manage liquids, has:

a. a primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;

b. a liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and

c. a secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest possible time, unless the unit has been granted a variance from the secondary containment system requirements under LAC 33:V.4703.B.4;

4. has controls as needed to prevent fugitive dust emissions; and

5. is designed and operated to ensure containment and prevent the tracking of materials out of the unit by personnel or equipment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended LR 21:944 (September 1995), amended by the Office of the Secretary, Legal Affairs Division, LR 34:635 (April 2008), LR 34:1008 (June 2008).

### §4703. Design and Operating Standards

A. All containment buildings must comply with the following design standards:

1. the containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on) and to ensure containment of managed wastes;

2. the floor and containment walls of the unit, including the secondary containment system if required under LAC 33:V.4703.B, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit and to prevent failure due to pressure gradients, settlement, compression, uplift, physical contact with the hazardous wastes to which they are exposed, climatic conditions, and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. The administrative authority will consider standards established by professional organizations which are generally recognized by the industry, such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM), in judging the structural integrity requirements of LAC 33:V.4703.A. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria:

a. they provide an effective barrier against fugitive dust emissions under LAC 33:V.4703.C.1.d; and

b. the unit is designed and operated in a fashion that ensures that wastes will not actually come in contact with these openings;

3. incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail; and

4. a containment building must have a primary barrier designed to withstand the movement of personnel, waste,

and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

B. For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:

1. a primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g. a geomembrane covered by a concrete wear surface);

2. a liquid collection and removal system to prevent the accumulation of liquid on the primary barrier of the containment building:

a. the primary barrier must be sloped to drain liquids to the associated collection system; and

b. liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time that protects human health and the environment;

3. a secondary containment system, including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time:

a. the requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

i. constructed with a bottom slope of 1 percent or more; and

ii. constructed of a granular drainage material with a hydraulic conductivity of $1 \times 10^{-2}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of $3 \times 10^{-5}$ $m^2$/sec or more;

b. if treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building;

c. the secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of LAC 33:V.4437.E.1. In addition, the containment building must meet the requirements of LAC 33:V.4437.B and C to be considered an acceptable secondary containment system for a tank.); and

4. for existing units other than 90-day generator units, the administrative authority may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this Subchapter. In making this demonstration, the owner or operator must:

a. provide written notice to the administrative authority of their request by February 18, 1993. This notification must describe the unit and its operating practices with specific reference to the performance of existing containment systems and specific plans for retrofitting the unit with secondary containment;

b. respond to any comments from the administrative authority on these plans within 30 days; and

c. fulfill the terms of the revised plans, if such plans are approved by the administrative authority.

C. Owners or operators of all containment buildings must:

1. use controls and practices to ensure containment of the hazardous waste within the unit and, at a minimum:

a. maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

b. maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

c. take measures to prevent the tracking of hazardous waste out of the unit by personnel or equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and

d. take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions. In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices. This state of no visible emissions must be maintained effectively at all times during normal operating conditions, including when vehicles and personnel are entering and exiting the unit;

2. obtain and keep on-site a certification by a qualified professional engineer that the containment building design meets the requirements of Subsections A-C of this Section;

3. throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, repair the condition promptly, in accordance with the following procedures:

a. upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator must:

i. enter a record of the discovery in the facility operating record;

ii. immediately remove the portion of the containment building affected by the condition from service;

iii. determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and

iv. within seven days after the discovery of the condition, notify the Office of Environmental Services of the condition and, within 14 working days, provide a written notice to the administrative authority with a description of the steps taken to repair the containment building and the schedule for accomplishing the work;

b. the administrative authority will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing; and

c. upon completing all repairs and cleanup, the owner or operator must notify the Office of Environmental Services in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with LAC 33:V.4703.C.3.a.iv; and

4. inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment, leak detection equipment, and containment building and the area immediately surrounding it to detect signs of releases of hazardous waste.

D. For containment buildings having areas both with and without secondary containment, the owner or operator must:

1. design and operate each area in accordance with the requirements in LAC 33:V.4703.A-C;

2. take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

3. maintain, in the facility's operating log, a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

E. Notwithstanding any other provision of this Subchapter, the administrative authority may waive requirements for secondary containment for a permitted containment building where the owner or operator demonstrates that the only free liquids in the unit are limited amounts of dust-suppression liquids required to meet occupational health and safety requirements and where containment of managed wastes and liquids can be ensured without a secondary containment system.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2509 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2136 (October 2007), LR 34:635 (April 2008), LR 34:1008 (June 2008).

### §4705. Closure and Post-Closure Care

A. At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate and manage them as hazardous waste, unless LAC 33:V.109.*Hazardous Waste*.6 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in LAC 33:V.Chapter 43.Subchapters F and G.

B. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in LAC 33:V.4705.A, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must either:

1. close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (LAC 33:V.4501). In addition, for the purposes of closure, post-closure, and financial responsibility, such a containment building is then considered to be a landfill and the owner or operator must meet all of the requirements for landfills specified in LAC 33:V.Chapter 43.Subchapters F and G; or

2. perform a risk assessment to demonstrate that closure with the remaining contaminant levels is protective of human health and the environment in accordance with LAC 33:I.Chapter 13. Any such risk assessment is subject to approval by the administrative authority and must demonstrate that post-closure care is not necessary to adequately protect human health and the environment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:266 (March 1995), amended by the Office of the Secretary, LR 24:2250 (December 1998).

## Subchapter U. Hazardous Waste Munitions and Explosives Storage

### §4707. Applicability

A. The requirements of this Subchapter apply to owners or operators who store munitions and explosive hazardous wastes, except as LAC 33:V.4301 provides otherwise.

[NOTE: Depending on explosive hazards, hazardous waste munitions and explosives may also be managed in other types

of storage units, including containment buildings (Subchapter T of this Chapter), tanks (Subchapter I of this Chapter), or containers (Subchapter H of this Chapter). See LAC 33:V.5311 for storage of waste military munitions].

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1746 (September 1998).

## §4709. Design and Operating Standards

A. Hazardous waste munitions and explosives storage units must be designed and operated with containment systems, controls, and monitoring that:

1. minimize the potential for detonation or other means of release of hazardous waste, hazardous constituents, hazardous decomposition products, or contaminated runoff to the soil, groundwater, surface water, and atmosphere;

2. provide a primary barrier, which may be a container (including a shell) or tank, designed to contain the hazardous waste;

3. for wastes stored outdoors, provide that the waste and containers will not be in standing precipitation;

4. for liquid wastes, provide a secondary containment system that assures that any released liquids are contained and promptly detected and removed from the waste area or vapor detection system that assures that any released liquids or vapors are promptly detected and an appropriate response taken (e.g., additional containment, such as overpacking or removal from the waste area); and

5. provide monitoring and inspection procedures that assure the controls and containment systems are working as designed and that releases that may adversely impact human health or the environment are not escaping from the unit.

B. Hazardous waste munitions and explosives stored under this Subchapter may be stored in one of the following:

1. earth-covered magazines that must be:

a. constructed of waterproofed, reinforced concrete, or structural steel arches, with steel doors that are kept closed when not being accessed;

b. designed and constructed:

i. to be of sufficient strength and thickness to support the weight of any explosives or munitions stored and any equipment used in the unit;

ii. to provide working space for personnel and equipment in the unit; and

iii. to withstand movement activities that occur in the unit; and

c. located and designed with walls and earthen covers that direct an explosion in the unit in a safe direction, so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion;

2. above-ground magazines that must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion; or

3. outdoor or open storage areas that must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.

C. Hazardous waste munitions and explosives must be stored in accordance with a standard operating procedure specifying procedures to ensure safety, security, and environmental protection. If these procedures serve the same purpose as the security and inspection requirements of LAC 33:V.4315, the preparedness and prevention procedures of Subchapter B of this Chapter, and the contingency plan and emergency procedures requirements of Subchapter C of this Chapter, then these procedures will be used to fulfill those requirements.

D. Hazardous waste munitions and explosives must be packaged to ensure safety in handling and storage.

E. Hazardous waste munitions and explosives must be inventoried at least annually.

F. Hazardous waste munitions and explosives and their storage units must be inspected and monitored as necessary to ensure explosives safety and to ensure that there is no migration of contaminants out of the unit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1746 (September 1998).

## §4711. Closure and Post-Closure Care

A. At closure of a magazine or unit that stored hazardous waste under this Subchapter, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste and manage them as hazardous waste unless LAC 33:V.109.*Hazardous Waste*.6 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for magazines or units must meet all of the requirements specified in Subchapters F and G of this Chapter, except that the owner or operator may defer closure of the unit as long as it remains in service as a munitions or explosives magazine or storage unit.

B. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in Subsection A of this Section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he or she must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (LAC 33:V.2521).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1746 (September 1998).

# Subchapter V. Air Emission Standards for Tanks, Surface Impoundments, and Containers

## §4719. Applicability

A. Interim status facilities are subject to the requirements of LAC 33:V.1747.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1747 (September 1998).

## §4721. Definitions

A. As used in this Subchapter, all terms shall have the meanings given to them in LAC 33:V.1703.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1747 (September 1998).

## §4723. Schedule for Implementation of Air Emission Standards

A. Owners or operators of facilities existing on December 6, 1996, and subject to Subchapters H, I, and J of this Chapter shall meet the following requirements.

1. Install and begin operation of control equipment or waste management units required to comply with this Subchapter and complete modifications of production or treatment processes to satisfy exemption criteria in accordance with LAC 33:V.4725 by December 6, 1996, except as provided for in Paragraph A.2 of this Section.

2. When control equipment or waste management units required to comply with this Subchapter cannot be installed and in operation, or modifications of production or treatment processes to satisfy exemption criteria in accordance with LAC 33:V.4725, by December 6, 1996, the owner or operator shall:

a. install and begin operation of the control equipment and waste management units, and complete modifications of production or treatment processes as soon as possible, but no later than December 6, 1997;

b. prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for control equipment waste management units and production or treatment process modifications; initiation of on-site installation of control equipment, or waste management units, and modifications of production or treatment processes; completion of the control equipment or waste management unit installation, and production or treatment process modifications; and performance of testing to demonstrate that the installed equipment or waste management units and modified production or treatment processes meet the applicable standards of this Subchapter;

c. for facilities subject to the recordkeeping requirements of LAC 33:V.4357, the owner or operator shall enter the implementation schedule specified in Subparagraph A.2.b of this Section in the operating record no later than December 6, 1996; and

d. for facilities not subject to LAC 33:V.4357, the owner or operator shall enter the implementation schedule specified in Subparagraph A.2.b of this Section in a permanent, readily available file located at the facility no later than December 6, 1996.

B. Owners or operators of facilities and units in existence on the effective date of the statutory or regulatory amendment that renders the facility subject to Subchapters H, I, or J of this Chapter shall meet the following requirements.

1. Install and begin operation of all control equipment or waste management units required to comply with this Subchapter, and complete modifications of production or treatment processes to satisfy exemption criteria in accordance with LAC 33:V.4725, by the effective date of the amendment except as provided for in Paragraph B.2 of this Section.

2. When control equipment or waste management units required to comply with this Subchapter cannot be installed and begin operation, or when modifications of production or treatment processes to satisfy exemption criteria in accordance with LAC 33:V.4725 cannot be completed, by the effective date of the amendment, the owner or operator shall:

a. install and begin operation of the control equipment or waste management units, and complete modification of production or treatment processes as soon as possible, but no later than 30 months after the effective date of the amendment;

b. for facilities subject to the recordkeeping requirements of LAC 33:V.4357, enter and maintain the implementation schedule specified in Subparagraph A.2.b of this Section in the operating record no later than the effective date of the amendment; or

c. for facilities not subject to LAC 33:V.4357, the owner or operator shall enter and maintain the implementation schedule specified in Subparagraph A.2.b of this Section in a permanent, readily available file located at the facility site no later than the effective date of the amendment.

C. Owners and operators of facilities and units that become newly subject to the requirements of this Subchapter after December 8, 1997, due to an action other than those described in Subsection B of this Section must comply with all applicable requirements immediately (i.e., must have control devices installed and operating on the date the

facility or unit becomes subject to this Subchapter; the 30-month implementation schedule does not apply).

D. The administrative authority may elect to extend the implementation date for control equipment at a facility, on a case-by-case basis, to a date later than December 8, 1997, when special circumstances that are beyond the facility owner's or operator's control delay installation or operation of control equipment, and the owner or operator has made all reasonable and prudent attempts to comply with the requirements of this Subchapter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1747 (September 1998), LR 25:487 (March 1999), repromulgated LR 25:856 (May 1999).

## §4725. Standards: General

A. Interim status facilities are subject to the requirements of LAC 33:V.1751.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1747 (September 1998).

## §4727. Waste Determination Procedures

A. Waste Determination Procedures to Determine Average Volatile Organic (VO) Concentration of a Hazardous Waste at the Point of Waste Origination

1. An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of LAC 33:V.4725 from using air emission controls in accordance with standards specified in LAC 33:V.4729-4735, as applicable to the waste management unit.

a. An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the hazardous waste stream is placed in a waste management unit exempted under the provisions of LAC 33:V.4725 from using air emission controls, and thereafter, an initial determination of the average VO concentration of the waste stream shall be made for each averaging period that a hazardous waste is managed in the unit.

b. Perform a new waste determination whenever changes to the source generating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the VO concentration limit specified in LAC 33:V.4725.

2. For a waste determination that is required by Paragraph A.1 of this Section, the average VO concentration of a hazardous waste at the point of waste origination shall be determined using either direct measurement as specified in Paragraph A.3 of this Section or by knowledge as specified in Paragraph A.4 of this Section.

3. Direct Measurement to Determine Average VO Concentration of a Hazardous Waste at the Point of Waste Origination

a. Identification. The owner or operator shall identify and record the point of waste origination for the hazardous waste.

b. Sampling. Samples of the hazardous waste stream shall be collected at the point of waste origination in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

i. The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream, but shall not exceed one year.

ii. A sufficient number of samples, but no less than four samples, shall be collected and analyzed for a hazardous waste determination. All of the samples for a given waste determination shall be collected within a one-hour period. The average of the four or more sample results constitutes a waste determination for the waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

iii. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in Method 25D in 40 CFR Part 60, Appendix A.

iv. Sufficient information, as specified in the site sampling plan required under Clause A.3.b.iii of this Section shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for the source or process generating the hazardous waste represented by the samples.

c. Analysis. Each collected sample shall be prepared and analyzed in accordance with Method 25D in 40 CFR Part 60, Appendix A for the total concentration of volatile organic constituents, or by using one or more appropriate methods when the individual organic compound

concentrations are identified and summed and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as 1.8 x $10^{-6}$ atmospheres/gram-mole/$m^3$) at 25°C. At the owner's or operator's discretion, the owner or operator may adjust test data obtained by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value of less than 0.1 Y/X at 25ºC. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor ($f_{m25D}$). If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at 25ºC that are contained in the waste. Constituent-specific adjustment factors ($f_{m25D}$) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet one of the following requirements in Clause A.3.c.i or ii of this Section and provided that the requirement to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X (which can also be expressed as 1.8 x $10^{-6}$ atmospheres/gram-mole/$m^3$) at 25°C is met:

i. any EPA standard method that has been validated in accordance with *Alternative Validation Procedure for EPA Waste and Wastewater Methods*, 40 CFR Part 63, Appendix D; or

ii. any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR Part 63, Appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under Section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

d. Calculations

i. The average VO concentration ($\overline{C}$) on a mass-weighted basis shall be calculated by using the results for all waste determinations conducted in accordance with Subparagraphs A.3.b and c of this Section and the following equation.

$$\overline{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} Q_i \times C_i$$

where:

$\overline{C}$ = average VO concentration of the hazardous waste at the point of waste origination on a mass-weighted basis, ppmw

i = individual waste determination "i" of the hazardous waste

n = total number of waste determinations of the hazardous waste conducted for the averaging period (not to exceed one year)

$Q_i$ = mass quantity of hazardous waste stream represented by $C_i$, kg/hr

$Q_T$ = total mass quantity of hazardous waste during the averaging period, kg/hr

$C_i$ = measured VO concentration of waste determination "i" as determined in accordance with the requirements of Subparagraph A.3.c of this Section (i.e., the average of the four or more samples specified in Clause A.3.b.ii of this Section), ppmw

ii. For the purpose of determining $C_i$, for individual waste samples analyzed in accordance with Subparagraph A.3.c of this Section, the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

(a). if Method 25D in 40 CFR Part 60, Appendix A is used for the analysis, one-half the blank value determined in the method at Section 4.4 of Method 25D in 40 CFR Part 60, Appendix A;

(b). if any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as 1.8 x $10^{-6}$ atmospheres/gram-mole/$m^3$) at 25°C.

e. Provided that the test method is appropriate for the waste as required under Subparagraph A.3.c of this Section, the department will determine compliance based on the test method used by the owner or operator as recorded in accordance with LAC 33:V.4735.

4. Use of Owner or Operator Knowledge to Determine Average VO Concentration of a Hazardous Waste at the Point of Waste Origination

a. Documentation shall be prepared that presents the information used as the basis for the owner's or operator's knowledge of the hazardous waste stream's average VO concentration. Examples of information that may be used as the basis for knowledge include: material balances for the source or process generating the hazardous waste stream; constituent-specific chemical test data for the hazardous waste stream from previous testing that are still applicable to the current waste stream; previous test data for other locations managing the same type of waste stream; or other knowledge based on information included in manifests, shipping papers, or waste certification notices.

b. If test data are used as the basis for knowledge, then the owner or operator shall document the test method, sampling protocol, and the means by which sampling

variability and analytical variability are accounted for in the determination of the average VO concentration. For example, an owner or operator may use organic concentration test data for the hazardous waste stream that is validated in accordance with Method 301 in 40 CFR Part 63, Appendix A as the basis for knowledge of the waste.

c. An owner or operator using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous waste may adjust the test data to the corresponding average VO concentration value that would have been obtained had the waste samples been analyzed using Method 25D in 40 CFR Part 60, Appendix A. To adjust these data, the measured concentration for each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor ($f_{m25D}$).

d. In the event that the administrative authority and the owner or operator disagree on a determination of the average VO concentration for a hazardous waste stream using knowledge, then the results from a determination of average VO concentration using direct measurement as specified in Paragraph A.3 of this Section shall be used to establish compliance with the applicable requirements of this Subpart. The administrative authority may perform or request that the owner or operator perform this determination using direct measurement. The owner or operator may choose one or more appropriate methods to analyze each collected sample in accordance with the requirements of Subparagraph A.3.c of this Section.

B. Waste Determination Procedures for Treated Hazardous Waste

1. An owner or operator shall perform the applicable waste determination for each treated hazardous waste placed in a waste management unit exempted under the provisions of LAC 33:V.4725 from using air emission controls in accordance with standards specified in LAC 33:V.4729-4735, as applicable to the waste management unit.

a. An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the treated waste stream is placed in a waste management unit exempted under the provisions of LAC 33:V.4725 from using air emission controls, and thereafter, update the information used for the waste determination at least once every 12 months following the date of the initial waste determination.

b. Perform a new waste determination whenever changes to the process generating or treating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level such that the applicable treatment conditions specified in LAC 33:V.4725 are not achieved.

2. The owner or operator shall designate and record the specific provision in LAC 33:V.4725 under which the waste determination is being performed. The waste determination for the treated hazardous waste shall be performed using the applicable procedures specified in Paragraphs B.3-9 of this Section.

3. Procedure to Determine the Average VO Concentration of a Hazardous Waste at the Point of Waste Treatment

a. Identification. The owner or operator shall identify and record the point of waste treatment for the hazardous waste.

b. Sampling. Samples of the hazardous waste stream shall be collected at the point of waste treatment in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

i. The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream, but shall not exceed one year.

ii. A sufficient number of samples, but no less than four samples, shall be collected and analyzed for a hazardous waste determination. All of the samples for a given waste determination shall be collected within a one-hour period. The average of the four or more sample results constitutes a waste determination for the waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

iii. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in Method 25D in 40 CFR Part 60, Appendix A.

iv. Sufficient information, as specified in the *site sampling plan* required under Clause B.3.b.iii of this Section, shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for the process treating the hazardous waste represented by the samples.

c. Analysis. Each collected sample shall be prepared and analyzed in accordance with Method 25D in 40 CFR Part 60, Appendix A for the total concentration of

volatile organic constituents, or by using one or more appropriate methods when the individual organic compound concentrations are identified and summed and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as 1.8 x $10^{-6}$ atmospheres/gram-mole/$m^3$) at 25°C. When the owner or operator is making a waste determination for a treated hazardous waste that is to be compared to an average VO concentration at the point of waste origination or the point of waste entry to the treatment system, to determine if the conditions of LAC 33:V.4723 or 4725 are met, then the waste samples shall be prepared and analyzed using the same method or methods as were used in making the initial waste determinations at the point of waste origination or at the point of entry to the treatment system. At the owner's or operator's discretion, the owner or operator may adjust test data obtained by any appropriate method to discount any contribution to the total VO concentration that is a result of including a compound with a Henry's law constant value less than 0.1 Y/X at 25°C. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor ($f_{m25D}$). If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at 25°C that are contained in the waste. Constituent-specific adjustment factors ($f_{m25D}$) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet one of the following requirements in Clause B.3.c.i or ii of this Section and provided that the requirement to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X (which can also be expressed as 1.8 x $10^{-6}$ atmospheres/gram-mole/$m^3$) at 25°C is met:

i. any EPA standard method that has been validated in accordance with *Alternative Validation Procedure for EPA Waste and Wastewater Methods*, 40 CFR Part 63, Appendix D; or

ii. any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR Part 63, Appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under Section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

d. Calculations. The average VO concentration ($\overline{C}$) on a mass-weighted basis shall be calculated by using the results for all waste determinations conducted in accordance with Subparagraphs B.3.b and c of this Section and the following equation.

$$\overline{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} \left( Q_i \times C_i \right)$$

where:

$\overline{C}$ = average VO concentration of the hazardous waste at the point of waste treatment on a mass-weighted basis, ppmw

i = individual waste determination "i" of the hazardous waste

n = total number of waste determinations of the hazardous waste conducted for the averaging period (not to exceed one year)

$Q_i$ = mass quantity of hazardous waste stream represented by $C_i$, kg/hr

$Q_T$ = total mass quantity of hazardous waste during the averaging period, kg/hr

$C_i$ = measured VO concentration of waste determination "i" as determined in accordance with the requirements of Subparagraph B.3.c of this Section (i.e., the average of the four or more samples specified in Clause B.3.b.ii of this Section), ppmw

e. Provided that the test method is appropriate for the waste as required under Subparagraph B.3.c of this Section, compliance shall be determined based on the test method used by the owner or operator as recorded in accordance with LAC 33:V.4739.

4. Procedure to Determine the Exit Concentration Limit ($C_t$) for a Treated Hazardous Waste

a. The point of waste origination for each hazardous waste treated by the process at the same time shall be identified.

b. If a single hazardous waste stream is identified in Subparagraph B.4.a of this Section, then the exit concentration limit ($C_t$) shall be 500 ppmw.

c. If more than one hazardous waste stream is identified in Subparagraph B.4.a of this Section, then the average VO concentration of each hazardous waste stream at the point of waste origination shall be determined in accordance with the requirements of Subsection A of this Section. The exit concentration limit ($C_t$) shall be calculated by using the results determined for each individual hazardous waste stream and the following equation.

$$C_t = \frac{\sum_{x=1}^{m} \left( Q_x \times \overline{C}_x \right) + \sum_{y=1}^{n} \left( Q_y \times 500\, ppmw \right)}{\sum_{x=1}^{m} Q_x + \sum_{y=1}^{n} Q_y}$$

where:

$C_t$ = exit concentration limit for treated hazardous waste, ppmw

x = individual hazardous waste stream "x" that has an average VO concentration less than 500 ppmw at the point of waste

origination as determined in accordance with the requirements of Subsection A of this Section

y = individual hazardous waste stream "y" that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination as determined in accordance with the requirements of Subsection A of this Section

m = total number of "x" hazardous waste streams treated by process

n = total number of "y" hazardous waste streams treated by process

$Q_x$ = annual mass quantity of hazardous waste stream "x," kg/yr

$Q_y$ = annual mass quantity of hazardous waste stream "y," kg/yr

$\overline{C}_x$ = average VO concentration of hazardous waste stream "x" at the point of waste origination as determined in accordance with the requirements of Subsection A of this Section, ppmw

5. Procedure to Determine the Organic Reduction Efficiency (R) for a Treated Hazardous Waste

a. The organic reduction efficiency (R) for a treatment process shall be determined based on results for a minimum of three consecutive runs.

b. All hazardous waste streams entering the treatment process and all hazardous waste streams exiting the treatment process shall be identified. The owner or operator shall prepare a sampling plan for measuring these streams that accurately reflects the retention time of the hazardous waste in the process.

c. For each run, information shall be determined for each hazardous waste stream identified in Subparagraph B.5.b of this Section using the following procedures:

i. the mass quantity of each hazardous waste stream entering the process ($Q_b$) and the mass quantity of each hazardous waste stream exiting the process ($Q_a$) shall be determined;

ii. the average VO concentration at the point of waste origination of each hazardous waste stream entering the process ($\overline{C}_b$) during the run shall be determined in accordance with the requirements of Paragraph A.3 of this Section. The average VO concentration at the point of waste treatment of each waste stream exiting the process ($\overline{C}_a$) during the run shall be determined in accordance with the requirements of Paragraph B.3 of this Section.

d. The waste volatile organic mass flow entering the process ($E_b$) and the waste volatile organic mass flow exiting the process ($E_a$) shall be calculated by using the results determined in accordance with Subparagraph B.5.c of this Section and the following equations.

$$E_b = \frac{1}{10^6} \sum_{j=1}^{m} \left( Q_{bj} \times \overline{C}_{bj} \right)$$

$$E_a = \frac{1}{10^6} \sum_{j=1}^{m} \left( Q_{aj} \times \overline{C}_{aj} \right)$$

where:

$E_a$ = waste volatile organic mass flow exiting process, kg/hr

$E_b$ = waste volatile organic mass flow entering process, kg/hr

m = total number of runs (at least 3)

j = individual run "j"

$Q_b$ = mass quantity of hazardous waste entering process during run "j," kg/hr

$Q_a$ = average mass quantity of hazardous waste exiting process during run "j," kg/hr

$\overline{C}_a$ = average VO concentration of hazardous waste exiting process during run "j" as determined in accordance with the requirements of Paragraph B.3 of this Section, ppmw

$\overline{C}_b$ = average VO concentration of hazardous waste entering process during run "j" as determined in accordance with the requirements of Paragraph A.3 of this Section, ppmw

e. The organic reduction efficiency of the process shall be calculated by using the results determined in accordance with Subparagraph B.5.d of this Section and the following equation.

$$R = \frac{E_b - E_a}{E_b} \times 100\%$$

where:

R = organic reduction efficiency, percent

$E_b$ = waste volatile organic mass flow entering process as determined in accordance with the requirements of Subparagraph B.5.d of this Section, kg/hr

$E_a$ = waste volatile organic mass flow exiting process as determined in accordance with the requirements of Subparagraph B.5.d of this Section, kg/hr

6. Procedure to Determine the Organic Biodegradation Efficiency ($R_{bio}$) for a Treated Hazardous Waste

a. The fraction of organics biodegraded ($F_{bio}$) shall be determined using the procedure specified in 40 CFR Part 63, Appendix C.

b. The $R_{bio}$ shall be calculated by using the following equation.

$$R_{bio} = F_{bio} \times 100\%$$

where:

$R_{bio}$ = organic biodegradation efficiency, percent

$F_{bio}$ = fraction of organic biodegraded as determined in accordance with the requirements of Subparagraph B.6.a of this Section

7. Procedure to Determine the Required Organic Mass Removal Rate (RMR) for a Treated Hazardous Waste

a. All of the hazardous waste streams entering the treatment process shall be identified.

b. The average VO concentration of each hazardous waste stream at the point of waste origination shall be determined in accordance with the requirements of Subsection A of this Section.

c. For each individual hazardous waste stream that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination, the average volumetric flow rate and the density of the hazardous waste stream at the point of waste origination shall be determined.

d. The RMR shall be calculated by using the average VO concentration, average volumetric flow rate, and density determined for each individual hazardous waste stream and the following equation.

$$RMR = \sum_{y=1}^{n} \left[ V_y \times k_y \times \frac{(\overline{C}_y - 500\,ppmw)}{10^6} \right]$$

where:

RMR = required organic mass removal rate, kg/hr

y = individual hazardous waste stream "y" that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination as determined in accordance with the requirements of Subsection A of this Section

n = total number of "y" hazardous waste streams treated by process

$V_y$ = average volumetric flow rate of hazardous waste stream "y" at the point of waste origination, $m^3$/hr

$k_y$ = density of hazardous waste stream "y," kg/m3

$\overline{C}_y$ = average VO concentration of hazardous waste stream "y" at the point of waste origination as determined in accordance with the requirements of Subsection A of this Section, ppmw

8. Procedure to Determine the Actual Organic Mass Removal Rate (MR) for a Treated Hazardous Waste

a. The MR shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be one hour.

b. The waste volatile organic mass flow entering the process ($E_b$) and the waste volatile organic mass flow exiting the process ($E_a$) shall be determined in accordance with the requirements of Subparagraph B.5.d of this Section.

c. The MR shall be calculated by using the mass flow rate determined in accordance with the requirements of Subparagraph B.8.b of this Section and the following equation.

$$MR = E_b - E_a$$

where:

MR = actual organic mass removal rate, kg/hr

$E_b$ = waste volatile organic mass flow entering process as determined in accordance with the requirements of Subparagraph B.5.d of this Section, kg/hr

$E_a$ = waste volatile organic mass flow exiting process as determined in accordance with the requirements of Subparagraph B.5.d of this Section, kg/hr

9. Procedure to Determine the Actual Organic Mass Biodegradation Rate ($MR_{bio}$) for a Treated Hazardous Waste

a. The $MR_{bio}$ shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be one hour.

b. The waste organic mass flow entering the process ($E_b$) shall be determined in accordance with the requirements of Subparagraph B.5.d of this Section.

c. The fraction of organic biodegraded ($F_{bio}$) shall be determined using the procedure specified in 40 CFR Part 63, Appendix C.

d. The $MR_{bio}$ shall be calculated by using the mass flow rates and fraction of organic biodegraded determined in accordance with the requirements of Subparagraphs B.9.b and c of this Section, respectively, and the following equation.

$$MR_{bio} = E_b \times F_{bio}$$

where:

$MR_{bio}$ = actual organic mass biodegradation rate, kg/hr

$E_b$ = waste organic mass flow entering process as determined in accordance with the requirements of Subparagraph B.5.d of this Section, kg/hr

$F_{bio}$ = fraction of organic biodegraded as determined in accordance with the requirements of Subparagraph B.9.c of this Section

C. Procedure to Determine the Maximum Organic Vapor Pressure of a Hazardous Waste in a Tank

1. An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with the standards specified in LAC 33:V.4729.

2. An owner or operator shall use either direct measurement as specified in Paragraph C.3 of this Section or knowledge of the waste as specified by Paragraph C.4 of this Section to determine the maximum organic vapor pressure which is representative of the hazardous waste composition stored or treated in the tank.

3. Direct Measurement to Determine the Maximum Organic Vapor Pressure of a Hazardous Waste

a. Sampling. A sufficient number of samples shall be collected to be representative of the waste contained in

the tank. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of acceptable sample collection and handling procedures may be found in Method 25D in 40 CFR Part 60, Appendix A.

b. Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous waste:

i. Method 25E in 40 CFR Part 60, Appendix A;

ii. methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, *Evaporative Loss from External Floating-Roof Tanks*, incorporated by reference in LAC 33:V.110.A;

iii. methods obtained from standard reference texts;

iv. ASTM Method 2879-92, incorporated by reference in LAC 33:V.110.A; and

v. any other method approved by the administrative authority.

4. Use of Knowledge to Determine the Maximum Organic Vapor Pressure of the Hazardous Waste. Documentation shall be prepared and recorded that presents the information used as the basis for the owner's or operator's knowledge that the maximum organic vapor pressure of the hazardous waste is less than the maximum vapor pressure limit listed in LAC 33:V.4729 for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous waste is generated by a process for which, at other locations, it previously has been determined by direct measurement that the waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

D. Procedure for Determining No Detectable Organic Emissions for the Purpose of Complying with This Subpart

1. The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR Part 60, Appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.

2. The test shall be performed when the unit contains a hazardous waste having an organic concentration representative of the range of concentrations for the hazardous waste expected to be managed in the unit. During the test the cover and closure devices shall be secured in the closed position.

3. The detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, Appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the hazardous waste placed in the waste management unit, not for each individual organic constituent.

4. The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, Appendix A.

5. Calibration gases shall be as follows:

a. zero air (less than 10 ppmv hydrocarbon in air); and

b. a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppmv methane or n-hexane.

6. The background level shall be determined according to the procedures in Method 21 of 40 CFR Part 60, Appendix A.

7. Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21 of 40 CFR Part 60, Appendix A. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

8. The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv, except when monitoring a seal around a rotating shaft that passes through a cover opening, in which case the comparison shall be as specified in Paragraph D.9 of this Section. If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

9. For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 10,000 ppmw. If the difference is less than 10,000 ppmw, then the potential leak interface is determined to operate with no detectable organic emissions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous

Waste Division, LR 24:1747 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:288 (February 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:1019 (June 2008).

### §4729. Standards: Tanks

A. Interim status facilities are subject to the requirements of LAC 33:V.1755.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1754 (September 1998).

### §4731. Standards: Surface Impoundments

A. Interim status facilities are subject to the requirements of LAC 33:V.1757.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1754 (September 1998).

### §4733. Standards: Containers

A. Interim status facilities are subject to the requirements of LAC 33:V.1759.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1754 (September 1998).

### §4735. Standards: Closed-Vent Systems and Control Devices

A. Interim status facilities are subject to the requirements of LAC 33:V.1761.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1754 (September 1998).

### §4737. Inspection and Monitoring Requirements

A. Interim status facilities are subject to the requirements of LAC 33:V.1763.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1754 (September 1998).

### §4739. Recordkeeping Requirements

A. Interim status facilities are subject to the requirements of LAC 33:V.1765.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1754 (September 1998).

# Chapter 49. Lists of Hazardous Wastes

[Comment: Chapter 49 is divided into two sections: Category I Hazardous Wastes, which consist of Hazardous Wastes from nonspecific and specific sources (F and K wastes), Acute Hazardous Wastes (P wastes), and Toxic Wastes (U wastes) (LAC 33:V.4901); and Category II Hazardous Wastes, which consist of wastes that are ignitable, corrosive, reactive, or toxic (LAC 33:V.4903).]

### §4901. Category I Hazardous Wastes

A. A solid waste is a hazardous waste if it is listed in this Chapter, unless it has been excluded from this list under LAC 33:V.105.M. Hazard codes are defined as follows for the listed hazardous wastes.

| | |
|---|---|
| Ignitable waste | (I) |
| Corrosive waste | (C) |
| Reactive waste | (R) |
| Toxicity Characteristic waste | (E) |
| Acute hazardous waste or acutely hazardous waste | (H) |
| Toxic waste | (T) |

1. Each hazardous waste listed in this Chapter is assigned an EPA Hazardous Waste number, which precedes the name of the waste. This number must be used in complying with the notification requirements of Section 3010 or 105.A of the Act and certain recordkeeping and reporting requirements under LAC 33:V.Chapters 3-29, 31-38, and 43.

2. The following hazardous wastes listed in LAC 33:V.4901.B and C are subject to the exclusion limits for acutely hazardous wastes established in LAC 33:V.108: EPA Hazardous Wastes Numbers F020, F021, F022, F023, F026, and F027.

B. Hazardous Wastes from Nonspecific Sources

1. The following solid wastes are listed hazardous wastes from nonspecific sources unless they are excluded in accordance with LAC 33:V.105.H.

[NOTE: EPA, in January 1985, added new listed hazardous wastes.]

| Table 1. Hazardous Wastes from Nonspecific Sources | | |
|---|---|---|
| **Industry and EPA Hazardous Waste Number** | **Hazard Code** | **Hazardous Waste** |
| **Generic** | | |
| F001 | (T) | The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of 10 percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. |
| F002 | (T) | The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-tri-fluoroethane, ortho-dichlorobenzene, tri-chlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of 10 percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. |
| F003 | (I)* | The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of 10 percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. |
| F004 | (T) | The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of 10 percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. |
| F005 | (I,T) | The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of 10 percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. |
| F006 | (T) | Wastewater treatment sludges from electroplating operations except from the following processes:<br>(1) Sulfuric acid anodizing of aluminum;<br>(2) tin plating on carbon steel;<br>(3) zinc plating (segregated basis) on carbon steel;<br>(4) aluminum or zinc-aluminum plating on carbon steel;<br>(5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and<br>(6) chemical etching and milling of aluminum. |
| F007 | (R,T) | Spent cyanide plating bath solutions from electroplating operations. |
| F008 | (R,T) | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. |
| F009 | (R,T) | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. |
| F010 | (R,T) | Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process. |
| F011 | (R,T) | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. |
| F012 | (T) | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. |

| Table 1. Hazardous Wastes from Nonspecific Sources | | |
|---|---|---|
| **Industry and EPA Hazardous Waste Number** | **Hazard Code** | **Hazardous Waste** |
| F019 | (T) | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. Wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process will not be subject to this listing at the point of generation if the wastes are not placed outside on the land prior to shipment to a landfill for disposal and are either disposed of in a Subtitle D municipal or industrial landfill unit that is equipped with a single clay liner and is permitted, licensed, or otherwise authorized by the state; or disposed of in a landfill unit subject to, or otherwise meeting, the landfill requirements in 40 CFR 258.40 or LAC 33:V.2503 or 4512. For the purposes of this listing, *motor vehicle manufacturing* is defined in Clause B.2.d.i of this Section, and Clause B.2.d.ii of this Section describes the recordkeeping requirements for motor vehicle manufacturing facilities. |
| F020 | (H) | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol.) |
| F021 | (H) | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives. |
| F022 | (H) | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions. |
| F023 | (H) | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.) |
| F024 | (T) | Processed wastes, including, but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in LAC 33:V.4901.B or C.) |
| F025 | (T) | Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. |
| F026 | (H) | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions. |
| F027 | (H) | Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.) |

| Table 1. Hazardous Wastes from Nonspecific Sources | | |
|---|---|---|
| **Industry and EPA Hazardous Waste Number** | **Hazard Code** | **Hazardous Waste** |
| F028 | (T) | Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027. |
| F032 | (T) | Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with LAC 33:V.4901.B.3 of this Subpart and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. |
| F034 | (T) | Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. |
| F035 | (T) | Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. |
| F037 | (T) | Petroleum refinery primary oil/water/solids separation sludge—Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators, tanks and impoundments, ditches and other conveyances, sumps, and stormwater units receiving dry weather flow, sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in LAC 33:V.4901.B.2.b (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under LAC 33:V.105.D.1.l, if those residuals are to be disposed of. |
| F038 | (T) | Petroleum refinery secondary (emulsified) oil/water/solids separation sludge—Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in LAC 33:V.4901.B.2.b (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing. |
| F039 | (T) | Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under LAC 33:V.4901. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.) |

* (I,T) should be used to specify mixtures that are ignitable and contain toxic constituents.

2. Listing Specific Definitions

a. For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids.

b. For the purposes of the F037 and F038 listing:

i. aggressive biological treatment units are defined as units which employ one of the following four treatment methods:

(a). activated sludge;

(b). trickling filter;

(c). rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or

(d). high-rate aeration, which is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhancing biological activity, and:

(i). the unit employs a minimum of 6 hp per million gallons of treatment volume; and either

(ii). the hydraulic retention time of the unit is no longer than five days; or

(iii).the hydraulic retention time is no longer than 30 days, and the unit does not generate a sludge that is a hazardous waste by the Toxicity Characteristic;

ii. generators and treatment, storage, and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage, and disposal facilities must maintain, in their operating or other onsite records, documents and data sufficient to prove that:

(a). the unit is an aggressive biological treatment unit as described in Clause B.2.b.i of this Section; and

(b). the sludges sought to be exempted from the definitions of F037 and/or F038 were actually generated in the aggressive biological treatment unit.

c. For the purposes of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement. For the purposes of the F038 listing:

i. sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement; and

ii. floats are considered to be generated at the moment they are formed in the top of the unit.

d. For the purposes of the F019 listing, the following conditions apply to wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process.

i. *Motor vehicle manufacturing* is defined to include the manufacture of automobiles and light trucks/utility vehicles (including light duty vans, pick-up trucks, minivans, and sport utility vehicles). Facilities must be engaged in manufacturing complete vehicles (body and chassis or unibody) or chassis only.

ii. Generators must maintain in their on-site records documentation and information sufficient to prove that the wastewater treatment sludges to be exempted from the F019 listing meet the conditions of the listing. These records must include the volume of waste generated and disposed of off-site, documentation showing when the waste volumes were generated and sent off-site, the name and address of the receiving facility, and documentation confirming receipt of the waste by the receiving facility. Generators must maintain these documents on site for no less than three years. The retention period for the documentation is automatically extended during the course of any enforcement action or as requested by the EPA Regional Administrator or the administrative authority.

3. Deletion of Certain Hazardous Waste Codes Following Equipment Cleaning and Replacement

a. Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has met all of the requirements of Subparagraphs B.3.b and c of this Section. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.

b. Generators must either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including but not limited to treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner that minimizes or eliminates the escape of hazardous waste or constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the groundwater, surface water, or atmosphere.

i. Generators shall do one of the following:

(a). prepare and follow an equipment cleaning plan and clean equipment in accordance with this Section;

(b). prepare and follow an equipment replacement plan and replace equipment in accordance with this Section; or

(c). document cleaning and replacement in accordance with this Section, carried out after termination of use of chlorophenolic preservations.

ii. Cleaning Requirements

(a). Prepare and sign a written equipment cleaning plan that describes:

(i). the equipment to be cleaned;

(ii). how the equipment will be cleaned;

(iii). the solvent to be used in cleaning;

(iv). how solvent rinses will be tested; and

(v). how cleaning residues will be disposed.

(b). Equipment must be cleaned as follows:

(i). remove all visible residues from process equipment; and

(ii). rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(c). Analytical Requirements

(i). Rinses must be tested by using an appropriate method.

(ii). *Not detected* means at or below the lower method calibration limit (MCL). The 2,3,7,8-TCDD-based MCL is 0.01 parts per trillion (ppt), sample weight of 1000g, IS spiking level of 1 ppt, final extraction volume of 10-50 µL. For other congeners, multiply the values by 1 for TCDF/PeCDD/PeCDF, by 2.5 for HxCDD/HxCDF/HpCDD/HpCDF, and by 5 for OCDD/OCDF.

(d). The generator must manage all residues from the cleaning process as F032 waste.

iii. Replacement Requirements

(a). Prepare and sign a written equipment replacement plan that describes:

(i). the equipment to be replaced;

(ii). how the equipment will be replaced; and

(iii). how the equipment will be disposed.

(b). The generator must manage the discarded equipment as F032 waste.

iv. Documentation is required which states that previous equipment cleaning and/or replacement was performed in accordance with this Section and occurred after cessation of use of chlorophenolic preservatives.

c. The generator must maintain the following records documenting the cleaning and replacement as part of the facility's operating record:

i. the name and address of the facility;

ii. formulations previously used and the date on which their use ceased in each process at the plant;

iii. formulations currently used in each process at the plant;

iv. the equipment cleaning or replacement plan;

v. the name and address of any persons who conducted the cleaning and replacement;

vi. the dates on which cleaning and replacement were accomplished;

vii. the dates of sampling and testing;

viii. a description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;

ix. a description of the tests performed, the date the tests were performed, and the results of the tests;

x. the name and model numbers of the instrument(s) used in performing the tests;

xi. QA/QC documentation; and

xii. the following statement signed by the generator or his authorized representative:

> "I certify under penalty of law that all process equipment required to be cleaned or replaced under LAC 33:V.4901.B was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment."

C. Hazardous wastes from specific sources are listed in Table 2 of this Section.

**Table 2. Hazardous Wastes from Specific Sources**

| Industry and EPA Hazardous Waste Number | Hazard Code | Hazardous Waste |
|---|---|---|
| **Wood Preservation** | | |
| K001 | (T) | Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. |
| **Inorganic Pigments** | | |
| K002 | (T) | Wastewater treatment sludge from the production of chrome yellow and orange pigments. |
| K003 | (T) | Wastewater treatment sludge from the production of molybdate orange pigments. |
| K004 | (T) | Wastewater treatment sludge from the production of zinc yellow pigments. |
| K005 | (T) | Wastewater treatment sludge from the production of chrome green pigments. |
| K006 | (T) | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated). |
| K007 | (T) | Wastewater treatment sludge from the production of iron blue pigments. |
| K008 | (T) | Oven residue from the production of chrome oxide green pigments. |
| **Organic Chemicals** | | |
| K009 | (T) | Distillation bottoms from the production of acetaldehyde from ethylene. |
| K010 | (T) | Distillation side cuts from the production of acetaldehyde from ethylene. |
| K011 | (R,T) | Bottom stream from the wastewater stripper in the production of acrylonitrile. |
| K013 | (R,T) | Bottom stream from the acetonitrile column in the production of acrylonitrile. |
| K014 | (T) | Bottoms from the acetonitrile purification column in the production of acrylonitrile. |
| K015 | (T) | Still bottoms from the distillation of benzyl chloride. |
| K016 | (T) | Heavy ends of distillation residues from the production of carbon tetrachloride. |
| K017 | (T) | Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. |
| K018 | (T) | Heavy ends from the fractionation column in ethyl chloride production. |
| K019 | (T) | Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production. |

| Table 2. Hazardous Wastes from Specific Sources | | |
|---|---|---|
| **Industry and EPA Hazardous Waste Number** | **Hazard Code** | **Hazardous Waste** |
| K020 | (T) | Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. |
| K021 | (T) | Aqueous spent antimony catalyst waste from fluoromethanes production. |
| K022 | (T) | Distillation bottom tars from the production of phenol/acetone from cumene. |
| K023 | (T) | Distillation light ends from the production of phthalic anhydride from naphthalene. |
| K024 | (T) | Distillation bottoms from the production of phthalic anhydride from naphthalene. |
| K025 | (T) | Distillation bottoms from the production of nitrobenzene by the nitration of benzene. |
| K026 | (T) | Stripping still tails from the production of methyl ethyl pyridines. |
| K027 | (R,T) | Centrifuge and distillation residues from toluene diisocyanate production. |
| K028 | (T) | Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. |
| K029 | (T) | Waste from the product steam stripper in the production of 1,1,1-trichloroethane. |
| K030 | (T) | Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene. |
| K083 | (T) | Distillation bottoms from aniline production. |
| K085 | (T) | Distillation or fractionation column bottoms from the production of chlorobenzenes. |
| K093 | (T) | Distillation light ends from the production of phthalic anhydride from ortho-xylene. |
| K094 | (T) | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. |
| K095 | (T) | Distillation bottoms from the production of 1,1,1-trichloroethane. |
| K096 | (T) | Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. |
| K103 | (T) | Process residues from aniline extraction from the production of aniline. |
| K104 | (T) | Combined wastewater streams generated from nitrobenzene/aniline production. |
| K105 | (T) | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. |
| K107 | (C,T) | Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. |
| K108 | (I,T) | Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. |
| K109 | (T) | Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. |
| K110 | (T) | Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. |
| K111 | (C,T) | Product washwaters from the production of dinitrotoluene via nitration of toluene. |
| K112 | (T) | Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene. |
| K113 | (T) | Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. |

| Table 2. Hazardous Wastes from Specific Sources | | |
|---|---|---|
| **Industry and EPA Hazardous Waste Number** | **Hazard Code** | **Hazardous Waste** |
| K114 | (T) | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. |
| K115 | (T) | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. |
| K116 | (T) | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. |
| K117 | (T) | Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. |
| K118 | (T) | Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. |
| K136 | (T) | Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. |
| K149 | (T) | Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.) |
| K150 | (T) | Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. |
| K151 | (T) | Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. |
| K156 | (T) | Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.) |
| K157 | (T) | Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.) |
| K158 | (T) | Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.) |
| K159 | (T) | Organics from the treatment of thiocarbamate wastes. |
| K161 | (R,T) | Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust, and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125-K126.) |

**Table 2. Hazardous Wastes from Specific Sources**

| Industry and EPA Hazardous Waste Number | Hazard Code | Hazardous Waste |
|---|---|---|
| K174 | (T) | Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer (including sludges that result from commingled ethylene dichloride or vinyl chloride monomer wastewater and other wastewater), unless the sludges meet the following conditions: (i) they are disposed of in a RCRA Subtitle C or nonhazardous landfill licensed or permitted by the state or federal government; (ii) they are not otherwise placed on the land prior to final disposal; and (iii) the generator maintains documentation demonstrating that the waste was either disposed of in an on-site landfill or consigned to a transporter or disposal facility that provided a written commitment to dispose of the waste in an off-site landfill. Respondents in any action brought to enforce the requirements of RCRA Subtitle C must, upon a showing by the government that the respondent managed wastewater treatment sludges from the production of vinyl chloride monomer or ethylene dichloride, demonstrate that they meet the terms of the exclusion set forth above. In doing so, they must provide appropriate documentation (*e.g.*, contracts between the generator and the landfill owner/operator, invoices documenting delivery of waste to landfill) that the terms of the exclusion were met. |
| K175 | (T) | Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process. |
| K181 | (T) | Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in LAC 33:V.4901.C.2 that are equal to or greater than the corresponding LAC 33:V.4901.C.2 levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (i) disposed in a Subtitle D landfill unit subject to the design criteria in 40 CFR 258.40; (ii) disposed in a RCRA Subtitle C landfill unit subject to either 40 CFR 264.301 or 265.301; (iii) disposed in other Subtitle D landfill units that meet the design criteria in 40 CFR 258.40, 264.301, or 265.301; or (iv) treated in a combustion unit that is permitted under RCRA Subtitle C, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, *dyes and/or pigments production* is defined in LAC 33:V.4901.C.1. LAC 33:V.4901.C.3 describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under 40 CFR 261.21-24 and 261.31-33 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met. |

**Table 2. Hazardous Wastes from Specific Sources**

| Industry and EPA Hazardous Waste Number | Hazard Code | Hazardous Waste |
|---|---|---|
| **Inorganic Chemicals** | | |
| K071 | (T) | Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used. |
| K073 | (T) | Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production. |
| K106 | (T) | Wastewater treatment sludge from the mercury cell process in chlorine production. |
| K176 | (E) | Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide). |
| K177 | (T) | Slag from the production of antimony accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide). |
| K178 | (T) | Residues from manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process. |
| **Pesticides** | | |
| K031 | (T) | By-product salts generated in the production of MSMA and cacodylic acid. |
| K032 | (T) | Wastewater treatment sludge from the production of chlordane. |
| K033 | (T) | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. |
| K034 | (T) | Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. |
| K035 | (T) | Wastewater treatment sludges generated in the production of creosote. |
| K036 | (T) | Still bottoms from toluene reclamation distillation in the production of disulfoton. |
| K037 | (T) | Wastewater treatment sludges from the production of disulfoton. |
| K038 | (T) | Wastewater treatment sludge from the washing and stripping of phorate production. |
| K039 | (T) | Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate. |
| K040 | (T) | Wastewater treatment sludge from the production of phorate. |
| K041 | (T) | Wastewater treatment sludge from the production of toxaphene. |
| K042 | (T) | Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T. |
| K043 | (T) | 2,6-Dichlorophenol waste from the production of 2,4-D. |
| K097 | (T) | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. |
| K098 | (T) | Untreated process wastewater from the production of toxaphene. |
| K099 | (T) | Untreated wastewater from the production of 2,4-D. |
| K123 | (T) | Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt. |
| K124 | (C,T) | Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. |

| Table 2. Hazardous Wastes from Specific Sources | | |
|---|---|---|
| **Industry and EPA Hazardous Waste Number** | **Hazard Code** | **Hazardous Waste** |
| K125 | (T) | Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts. |
| K126 | (T) | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts. |
| K131 | (C,T) | Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide. |
| K132 | (T) | Spent absorbent and wastewater separator solids from the production of methyl bromide. |
| **Explosives** | | |
| K044 | (R) | Wastewater treatment sludges from the manufacturing and processing of explosives. |
| K045 | (R) | Spent carbon from the treatment of wastewater containing explosives. |
| K046 | (T) | Wastewater treatment sludges from the manufacturing, formulation, and loading of lead-based initiating compounds. |
| K047 | (R) | Pink/red water from TNT operations. |
| **Petroleum Refining** | | |
| K048 | (T) | Dissolved air flotation (DAF) float from the petroleum refining industry. |
| K049 | (T) | Slop oil emulsion solids from the petroleum refining industry. |
| K050 | (T) | Heat exchanger bundle cleaning sludge from the petroleum refining industry. |
| K051 | (T) | API separator sludge from the petroleum refining industry. |
| K052 | (T) | Tank bottom (leaded) from the petroleum refining industry. |
| K169 | (T) | Crude oil tank sediment from petroleum refining operations. |
| K170 | (T) | Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations. |
| K171 | (I,T) | Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feed to other catalytic reactors (this listing does not include inert support media). |
| K172 | (I,T) | Spent hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feed to other catalytic reactors (this listing does not include inert support media). |
| **Iron and Steel** | | |
| K061 | (T) | Emission control dust/sludge from the primary production of steel in electric furnaces. |
| K062 | (C,T) | Spent pickle liquor generated by steel finishing operations of iron and steel industry (SIC Codes 331 and 332). |
| **Primary Aluminum** | | |
| K088 | (T) | Spent potliners from primary aluminum reduction. |

| Table 2. Hazardous Wastes from Specific Sources | | |
|---|---|---|
| **Industry and EPA Hazardous Waste Number** | **Hazard Code** | **Hazardous Waste** |
| **Secondary Lead** | | |
| K069 | (T) | Emission control dust/sludge from secondary lead smelting. [NOTE: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action affecting this stay, EPA will publish a notice of the action in the *Federal Register*.] |
| K100 | (T) | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. |
| **Veterinary Pharmaceuticals** | | |
| K084 | (T) | Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. |
| K101 | (T) | Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. |
| K102 | (T) | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. |
| **Ink Formulation** | | |
| K086 | (T) | Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. |
| **Coking** | | |
| K060 | (T) | Ammonia still lime sludge from coking operations. |
| K087 | (T) | Decanter tank tar sludge from coking operations. |
| K141 | (T) | Process residues from the recovery of coal tar, including but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank car sludge from coking operations). |
| K142 | (T) | Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal. |
| K143 | (T) | Process residues from the recovery of light oil, including but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal. |
| K144 | (T) | Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal. |
| K145 | (T) | Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal. |
| K147 | (T) | Tar storage tank residues from coal tar refining. |
| K148 | (T) | Residues from coal tar distillation, including but not limited to, still bottoms. |

1. Listing-Specific Definitions. For purposes of the K181 listing, the following definition applies.

*Dyes and/or Pigments Production*—includes manufacture of the following product classes: dyes, pigments, and FDA certified colors that are classified as azo, triarylmethane, perylene, or anthraquinone classes. Azo products include azo, monoazo, diazo, triazo, polyazo, azoic, benzidine, and pyrazolone products. Triarylmethane products include both triarylmethane and triphenylmethane products. Wastes that are not generated at a dyes and/or pigments manufacturing site, such as wastes from the offsite use, formulation, and packaging of dyes and/or pigments, are not included in the K181 listing.

2. K181 Listing Levels. Nonwastewaters containing constituents in amounts equal to or exceeding the following levels during any calendar year are subject to the K181 listing, unless the conditions in the K181 listing are met.

| Constituent | Chemical Abstracts No. | Mass Levels (kg/yr) |
|---|---|---|
| Aniline | 62-53-3 | 9,300 |
| o-Anisidine | 90-04-0 | 110 |
| 4-Chloroaniline | 106-47-8 | 4,800 |
| p-Cresidine | 120-71-8 | 660 |
| 2,4-Dimethylaniline | 95-68-1 | 100 |
| 1,2-Phenylenediamine | 95-54-5 | 710 |
| 1,3-Phenylenediamine | 108-45-2 | 1,200 |

3. Procedures for Demonstrating That Dyes and/or Pigment Nonwastewaters Are Not K181. The procedures described in Subparagraphs C.3.a-c and e of this Section establish when nonwastewaters from the production of dyes/pigments would not be hazardous (these procedures apply to wastes that are not disposed in landfill units or treated in combustion units as specified in Table 2 of this Subsection). If the nonwastewaters are disposed in landfill units or treated in combustion units, as described in Table 2 of this Subsection, then the nonwastewaters are not hazardous. In order to demonstrate that it is meeting the landfill disposal or combustion conditions contained in the K181 listing description, the generator must maintain documentation as described in Subparagraph C.3.d of this Section.

a. Determination Based on No K181 Constituents. Generators that have knowledge (e.g., knowledge of constituents in wastes based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed) that their wastes contain none of the K181 constituents (see Paragraph C.2 of this Section) can use their knowledge to determine that their waste is not K181. The generator must document the basis for all such determinations on an annual basis and keep each annual documentation for three years.

b. Determination for Generated Quantities of 1,000 MT/yr or Less for Wastes That Contain K181 Constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is 1,000 metric tons or less, the generator can use knowledge of the wastes (e.g., knowledge of constituents in wastes based on prior analytical data and/or information about raw materials used, production processes used, and reaction and degradation products formed) to conclude that annual mass loadings for the K181 constituents are below the listing levels of Paragraph C.2 of this Section. To make this determination, the generator must:

i. each year document the basis for determining that the annual quantity of nonwastewaters expected to be generated will be less than 1,000 metric tons;

ii. track the actual quantity of nonwastewaters generated from January 1 through December 31 of each year. If, at any time within the year, the actual waste quantity exceeds 1,000 metric tons, the generator must comply with the requirements of Subparagraph C.3.c of this Section for the remainder of the year;

iii. keep a running total of the K181 constituent mass loadings over the course of the calendar year; and

iv. keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(a). the quantity of dyes and/or pigment nonwastewaters generated;

(b). the relevant process information used; and

(c). the calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.

c. Determination for Generated Quantities Greater than 1,000 MT/yr for Wastes That Contain K181 Constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is greater than 1,000 metric tons, the generator must perform all of the steps described in Clauses C.3.c.i-xi of this Section in order to make a determination that its waste is not K181.

i. Determine which K181 constituents (see Paragraph C.2 of this Section) are reasonably expected to be present in the wastes based on knowledge of the wastes (e.g., based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed).

ii. If 1,2-phenylenediamine is present in the wastes, the generator can use either knowledge or sampling and analysis procedures to determine the level of this constituent in the wastes. For determinations based on use of knowledge, the generator must comply with the procedures for using knowledge described in Subparagraph C.3.b of this Section and keep the records described in Clause C.3.b.iv of this Section. For determinations based on sampling and

analysis, the generator must comply with the sampling and analysis and recordkeeping requirements described in Clauses C.3.c.iii-xi of this Section.

iii. Develop a waste sampling and analysis plan (or modify an existing plan) to collect and analyze representative waste samples for the K181 constituents reasonably expected to be present in the wastes. At a minimum, the plan must include:

(a). a discussion of the number of samples needed to characterize the wastes fully;

(b). the planned sample collection method to obtain representative waste samples;

(c). a discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes;

(d). a detailed description of the test methods to be used, including sample preparation, cleanup (if necessary), and determinative methods.

iv. Collect and analyze samples in accordance with the waste sampling and analysis plan.

(a). The sampling and analysis must be unbiased, precise, and representative of the wastes.

(b). The analytical measurements must be sufficiently sensitive, accurate, and precise to support any claim that the constituent mass loadings are below the listing levels of Paragraph C.2 of this Section.

v. Record the analytical results.

vi. Record the waste quantity represented by the sampling and analysis results.

vii. Calculate constituent-specific mass loadings (product of concentrations and waste quantity).

viii. Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

ix. Determine whether the mass of any of the K181 constituents listed in Paragraph C.2 of this Section generated between January 1 and December 31 of any year is below the K181 listing levels.

x. Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(a). the sampling and analysis plan;

(b). the sampling and analysis results (including QA/QC data);

(c). the quantity of dyes and/or pigment nonwastewaters generated;

(d). the calculations performed to determine annual mass loadings.

xi. Nonhazardous waste determinations must be conducted annually to verify that the wastes remain nonhazardous.

(a). The annual testing requirements are suspended after three consecutive successful annual demonstrations that the wastes are nonhazardous. The generator can then use knowledge of the wastes to support subsequent annual determinations.

(b). The annual testing requirements are reinstated if the manufacturing or waste treatment processes generating the wastes are significantly altered, resulting in an increase of the potential for the wastes to exceed the listing levels.

(c). If the annual testing requirements are suspended, the generator must keep records of the process knowledge information used to support a nonhazardous determination. If testing is reinstated, a description of the process change must be retained.

d. Recordkeeping for the Landfill Disposal and Combustion Exemptions. For the purposes of meeting the landfill disposal and combustion condition set out in the K181 listing description, the generator must maintain on site for three years documentation demonstrating that each shipment of waste was received by a landfill unit that is subject to or meets the landfill design standards set out in the listing description, or was treated in combustion units as specified in the listing description.

e. Waste Holding and Handling. During the interim period, from the point of generation to completion of the hazardous waste determination, the generator is responsible for storing the wastes appropriately. If the wastes are determined to be hazardous and the generator has not complied with the RCRA Subtitle C requirements during the interim period, the generator could be subject to an enforcement action for improper management.

D. Discarded Commercial Chemical Products, Off-specification Species, Container Residues, Spill Residues Thereof, Any Associated Wastewaters, and Any Discarded Process Wastewaters. The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded as described in LAC 33:V.109 (definition of *solid waste*), when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel, or when they present a threat to groundwater or human health and the environment:

1. any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in LAC 33:V.4901.E or F;

2. any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in LAC 33:V.4901.E or F;

3. any residue remaining in a container or an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in LAC 33:V.4901.E or F, unless the container is empty as defined in LAC 33:V.109.*Empty Container*.2;

4. any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in LAC 33:V.4901.E or F, or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in LAC 33:V.4901.E or F.

[Comment: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance that is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in LAC 33:V.4901.E or F. Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in LAC 33:V.4901.E or F, such waste will be listed in either LAC 33:V.4901.B or C or will be identified as a hazardous waste by the characteristics set forth in LAC 33:V.4903.]

E. The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products or manufacturing chemical intermediates referred to in Paragraphs D.1-4 of this Section are identified as acute hazardous wastes (H) and are subject to the small quantity exclusions defined in LAC 33:V.108.E. These wastes and their corresponding EPA Hazardous Waste Numbers are listed in Table 3 of this Section.

[Comment: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity) and R (Reactivity). Absence of a letter indicates that the compound is listed only for acute toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by EPA Hazardous Waste Number.]

**Table 3. Acute Hazardous Wastes (Alphabetical Order by Substance)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| P023 | 107-20-0 | Acetaldehyde, chloro- |
| P002 | 591-08-2 | Acetamide, N-(aminothioxomethyl)- |
| P057 | 640-19-7 | Acetamide, 2-fluoro- |
| P058 | 62-74-8 | Acetic acid, fluoro-, sodium salt |
| P002 | 591-08-2 | 1-Acetyl-2-thiourea |
| P003 | 107-02-8 | Acrolein |
| P070 | 116-06-3 | Aldicarb |
| P203 | 1646-88-4 | Aldicarb sulfone |
| P004 | 309-00-2 | Aldrin |
| P005 | 107-18-6 | Allyl alcohol |
| P006 | 20859-73-8 | Aluminum phosphide (R,T) |
| P007 | 2763-96-4 | 5-(aminomethyl)-3-isoxazolol |
| P008 | 504-24-5 | 4-Aminopyridine |
| P009 | 131-74-8 | Ammonium picrate (R) |
| P119 | 7803-55-6 | Ammonium vanadate |
| P099 | 506-61-6 | Argentate (1-), bis(cyano-C)-, potassium |
| P010 | 7778-39-4 | Arsenic acid $H_3AsO_4$ |
| P012 | 1327-53-3 | Arsenic oxide $As_2O_3$ |
| P011 | 1303-28-2 | Arsenic oxide $As_2O_5$ |
| P011 | 1303-28-2 | Arsenic pentoxide |
| P012 | 1327-53-3 | Arsenic trioxide |
| P038 | 692-42-2 | Arsine, diethyl- |
| P036 | 696-28-6 | Arsonous dichloride, phenyl- |
| P054 | 151-56-4 | Aziridine |
| P067 | 75-55-8 | Aziridine, 2-methyl- |
| P013 | 542-62-1 | Barium cyanide |
| P024 | 106-47-8 | Benzenamine, 4-chloro- |
| P077 | 100-01-6 | Benzenamine, 4-nitro |
| P028 | 100-44-7 | Benzene, (chloromethyl)- |
| P042 | 51-43-4 | 1, 2-Benzenediol, 4-[1- hydroxy-2-(methylamino) ethyl], (R)- |
| P046 | 122-09-8 | Benzeneethanamine, alpha, alpha- dimethyl- |
| P014 | 108-98-5 | Benzenethiol |

| Table 3. Acute Hazardous Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| P127 | 1563-66-2 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate |
| P188 | 57-64-7 | Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1) |
| P001 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy- 3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations greater than 0.3 percent |
| P028 | 100-44-7 | Benzyl chloride |
| P015 | 7440-41-7 | Beryllium Powder |
| P017 | 598-31-2 | Bromoacetone |
| P018 | 357-57-3 | Brucine |
| P045 | 39196-18-4 | 2-Butanone, 3,3-dimethyl-1-(methylthio)-, O- [(methylamino) carbonyl] oxime |
| P021 | 592-01-8 | Calcium cyanide |
| P021 | 592-01-8 | Calcium cyanide $Ca(CN)_2$ |
| P189 | 55285-14-8 | Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester |
| P191 | 644-64-4 | Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester |
| P192 | 119-38-0 | Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazol-5-yl ester |
| P190 | 1129-41-5 | Carbamic acid, methyl-, 3-methylphenyl ester |
| P127 | 1563-66-2 | Carbofuran |
| P022 | 75-15-0 | Carbon disulfide |
| P095 | 75-44-5 | Carbonic dichloride |
| P189 | 55285-14-8 | Carbosulfan |
| P023 | 107-20-0 | Chloroacetaldehyde |
| P024 | 106-47-8 | p-Chloroaniline |
| P026 | 5344-82-1 | 1-(o-Chlorophenyl)thiourea |
| P027 | 542-76-7 | 3-Chloropropionitrile |
| P029 | 544-92-3 | Copper cyanide |
| P029 | 544-92-3 | Copper cyanide Cu(CN) |
| P202 | 64-00-6 | m-Cumenyl methylcarbamate |
| P030 | | Cyanides (soluble cyanide salts), not otherwise specified |
| P031 | 460-19-5 | Cyanogen |
| P033 | 506-77-4 | Cyanogen chloride |
| P033 | 506-77-4 | Cyanogen chloride (CN)C1 |
| P034 | 131-89-5 | 2-Cyclohexyl-4,6-dinitrophenol |
| P016 | 542-88-1 | Dichloromethyl ether |
| P036 | 696-28-6 | Dichlorophenylarsine |
| P037 | 60-57-1 | Dieldrin |
| P038 | 692-42-2 | Diethylarsine |
| P041 | 311-45-5 | Diethyl-p-nitrophenyl phosphate |
| P040 | 297-97-2 | O,O-Diethyl O-pyrazinyl phosphorothioate |
| P043 | 55-91-4 | Diisopropylfluorophosphate (DFP) |
| P004 | 309-00-2 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexachloro- 1,4,4a,5,8,8a,-hexahydro-, (1alpha, 4alpha, 4abeta, 5alpha, 8alpha, 8abeta)- |
| P060 | 465-73-6 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexachloro- 1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta, 8abeta)- |
| P037 | 60-57-1 | 2,7:3,6-Dimethanonaphth [2,3- b]oxirene,3,4,5,6,9,9- hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-, (1aalpha,2beta,2aalpha, 3beta,6beta,6aalpha,7beta, 7aalpha)- |
| P051 | [1]72-20-8 | 2,7:3,6-Dimethanonaphth [2,3-b] oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-, (1aalpha,2beta,2abeta, 3alpha,6alpha,6abeta,7beta, 7aalpha)-, and metabolites |
| P044 | 60-51-5 | Dimethoate |
| P046 | 122-09-8 | alpha, alpha-Dimethylphenethylamine |
| P191 | 644-64-4 | Dimetilan |
| P047 | [1]534-52-1 | 4,6-Dinitro-o-cresol, and salts |
| P048 | 51-28-5 | 2,4-Dinitrophenol |
| P020 | 88-85-7 | Dinoseb |
| P085 | 152-16-9 | Diphosphoramide, octamethyl- |
| P111 | 107-49-3 | Diphosphoric acid, tetraethyl ester |
| P039 | 298-04-4 | Disulfoton |
| P049 | 541-53-7 | Dithiobiuret |
| P185 | 26419-73-8 | 1,3-Dithiolane-2-carboxaldehyde, 2, 4-dimethyl-, O-[(methylamino)- carbonyl]oxime |
| P050 | 115-29-7 | Endosulfan |
| P088 | 145-73-3 | Endothall |
| P051 | 72-20-8 | Endrin |
| P051 | 72-20-8 | Endrin, and metabolites |
| P042 | 51-43-4 | Epinephrine |

**Table 3. Acute Hazardous Wastes (Alphabetical Order by Substance)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| P031 | 460-19-5 | Ethanedinitrile |
| P194 | 23135-22-0 | Ethanimidothioic acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester |
| P066 | 16752-77-5 | Ethanimidothioic acid, N- [[(methylamino)carbonyl]oxy]-, methyl ester |
| P101 | 107-12-0 | Ethyl cyanide |
| P054 | 151-56-4 | Ethyleneimine |
| P097 | 52-85-7 | Famphur |
| P056 | 7782-41-4 | Fluorine |
| P057 | 640-19-7 | Fluoroacetamide |
| P058 | 62-74-8 | Fluoroacetic acid, sodium salt |
| P198 | 23422-53-9 | Formetanate hydrochloride |
| P197 | 17702-57-7 | Formparanate |
| P065 | 628-86-4 | Fulminic acid, mercury (2+) salt (R,T) |
| P059 | 76-44-8 | Heptachlor |
| P062 | 757-58-4 | Hexaethyl tetraphosphate |
| P116 | 79-19-6 | Hydrazinecarbothioamide |
| P068 | 60-34-4 | Hydrazine, methyl- |
| P063 | 74-90-8 | Hydrocyanic acid |
| P063 | 74-90-8 | Hydrogen cyanide |
| P096 | 7803-51-2 | Hydrogen phosphide |
| P060 | 465-73-6 | Isodrin |
| P192 | 119-38-0 | Isolan |
| P202 | 64-00-6 | 3-Isopropylphenyl N-methylcarbamate |
| P007 | 2763-96-4 | 3 (2H)-Isoxazolone, 5-(aminomethyl)- |
| P196 | 15339-36-3 | Manganese, bis(dimethylcarbamodithioato-S,S')- |
| P196 | 15339-36-3 | Manganese, dimethyldithiocarbamate |
| P092 | 62-38-4 | Mercury, (acetato-O)phenyl- |
| P065 | 628-86-4 | Mercury fulminate (R,T) |
| P082 | 62-75-9 | Methanamine, N-methyl-N-nitroso- |
| P064 | 624-83-9 | Methane, isocyanato- |
| P016 | 542-88-1 | Methane, oxybis[chloro- |
| P112 | 509-14-8 | Methane, tetranitro- (R) |
| P118 | 75-70-7 | Methanethiol, trichloro- |
| P198 | 23422-53-9 | Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy] phenyl]monohydrochloride |
| P197 | 17702-57-7 | Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]- |
| P050 | 115-29-7 | 6, 9-Methano-2,4,3-benzo-dioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a- hexahydro-,3-oxide |
| P059 | 76-44-8 | 4,7-Methano-1H-indene,1,4,5,6,7, 8,8-heptachloro-3a,4,7,7a-tetrahydro- |
| P199 | 2032-65-7 | Methiocarb |
| P066 | 16752-77-5 | Methomyl |
| P068 | 60-34-4 | Methyl hydrazine |
| P064 | 624-83-9 | Methyl isocyanate |
| P069 | 75-86-5 | 2-Methyllactonitrile |
| P071 | 298-00-0 | Methyl parathion |
| P190 | 1129-41-5 | Metolcarb |
| P128 | 315-8-4 | Mexacarbate |
| P072 | 86-88-4 | alpha-Naphthylthiourea |
| P073 | 13463-39-3 | Nickel carbonyl |
| P073 | 13463-39-3 | Nickel carbonyl $Ni(CO)_4$ (T-4)- |
| P074 | 557-19-7 | Nickel cyanide |
| P074 | 557-19-7 | Nickel cyanide $Ni(CN)_2$ |
| P075 | [1]54-11-5 | Nicotine, and salts |
| P076 | 10102-43-9 | Nitric oxide |
| P077 | 100-01-6 | p-Nitroaniline |
| P078 | 10102-44-0 | Nitrogen dioxide |
| P076 | 10102-43-9 | Nitrogen oxide NO |
| P078 | 10102-44-0 | Nitrogen oxide $NO_2$ |
| P081 | 55-63-0 | Nitroglycerine (R) |
| P082 | 62-75-9 | N-Nitrosodimethylamine |
| P084 | 4549-40-0 | N-Nitrosomethylvinylamine |
| P085 | 152-16-9 | Octamethylpyrophosphoramide |
| P087 | 20816-12-0 | Osmium oxide $OsO_4$, (T-4)- |
| P087 | 20816-12-0 | Osmium tetroxide |
| P088 | 145-73-3 | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid |

| Table 3. Acute Hazardous Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| P194 | 23135-22-0 | Oxamyl |
| P089 | 56-38-2 | Parathion |
| P034 | 131-89-5 | Phenol, 2-cyclohexyl-4,6-dinitro- |
| P199 | 2032-65-7 | Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate |
| P128 | 315-18-4 | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) |
| P048 | 51-28-5 | Phenol, 2,4-dinitro- |
| P047 | [1]534-52-1 | Phenol, 2-methyl-4,6-dinitro-, and salts |
| P201 | 2631-37-0 | Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate |
| P202 | 64-00-6 | Phenol, 3-(1-methylethyl)-, methyl carbamate |
| P020 | 88-85-7 | Phenol, 2-(1-methylpropyl)-4,6-dinitro- |
| P009 | 131-74-8 | Phenol, 2,4,6-trinitro-, ammonium salt (R) |
| P092 | 62-38-4 | Phenylmercury acetate |
| P093 | 103-85-5 | Phenylthiourea |
| P094 | 298-02-2 | Phorate |
| P095 | 75-44-5 | Phosgene |
| P096 | 7803-51-2 | Phosphine |
| P041 | 311-45-5 | Phosphoric acid, diethyl 4-nitrophenyl ester |
| P039 | 298-04-4 | Phosphorodithioic acid, O,O- diethyl S-[2-(ethylthio)ethyl] ester |
| P094 | 298-02-2 | Phosphorodithioic acid, O, O-diethyl S-[(ethylthio)methyl] ester |
| P044 | 60-51-5 | Phosphorodithioic acid, O, O-dimethyl S-[2-(methylamino)- 2-oxoethyl] ester |
| P043 | 55-91-4 | Phosphorofluoridic acid, bis (1-methylethyl) ester |
| P089 | 56-38-2 | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester |
| P040 | 297-97-2 | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester |
| P097 | 52-85-7 | Phosphorothioic acid, O-[4- [(dimethylamino)sulfonyl] phenyl]O,O- dimethyl ester |
| P071 | 298-00-0 | Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester |
| P204 | 57-47-6 | Physostigmine |
| P188 | 57-64-7 | Physostigmine salicylate |
| P110 | 78-00-2 | Plumbane, tetraethyl- |
| P098 | 151-50-8 | Potassium cyanide |
| P098 | 151-50-8 | Potassium cyanide K(CN) |
| P099 | 506-61-6 | Potassium silver cyanide |
| P201 | 2631-37-0 | Promecarb |
| P203 | 1646-88-4 | Propanal, 2-methyl-2-(methyl-sufonyl)-, O-[(methylamino)carbonyl] oxime |
| P070 | 116-06-3 | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime |
| P101 | 107-12-0 | Propanenitrile |
| P027 | 542-76-7 | Propanenitrile, 3-chloro- |
| P069 | 75-86-5 | Propanenitrile, 2-hydroxy-2-methyl- |
| P081 | 55-63-0 | 1,2,3-Propanetriol, trinitrate (R) |
| P017 | 598-31-2 | 2-Propanone, 1-bromo- |
| P102 | 107-19-7 | Propargyl alcohol |
| P003 | 107-02-8 | 2-Propenal |
| P005 | 107-18-6 | 2-Propen-1-ol |
| P067 | 75-55-8 | 1,2-Propylenimine |
| P102 | 107-19-7 | 2-Propyn-1-o1 |
| P008 | 504-24-5 | 4-Pyridinamine |
| P075 | [1]54-11-5 | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (s)- and salts |
| P204 | 57-47-6 | Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-,methylcarbamate (ester), (3aS-cis)- |
| P114 | 12039-52-0 | Selenious acid, dithallium(1+) salt |
| P103 | 630-10-4 | Selenourea |
| P104 | 506-64-9 | Silver cyanide |
| P104 | 506-64-9 | Silver cyanide Ag(CN) |
| P105 | 26628-22-8 | Sodium azide |
| P106 | 143-33-9 | Sodium cyanide |
| P106 | 143-33-9 | Sodium cyanide Na(CN) |
| P108 | [1]57-24-9 | Strychnidin-10-one, and salts |
| P018 | 357-57-3 | Strychnidin-10-one, 2,3-dimethoxy- |
| P108 | [1]57-24-9 | Strychnine, and salts |
| P115 | 7446-18-6 | Sulfuric acid, dithallium(1+) salt |
| P109 | 3689-24-5 | Tetraethyldithiopyrophosphate |
| P110 | 78-00-2 | Tetraethyl lead |
| P111 | 107-49-3 | Tetraethyl pyrophosphate |
| P112 | 509-14-8 | Tetranitromethane (R) |

| Table 3. Acute Hazardous Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| P062 | 757-58-4 | Tetraphosphoric acid, hexaethyl ester |
| P113 | 1314-32-5 | Thallic oxide |
| P113 | 1314-32-5 | Thallium oxide $Tl_2O_3$ |
| P114 | 12039-52-0 | Thallium(I) selenite |
| P115 | 7446-18-6 | Thallium(I) sulfate |
| P109 | 3689-24-5 | Thiodiphosphoric acid, tetraethyl ester |
| P045 | 39196-18-4 | Thiofanox |
| P049 | 541-53-7 | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ |
| P014 | 108-98-5 | Thiophenol |
| P116 | 79-19-6 | Thiosemicarbazide |
| P026 | 5344-82-1 | Thiourea, (2-chlorophenyl) |
| P072 | 86-88-4 | Thiourea, 1-naphthalenyl- |
| P093 | 103-85-5 | Thiourea, phenyl- |
| P185 | 26419-73-8 | Tirpate |
| P123 | 8001-35-2 | Toxaphene |
| P118 | 75-70-7 | Trichloromethanethiol |
| P119 | 7803-55-6 | Vanadic acid, ammonium salt |
| P120 | 1314-62-1 | Vanadium oxide $V_2O_5$ |
| P120 | 1314-62-1 | Vanadium pentoxide |
| P084 | 4549-40-0 | Vinylamine, N-methyl-N-nitroso- |
| P001 | [1]81-81-2 | Warfarin, and salts, when present at concentrations greater than 0.3 percent |
| P205 | 137-30-4 | Zinc,bis(dimethyl-carbamodithioato-S,S')- |
| P121 | 557-21-1 | Zinc cyanide |
| P121 | 557-21-1 | Zinc cyanide $Zn(CN)_2$ |
| P122 | 1314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10 percent (R,T) |
| P205 | 137-30-4 | Ziram |
| [1]CAS Number given for parent compound only. | | |

| Table 3. Acute Hazardous Wastes (Numerical Order by EPA Hazardous Waste Number) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| P001 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy- 3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations greater than 0.3 percent |
| P001 | [1]81-81-2 | Warfarin, and salts, when present at concentrations greater than 0.3 percent |
| P002 | 591-08-2 | Acetamide, N-(aminothioxomethyl)- |
| P002 | 591-08-2 | 1-Acetyl-2-thiourea |
| P003 | 107-02-8 | Acrolein |
| P003 | 107-02-8 | 2-Propenal |
| P004 | 309-00-2 | Aldrin |
| P004 | 309-00-2 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexachloro- 1,4,4a,5,8,8a,-hexahydro-, (1alpha, 4alpha, 4abeta, 5alpha, 8alpha, 8abeta)- |
| P005 | 107-18-6 | Allyl alcohol |
| P005 | 107-18-6 | 2-Propen-1-ol |
| P006 | 20859-73-8 | Aluminum phosphide (R,T) |
| P007 | 2763-96-4 | 5-(aminomethyl)-3-isoxazolol |
| P007 | 2763-96-4 | 3 (2H)-Isoxazolone, 5-(aminomethyl)- |
| P008 | 504-24-5 | 4-Aminopyridine |
| P008 | 504-24-5 | 4-Pyridinamine |
| P009 | 131-74-8 | Ammonium picrate (R) |
| P009 | 131-74-8 | Phenol, 2,4,6-trinitro-, ammonium salt (R) |
| P010 | 7778-39-4 | Arsenic acid $H_3AsO_4$ |
| P011 | 1303-28-2 | Arsenic oxide $As_2O_5$ |
| P011 | 1303-28-2 | Arsenic pentoxide |
| P012 | 1327-53-3 | Arsenic oxide $As_2O_3$ |
| P012 | 1327-53-3 | Arsenic trioxide |
| P013 | 542-62-1 | Barium cyanide |
| P014 | 108-98-5 | Benzenethiol |
| P014 | 108-98-5 | Thiophenol |

**Table 3. Acute Hazardous Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| P015 | 7440-41-7 | Beryllium Powder |
| P016 | 542-88-1 | Dichloromethyl ether |
| P016 | 542-88-1 | Methane, oxybis[chloro- |
| P017 | 598-31-2 | Bromoacetone |
| P017 | 598-31-2 | 2-Propanone, 1-bromo- |
| P018 | 357-57-3 | Brucine |
| P018 | 357-57-3 | Strychnidin-10-one, 2,3-dimethoxy- |
| P020 | 88-85-7 | Dinoseb |
| P020 | 88-85-7 | Phenol, 2-(1-methylpropyl)-4,6-dinitro- |
| P021 | 592-01-8 | Calcium cyanide |
| P021 | 592-01-8 | Calcium cyanide $Ca(CN)_2$ |
| P022 | 75-15-0 | Carbon disulfide |
| P023 | 107-20-0 | Acetaldehyde, chloro- |
| P023 | 107-20-0 | Chloroacetaldehyde |
| P024 | 106-47-8 | Benzenamine, 4-chloro- |
| P024 | 106-47-8 | p-Chloroaniline |
| P026 | 5344-82-1 | 1-(o-Chlorophenyl)thiourea |
| P026 | 5344-82-1 | Thiourea, (2-chlorophenyl) |
| P027 | 542-76-7 | 3-Chloropropionitrile |
| P027 | 542-76-7 | Propanenitrile, 3-chloro- |
| P028 | 100-44-7 | Benzene, (chloromethyl)- |
| P028 | 100-44-7 | Benzyl chloride |
| P029 | 544-92-3 | Copper cyanide |
| P029 | 544-92-3 | Copper cyanide Cu(CN) |
| P030 | | Cyanides (soluble cyanide salts), not otherwise specified |
| P031 | 460-19-5 | Cyanogen |
| P031 | 460-19-5 | Ethanedinitrile |
| P033 | 506-77-4 | Cyanogen chloride |
| P033 | 506-77-4 | Cyanogen chloride (CN)C1 |
| P034 | 131-89-5 | 2-Cyclohexyl-4,6-dinitrophenol |
| P034 | 131-89-5 | Phenol, 2-cyclohexyl-4,6-dinitro- |
| P036 | 696-28-6 | Arsonous dichloride, phenyl- |
| P036 | 696-28-6 | Dichlorophenylarsine |
| P037 | 60-57-1 | Dieldrin |
| P037 | 60-57-1 | 2,7:3,6-Dimethanonaphth [2,3- b]oxirene,3,4,5,6,9,9- hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-, (1aalpha,2beta,2aalpha, 3beta,6beta,6aalpha,7beta, 7aalpha)- |
| P038 | 692-42-2 | Arsine, diethyl- |
| P038 | 692-42-2 | Diethylarsine |
| P039 | 298-04-4 | Disulfoton |
| P039 | 298-04-4 | Phosphorodithioic acid, O,O- diethyl S-[2-(ethylthio)ethyl] ester |
| P040 | 297-97-2 | O,O-Diethyl O-pyrazinyl phosphorothioate |
| P040 | 297-97-2 | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester |
| P041 | 311-45-5 | Diethyl-p-nitrophenyl phosphate |
| P041 | 311-45-5 | Phosphoric acid, diethyl 4-nitrophenyl ester |
| P042 | 51-43-4 | 1, 2-Benzenediol, 4-[1- hydroxy-2-(methylamino) ethyl], (R)- |
| P042 | 51-43-4 | Epinephrine |
| P043 | 55-91-4 | Diisopropylfluorophosphate (DFP) |
| P043 | 55-91-4 | Phosphorofluoridic acid, bis (1-methylethyl) ester |
| P044 | 60-51-5 | Dimethoate |
| P044 | 60-51-5 | Phosphorodithioic acid, O, O-dimethyl S-[2-(methylamino)- 2-oxoethyl] ester |
| P045 | 39196-18-4 | 2-Butanone, 3,3-dimethyl-1-(methylthio)-, O- [(methylamino) carbonyl] oxime |
| P045 | 39196-18-4 | Thiofanox |
| P046 | 122-09-8 | Benzeneethanamine, alpha, alpha- dimethyl- |
| P046 | 122-09-8 | alpha, alpha-Dimethylphenethylamine |
| P047 | [1]534-52-1 | 4,6-Dinitro-o-cresol, and salts |
| P047 | [1]534-52-1 | Phenol, 2-methyl-4,6-dinitro-, and salts |
| P048 | 51-28-5 | 2,4-Dinitrophenol |
| P048 | 51-28-5 | Phenol, 2,4-dinitro- |
| P049 | 541-53-7 | Dithiobiuret |
| P049 | 541-53-7 | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ |
| P050 | 115-29-7 | Endosulfan |
| P050 | 115-29-7 | 6, 9-Methano-2,4,3-benzo-dioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a- hexahydro-,3-oxide |

**Table 3. Acute Hazardous Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| P051 | [1]72-20-8 | 2,7:3,6-Dimethanonaphth [2,3-b] oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-, (1aalpha,2beta,2abeta, 3alpha,6alpha,6abeta,7beta, 7aalpha)-, and metabolites |
| P051 | 72-20-8 | Endrin |
| P051 | 72-20-8 | Endrin, and metabolites |
| P054 | 151-56-4 | Aziridine |
| P054 | 151-56-4 | Ethyleneimine |
| P056 | 7782-41-4 | Fluorine |
| P057 | 640-19-7 | Acetamide, 2-fluoro- |
| P057 | 640-19-7 | Fluoroacetamide |
| P058 | 62-74-8 | Acetic acid, fluoro-, sodium salt |
| P058 | 62-74-8 | Fluoroacetic acid, sodium salt |
| P059 | 76-44-8 | Heptachlor |
| P059 | 76-44-8 | 4,7-Methano-1H-indene,1,4,5,6,7, 8,8-heptachloro-3a,4,7,7a-tetrahydro- |
| P060 | 465-73-6 | 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexachloro- 1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta, 8abeta)- |
| P060 | 465-73-6 | Isodrin |
| P062 | 757-58-4 | Hexaethyl tetraphosphate |
| P062 | 757-58-4 | Tetraphosphoric acid, hexaethyl ester |
| P063 | 74-90-8 | Hydrocyanic acid |
| P063 | 74-90-8 | Hydrogen cyanide |
| P064 | 624-83-9 | Methane, isocyanato- |
| P064 | 624-83-9 | Methyl isocyanate |
| P065 | 628-86-4 | Fulminic acid, mercury (2+) salt (R,T) |
| P065 | 628-86-4 | Mercury fulminate (R,T) |
| P066 | 16752-77-5 | Ethanimidothioic acid, N- [[(methylamino)carbonyl]oxy]-, methyl ester |
| P066 | 16752-77-5 | Methomyl |
| P067 | 75-55-8 | Aziridine, 2-methyl- |
| P067 | 75-55-8 | 1,2-Propylenimine |
| P068 | 60-34-4 | Hydrazine, methyl- |
| P068 | 60-34-4 | Methyl hydrazine |
| P069 | 75-86-5 | 2-Methyllactonitrile |
| P069 | 75-86-5 | Propanenitrile, 2-hydroxy-2-methyl- |
| P070 | 116-06-3 | Aldicarb |
| P070 | 116-06-3 | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime |
| P071 | 298-00-0 | Methyl parathion |
| P071 | 298-00-0 | Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester |
| P072 | 86-88-4 | alpha-Naphthylthiourea |
| P072 | 86-88-4 | Thiourea, 1-naphthalenyl- |
| P073 | 13463-39-3 | Nickel carbonyl |
| P073 | 13463-39-3 | Nickel carbonyl $Ni(CO)_4$ (T-4)- |
| P074 | 557-19-7 | Nickel cyanide |
| P074 | 557-19-7 | Nickel cyanide $Ni(CN)_2$ |
| P075 | [1]54-11-5 | Nicotine, and salts |
| P075 | [1]54-11-5 | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (s)- and salts |
| P076 | 10102-43-9 | Nitric oxide |
| P076 | 10102-43-9 | Nitrogen oxide NO |
| P077 | 100-01-6 | Benzenamine, 4-nitro |
| P077 | 100-01-6 | p-Nitroaniline |
| P078 | 10102-44-0 | Nitrogen dioxide |
| P078 | 10102-44-0 | Nitrogen oxide $NO_2$ |
| P081 | 55-63-0 | Nitroglycerine (R) |
| P081 | 55-63-0 | 1,2,3-Propanetriol, trinitrate (R) |
| P082 | 62-75-9 | Methanamine, N-methyl-N-nitroso- |
| P082 | 62-75-9 | N-Nitrosodimethylamine |
| P084 | 4549-40-0 | N-Nitrosomethylvinylamine |
| P084 | 4549-40-0 | Vinylamine, N-methyl-N-nitroso- |
| P085 | 152-16-9 | Diphosphoramide, octamethyl- |
| P085 | 152-16-9 | Octamethylpyrophosphoramide |
| P087 | 20816-12-0 | Osmium oxide $OsO_4$, (T-4)- |
| P087 | 20816-12-0 | Osmium tetroxide |
| P088 | 145-73-3 | Endothall |
| P088 | 145-73-3 | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid |

**Table 3. Acute Hazardous Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| P089 | 56-38-2 | Parathion |
| P089 | 56-38-2 | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester |
| P092 | 62-38-4 | Mercury, (acetato-O)phenyl- |
| P092 | 62-38-4 | Phenylmercury acetate |
| P093 | 103-85-5 | Phenylthiourea |
| P093 | 103-85-5 | Thiourea, phenyl- |
| P094 | 298-02-2 | Phorate |
| P094 | 298-02-2 | Phosphorodithioic acid, O, O-diethyl S-[(ethylthio)methyl] ester |
| P095 | 75-44-5 | Carbonic dichloride |
| P095 | 75-44-5 | Phosgene |
| P096 | 7803-51-2 | Hydrogen phosphide |
| P096 | 7803-51-2 | Phosphine |
| P097 | 52-85-7 | Famphur |
| P097 | 52-85-7 | Phosphorothioic acid, O-[4- [(dimethylamino)sulfonyl] phenyl]O,O- dimethyl ester |
| P098 | 151-50-8 | Potassium cyanide |
| P098 | 151-50-8 | Potassium cyanide K(CN) |
| P099 | 506-61-6 | Argentate (1-), bis(cyano-C)-, potassium |
| P099 | 506-61-6 | Potassium silver cyanide |
| P101 | 107-12-0 | Ethyl cyanide |
| P101 | 107-12-0 | Propanenitrile |
| P102 | 107-19-7 | Propargyl alcohol |
| P102 | 107-19-7 | 2-Propyn-1-o1 |
| P103 | 630-10-4 | Selenourea |
| P104 | 506-64-9 | Silver cyanide |
| P104 | 506-64-9 | Silver cyanide Ag(CN) |
| P105 | 26628-22-8 | Sodium azide |
| P106 | 143-33-9 | Sodium cyanide |
| P106 | 143-33-9 | Sodium cyanide Na(CN) |
| P108 | [1]57-24-9 | Strychnidin-10-one, and salts |
| P108 | [1]57-24-9 | Strychnine, and salts |
| P109 | 3689-24-5 | Tetraethyldithiopyrophosphate |
| P109 | 3689-24-5 | Thiodiphosphoric acid, tetraethyl ester |
| P110 | 78-00-2 | Plumbane, tetraethyl- |
| P110 | 78-00-2 | Tetraethyl lead |
| P111 | 107-49-3 | Diphosphoric acid, tetraethyl ester |
| P111 | 107-49-3 | Tetraethyl pyrophosphate |
| P112 | 509-14-8 | Methane, tetranitro- (R) |
| P112 | 509-14-8 | Tetranitromethane (R) |
| P113 | 1314-32-5 | Thallic oxide |
| P113 | 1314-32-5 | Thallium oxide $Tl_2O_3$ |
| P114 | 12039-52-0 | Selenious acid, dithallium(1+) salt |
| P114 | 12039-52-0 | Thallium(I) selenite |
| P115 | 7446-18-6 | Sulfuric acid, dithallium(1+) salt |
| P115 | 7446-18-6 | Thallium(I) sulfate |
| P116 | 79-19-6 | Hydrazinecarbothioamide |
| P116 | 79-19-6 | Thiosemicarbazide |
| P118 | 75-70-7 | Methanethiol, trichloro- |
| P118 | 75-70-7 | Trichloromethanethiol |
| P119 | 7803-55-6 | Ammonium vanadate |
| P119 | 7803-55-6 | Vanadic acid, ammonium salt |
| P120 | 1314-62-1 | Vanadium oxide $V_2O_5$ |
| P120 | 1314-62-1 | Vanadium pentoxide |
| P121 | 557-21-1 | Zinc cyanide |
| P121 | 557-21-1 | Zinc cyanide $Zn(CN)_2$ |
| P122 | 1314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10 percent (R,T) |
| P123 | 8001-35-2 | Toxaphene |
| P127 | 1563-66-2 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate |
| P127 | 1563-66-2 | Carbofuran |
| P128 | 315-8-4 | Mexacarbate |
| P128 | 315-18-4 | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) |
| P185 | 26419-73-8 | 1,3-Dithiolane-2-carboxaldehyde, 2, 4-dimethyl-, O-[(methylamino)- carbonyl]oxime |
| P185 | 26419-73-8 | Tirpate |

| Table 3. Acute Hazardous Wastes (Numerical Order by EPA Hazardous Waste Number) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| P188 | 57-64-7 | Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1) |
| P188 | 57-64-7 | Physostigmine salicylate |
| P189 | 55285-14-8 | Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester |
| P189 | 55285-14-8 | Carbosulfan |
| P190 | 1129-41-5 | Carbamic acid, methyl-, 3-methylphenyl ester |
| P190 | 1129-41-5 | Metolcarb |
| P191 | 644-64-4 | Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester |
| P191 | 644-64-4 | Dimetilan |
| P192 | 119-38-0 | Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazol-5-yl ester |
| P192 | 119-38-0 | Isolan |
| P194 | 23135-22-0 | Ethanimidothioic acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester |
| P194 | 23135-22-0 | Oxamyl |
| P196 | 15339-36-3 | Manganese, bis(dimethylcarbamodithioato-S,S')- |
| P196 | 15339-36-3 | Manganese, dimethyldithiocarbamate |
| P197 | 17702-57-7 | Formparanate |
| P197 | 17702-57-7 | Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]- |
| P198 | 23422-53-9 | Formetanate hydrochloride |
| P198 | 23422-53-9 | Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-monohydrochloride |
| P199 | 2032-65-7 | Methiocarb |
| P199 | 2032-65-7 | Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate |
| P201 | 2631-37-0 | Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate |
| P201 | 2631-37-0 | Promecarb |
| P202 | 64-00-6 | m-Cumenyl methylcarbamate |
| P202 | 64-00-6 | 3-Isopropylphenyl N-methylcarbamate |
| P202 | 64-00-6 | Phenol, 3-(1-methylethyl)-, methyl carbamate |
| P203 | 1646-88-4 | Aldicarb sulfone |
| P203 | 1646-88-4 | Propanal, 2-methyl-2-(methyl-sufonyl)-, O-[(methylamino)carbonyl] oxime |
| P204 | 57-47-6 | Physostigmine |
| P204 | 57-47-6 | Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-,methylcarbamate (ester), (3aS-cis)- |
| P205 | 137-30-4 | Zinc,bis(dimethyl-carbamodithioato-S,S')- |
| P205 | 137-30-4 | Ziram |
| [1]CAS Number given for parent compound only. | | |

F. Commercial chemical products or manufacturing chemical intermediates or off-specification commercial chemical products referred to in Paragraphs D.1-4 of this Section are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity generator exclusion defined in LAC 33:V.108.A and G. These wastes and their corresponding EPA Hazardous Waste Numbers are listed in Table 4 of this Section.

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability), and C (Corrosivity). Absence of a letter indicates that the compound is listed only for toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by EPA Hazardous Waste Number.]

| Table 4. Toxic Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| U394 | 30558-43-1 | A2213 |
| U001 | 75-07-0 | Acetaldehyde (I) |
| U034 | 75-87-6 | Acetaldehyde, trichloro- |
| U187 | 62-44-2 | Acetamide, N-(4-ethoxyphenyl)- |
| U005 | 53-96-3 | Acetamide, N-9H-fluoren-2-yl- |
| U240 | [1]94-75-7 | Acetic acid, (2,4-dichloro- phenoxy)-, salts and esters |
| U112 | 141-78-6 | Acetic acid, ethyl ester (I) |
| U144 | 301-04-2 | Acetic acid, lead (2+) salt |
| U214 | 563-68-8 | Acetic acid, thallium(1+) salt |
| See F027 | 93-76-5 | Acetic acid, (2,4,5-trichlorophenoxy)- |

| Table 4. Toxic Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| U002 | 67-64-1 | Acetone (I) |
| U003 | 75-05-8 | Acetonitrile (I,T) |
| U004 | 98-86-2 | Acetophenone |
| U005 | 53-96-3 | 2-Acetylaminofluorene |
| U006 | 75-36-5 | Acetyl chloride (C,R,T) |
| U007 | 79-06-1 | Acrylamide |
| U008 | 79-10-7 | Acrylic acid (I) |
| U009 | 107-13-1 | Acrylonitrile |
| U011 | 61-82-5 | Amitrole |
| U012 | 62-53-3 | Aniline (I,T) |
| U136 | 75-60-5 | Arsinic acid, dimethyl- |
| U014 | 492-80-8 | Auramine |
| U015 | 115-02-6 | Azaserine |
| U010 | 50-07-7 | Azirino [2',3':3,4]pyrrolo[1,2-a] indole-4,7-dione,6-amino-8- [[(aminocarbonyl)oxy]methyl]- 1,1a,2,8,8a,8b,-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balpha)]- |
| U280 | 101-27-9 | Barban |
| U278 | 22781-23-3 | Bendiocarb |
| U364 | 22961-82-6 | Bendiocarb phenol |
| U271 | 17804-35-2 | Benomyl |
| U157 | 56-49-5 | Benz (j) aceanthrylene, 1,2-dihydro-3-methyl- |
| U016 | 225-51-4 | Benz(c)acridine |
| U017 | 98-87-3 | Benzal chloride |
| U192 | 23950-58-5 | Benzamide,3,5-dichloro-N-(1,1-dimethyl-2 propynyl)- |
| U018 | 56-55-3 | Benz[a]anthracene |
| U094 | 57-97-6 | Benz[a]anthracene, 7,12-dimethyl- |
| U012 | 62-53-3 | Benzenamine (I,T) |
| U014 | 492-80-8 | Benzenamine,4,4'-carbonimidoylbis (N,N-dimethyl- |
| U049 | 3165-93-3 | Benzenamine, 4-chloro-2-methyl-, hydrochloride |
| U093 | 60-11-7 | Benzenamine,N,N-dimethyl-4-(phenylazo)- |
| U328 | 95-53-4 | Benzenamine, 2-methyl- |
| U353 | 106-49-0 | Benzenamine, 4-methyl- |
| U158 | 101-14-4 | Benzenamine, 4,4'-methylenebis [2-chloro- |
| U222 | 636-21-5 | Benzenamine, 2-methyl-, hydrochloride |
| U181 | 99-55-8 | Benzenamine, 2-methyl-5-nitro- |
| U019 | 71-43-2 | Benzene (I,T) |
| U038 | 510-15-6 | Benzeneacetic acid, 4-chloro-alpha- (4-chlorophenyl)-alpha-hydroxy-, ethyl ester |
| U030 | 101-55-3 | Benzene, 1-bromo-4-phenoxy- |
| U035 | 305-03-3 | Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]- |
| U037 | 108-90-7 | Benzene, chloro- |
| U221 | 25376-45-8 | Benzenediamine, ar-methyl- |
| U028 | 117-81-7 | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester |
| U069 | 84-74-2 | 1,2-Benzenedicarboxylic acid, dibutyl ester |
| U088 | 84-66-2 | 1,2-Benzenedicarboxylic acid, diethyl ester |
| U102 | 131-11-3 | 1,2-Benzenedicarboxylic acid, dimethyl ester |
| U107 | 117-84-0 | 1,2-Benzenedicarboxylic acid, dioctyl ester |
| U070 | 95-50-1 | Benzene, 1,2-dichloro- |
| U071 | 541-73-1 | Benzene, 1,3-dichloro- |
| U072 | 106-46-7 | Benzene, 1,4-dichloro- |
| U060 | 72-54-8 | Benzene, 1, 1'-(2, 2-dichloroethylidene)bis [4-chloro- |
| U017 | 98-87-3 | Benzene, (dichloromethyl)- |
| U223 | 26471-62-5 | Benzene,1,3-diisocyanatomethyl-(R,T) |
| U239 | 1330-20-7 | Benzene, dimethyl-(I,T) |
| U201 | 108-46-3 | 1,3-Benzenediol |
| U127 | 118-74-1 | Benzene, hexachloro- |
| U056 | 110-82-7 | Benzene, hexahydro-(I) |
| U220 | 108-88-3 | Benzene, methyl- |
| U105 | 121-14-2 | Benzene, 1-methyl-2,4-dinitro- |
| U106 | 606-20-2 | Benzene, 2-methyl-1,3-dinitro- |
| U055 | 98-82-8 | Benzene, (1-methylethyl)-(I) |
| U169 | 98-95-3 | Benzene, nitro- |
| U183 | 608-93-5 | Benzene, pentachloro |
| U185 | 82-68-8 | Benzene, pentachloronitro- |

**Table 4. Toxic Wastes**
**(Alphabetical Order by Substance)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U020 | 98-09-9 | Benzenesulfonic acid chloride (C,R) |
| U020 | 98-09-9 | Benzenesulfonyl chloride (C,R) |
| U207 | 95-94-3 | Benzene, 1,2,4,5-tetrachloro- |
| U061 | 50-29-3 | Benzene, 1, 1'-(2,2,2-trichloroethylidene)bis[4-chloro- |
| U247 | 72-43-5 | Benzene, 1, 1'-(2,2,2-trichloroethylidene)bis[4-methoxy- |
| U023 | 98-07-7 | Benzene, (trichloromethyl)- |
| U234 | 99-35-4 | Benzene, 1,3,5-trinitro- |
| U021 | 92-87-5 | Benzidine |
| U202 | [1]81-07-2 | 1,2-Benzisothiazol-3 (2H)- one,1,1,-dioxide, and salts |
| U364 | 22961-82-6 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl- |
| U278 | 22781-23-3 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate |
| U203 | 94-59-7 | 1,3-Benzodioxole, 5-(2-propenyl)- |
| U141 | 120-58-1 | 1,3-Benzodioxole, 5-(1-propenyl)- |
| U090 | 94-58-6 | 1,3-Benzodioxole, 5-propyl- |
| U367 | 1563-38-8 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- |
| U064 | 189-55-9 | Benzo[rst]pentaphene |
| U248 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, and salts, when present at concentrations of 0.3 percent or less |
| U022 | 50-32-8 | Benzo[a]pyrene |
| U197 | 106-51-4 | p-Benzoquinone |
| U023 | 98-07-7 | Benzotrichloride (C,R,T) |
| U085 | 1464-53-5 | 2,2'-Bioxirane |
| U021 | 92-87-5 | (1,1'-Biphenyl)-4,4'-diamine |
| U073 | 91-94-1 | (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro- |
| U091 | 119-90-4 | (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy- |
| U095 | 119-93-7 | (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl- |
| U225 | 75-25-2 | Bromoform |
| U030 | 101-55-3 | 4-Bromophenyl phenyl ether |
| U128 | 87-68-3 | 1,3-Butadiene,1,1,2,3,4,4-hexachloro- |
| U172 | 924-16-3 | 1-Butanamine, N-butyl-N-nitroso- |
| U031 | 71-36-3 | 1-Butanol (I) |
| U159 | 78-93-3 | 2-Butanone (I,T) |
| U160 | 1338-23-4 | 2-Butanone, peroxide (R,T) |
| U053 | 4170-30-3 | 2-Butenal |
| U074 | 764-41-0 | 2-Butene, 1,4-dichloro- (I,T) |
| U143 | 303-34-4 | 2-Butenoic acid, 2-methyl-,7-[[2,3- dihydroxy-2-(1-methoxyethyl)-3- methyl-1-oxobutoxy]methyl]- 2,3,5,7a-tetrahydro-1H-pyrrolizin- 1-yl ester, [1S-[1alpha(Z), 7(2S*,3R*), 7aalpha]]- |
| U031 | 71-36-3 | n-Butyl alcohol (I) |
| U136 | 75-60-5 | Cacodylic acid |
| U032 | 13765-19-0 | Calcium chromate |
| U372 | 10605-21-7 | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester |
| U271 | 17804-35-2 | Carbamic acid, [1-[(butylamino)carbonyl]-1H- benzimidazol-2-yl]-, methyl ester |
| U280 | 101-27-9 | Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester |
| U238 | 51-79-6 | Carbamic acid, ethyl ester |
| U178 | 615-53-2 | Carbamic acid, methylnitroso-,ethyl ester |
| U373 | 122-42-9 | Carbamic acid, phenyl-, 1-methylethyl ester |
| U409 | 23564-05-8 | Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester |
| U097 | 79-44-7 | Carbamic chloride, dimethyl- |
| U114 | [1]111-54-6 | Carbamodithioic acid, 1,2-ethanediylbis-,salts and esters |
| U062 | 2303-16-4 | Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2- propenyl)ester |
| U389 | 2303-17-5 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester |
| U387 | 52888-80-9 | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester |
| U279 | 63-25-2 | Carbaryl |
| U372 | 10605-21-7 | Carbendazim |
| U367 | 1563-38-8 | Carbofuran phenol |
| U215 | 6533-73-9 | Carbonic acid, dithallium (1+) salt |
| U033 | 353-50-4 | Carbonic difluoride |
| U156 | 79-22-1 | Carbonochloridic acid, methyl ester (I,T) |
| U033 | 353-50-4 | Carbon oxyfluoride (R,T) |
| U211 | 56-23-5 | Carbon tetrachloride |
| U034 | 75-87-6 | Chloral |
| U035 | 305-03-3 | Chlorambucil |
| U036 | 57-74-9 | Chlordane, alpha and gamma isomers |

| Table 4. Toxic Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| U026 | 494-03-1 | Chlornaphazin |
| U037 | 108-90-7 | Chlorobenzene |
| U038 | 510-15-6 | Chlorobenzilate |
| U039 | 59-50-7 | p-Chloro-m-cresol |
| U042 | 110-75-8 | 2-Chloroethyl vinyl ether |
| U044 | 67-66-3 | Chloroform |
| U046 | 107-30-2 | Chloromethyl methyl ether |
| U047 | 91-58-7 | beta-Chloronaphthalene |
| U048 | 95-57-8 | o-Chlorophenol |
| U049 | 3165-93-3 | 4-Chloro-o-toluidine, hydrochloride |
| U032 | 13765-19-0 | Chromic acid $H_2CrO_4$, calcium salt |
| U050 | 218-01-9 | Chrysene |
| U051 | | Creosote |
| U052 | 1319-77-3 | Cresols (Cresylic acid) |
| U053 | 4170-30-3 | Crotonaldehyde |
| U055 | 98-82-8 | Cumene (I) |
| U246 | 506-68-3 | Cyanogen bromide (CN) Br |
| U197 | 106-51-4 | 2,5-Cyclohexadiene-1,4-dione |
| U056 | 110-82-7 | Cyclohexane (I) |
| U129 | 58-89-9 | Cyclohexane,1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha, 5alpha,6beta)- |
| U057 | 108-94-1 | Cyclohexanone (I) |
| U130 | 77-47-4 | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- |
| U058 | 50-18-0 | Cyclophosphamide |
| U240 | [1]94-75-7 | 2,4-D, salts and esters |
| U059 | 20830-81-3 | Daunomycin |
| U060 | 72-54-8 | DDD |
| U061 | 50-29-3 | DDT |
| U062 | 2303-16-4 | Diallate |
| U063 | 53-70-3 | Dibenz[a,h]anthracene |
| U064 | 189-55-9 | Dibenzo[a,i]pyrene |
| U066 | 96-12-8 | 1,2-Dibromo-3-chloropropane |
| U069 | 84-74-2 | Dibutyl phthalate |
| U070 | 95-50-1 | o-Dichlorobenzene |
| U071 | 541-73-1 | m-Dichlorobenzene |
| U072 | 106-46-7 | p-Dichlorobenzene |
| U073 | 91-94-1 | 3,3'-Dichlorobenzidine |
| U074 | 764-41-0 | 1,4-Dichloro-2-butene (I,T) |
| U075 | 75-71-8 | Dichlorodifluoromethane |
| U078 | 75-35-4 | 1,1-Dichloroethylene |
| U079 | 156-60-5 | 1,2-Dichloroethylene |
| U025 | 111-44-4 | Dichloroethyl ether |
| U027 | 108-60-1 | Dichloroisopropyl ether |
| U024 | 111-91-1 | Dichloromethoxy ethane |
| U081 | 120-83-2 | 2,4-Dichlorophenol |
| U082 | 87-65-0 | 2,6-Dichlorophenol |
| U084 | 542-75-6 | 1,3-Dichloropropene |
| U085 | 1464-53-5 | 1,2:3,4-Diepoxybutane (I,T) |
| U395 | 5952-26-1 | Diethylene glycol, dicarbamate |
| U108 | 123-91-1 | 1,4-Diethyleneoxide |
| U028 | 117-81-7 | Diethylhexyl phthalate |
| U086 | 1615-80-1 | N,N'-Diethylhydrazine |
| U087 | 3288-58-2 | O,O-Diethyl-S-methyl-dithiophosphate |
| U088 | 84-66-2 | Diethyl phthalate |
| U089 | 56-53-1 | Diethylstilbestrol |
| U090 | 94-58-6 | Dihydrosafrole |
| U091 | 119-90-4 | 3,3'-Dimethoxybenzidine |
| U092 | 124-40-3 | Dimethylamine (I) |
| U093 | 60-11-7 | p-Dimethylaminoazobenzene |
| U094 | 57-97-6 | 7,12-Dimethylbenz[a]anthracene |
| U095 | 119-93-7 | 3,3'-Dimethylbenzidine |
| U096 | 80-15-9 | alpha,alpha-Dimethyl-benzylhydroperoxide (R) |
| U097 | 79-44-7 | Dimethylcarbamoyl chloride |

| Table 4. Toxic Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| U098 | 57-14-7 | 1,1-Dimethylhydrazine |
| U099 | 540-73-8 | 1,2-Dimethylhydrazine |
| U101 | 105-67-9 | 2,4-Dimethylphenol |
| U102 | 131-11-3 | Dimethyl phthalate |
| U103 | 77-78-1 | Dimethyl sulfate |
| U105 | 121-14-2 | 2,4-Dinitrotoluene |
| U106 | 606-20-2 | 2,6-Dinitrotoluene |
| U107 | 117-84-0 | Di-n-octyl phthalate |
| U108 | 123-91-1 | 1,4-Dioxane |
| U109 | 122-66-7 | 1,2-Diphenylhydrazine |
| U110 | 142-84-7 | Dipropylamine (I) |
| U111 | 621-64-7 | Di-n-propylnitrosamine |
| U041 | 106-89-8 | Epichlorohydrin |
| U001 | 75-07-0 | Ethanal (I) |
| U404 | 121-44-8 | Ethanamine, N,N-diethyl- |
| U174 | 55-18-5 | Ethanamine, N-ethyl-N-nitroso- |
| U155 | 91-80-5 | 1,2-Ethanediamine,-N,N-dimethyl-N'-2- pyridinyl-N'-(2-thienylmethyl)- |
| U067 | 106-93-4 | Ethane, 1,2-dibromo- |
| U076 | 75-34-3 | Ethane, 1,1-dichloro- |
| U077 | 107-06-2 | Ethane, 1,2-dichloro- |
| U131 | 67-72-1 | Ethane, hexachloro- |
| U024 | 111-91-1 | Ethane, 1,1'-[methylenebis (oxy)]bis[2-chloro- |
| U117 | 60-29-7 | Ethane,1,1'-oxybis-(I) |
| U025 | 111-44-4 | Ethane, 1,1'-oxybis [2-chloro- |
| U184 | 76-01-7 | Ethane, pentachloro- |
| U208 | 630-20-6 | Ethane, 1,1,1,2-tetrachloro- |
| U209 | 79-34-5 | Ethane, 1,1,2,2-tetrachloro- |
| U218 | 62-55-5 | Ethanethioamide |
| U226 | 71-55-6 | Ethane, 1,1,1-trichloro- |
| U227 | 79-00-5 | Ethane, 1,1,2-trichloro- |
| U394 | 30558-43-1 | Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester |
| U410 | 59669-26-0 | Ethanimidothioic acid, N,N'-[thiobis[(methylimino) carbonyloxy]]bis-,dimethyl ester |
| U359 | 110-80-5 | Ethanol,2-ethoxy- |
| U173 | 1116-54-7 | Ethanol,2,2'-(nitrosoimino)bis- |
| U395 | 5952-26-1 | Ethanol, 2,2'-oxybis-, dicarbamate |
| U004 | 98-86-2 | Ethanone, 1-phenyl- |
| U043 | 75-01-4 | Ethene, chloro- |
| U042 | 110-75-8 | Ethene, (2-chloroethoxy)- |
| U078 | 75-35-4 | Ethene, 1,1-dichloro- |
| U079 | 156-60-5 | Ethene, 1,2-dichloro-, (E)- |
| U210 | 127-18-4 | Ethene, tetrachloro- |
| U228 | 79-01-6 | Ethene, trichloro- |
| U112 | 141-78-6 | Ethyl acetate (I) |
| U113 | 140-88-5 | Ethyl acrylate (I) |
| U117 | 60-29-7 | Ethyl ether (I) |
| U238 | 51-79-6 | Ethyl carbamate (urethane) |
| U114 | [1]111-54-6 | Ethylenebisdithiocarbamic acid, salts and esters |
| U067 | 106-93-4 | Ethylene dibromide |
| U077 | 107-06-2 | Ethylene dichloride |
| U359 | 110-80-5 | Ethylene glycol monoethyl ether |
| U115 | 75-21-8 | Ethylene oxide (I,T) |
| U116 | 96-45-7 | Ethylene thiourea |
| U076 | 75-34-3 | Ethylidene dichloride |
| U118 | 97-63-2 | Ethyl methacrylate |
| U119 | 62-50-0 | Ethyl methanesulfonate |
| U120 | 206-44-0 | Fluoranthene |
| U122 | 50-00-0 | Formaldehyde |
| U123 | 64-18-6 | Formic acid (C,T) |
| U124 | 110-00-9 | Furan (I) |
| U125 | 98-01-1 | 2-Furancarboxaldehyde (I) |
| U147 | 108-31-6 | 2,5-Furandione |
| U213 | 109-99-9 | Furan, tetrahydro-(I) |

| Table 4. Toxic Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| U125 | 98-01-1 | Furfural (I) |
| U124 | 110-00-9 | Furfuran (I) |
| U206 | 18883-66-4 | Glucopyranose,2-deoxy-2-(3-methyl-3- nitrosoureido)-, D- |
| U206 | 18883-66-4 | D-Glucose, 2-deoxy-2- [[(methylnitrosoamino)- carbonyl]amino]- |
| U126 | 765-34-4 | Glycidylaldehyde |
| U163 | 70-25-7 | Guanidine,N-methyl-N'-nitro-N-nitroso- |
| U127 | 118-74-1 | Hexachlorobenzene |
| U128 | 87-68-3 | Hexachlorobutadiene |
| U130 | 77-47-4 | Hexachlorocyclopentadiene |
| U131 | 67-72-1 | Hexachloroethane |
| U132 | 70-30-4 | Hexachlorophene |
| U243 | 1888-71-7 | Hexachloropropene |
| U133 | 302-01-2 | Hydrazine (R,T) |
| U086 | 1615-80-1 | Hydrazine, 1,2-diethyl- |
| U098 | 57-14-7 | Hydrazine, 1,1-dimethyl- |
| U099 | 540-73-8 | Hydrazine, 1,2-dimethyl- |
| U109 | 122-66-7 | Hydrazine, 1,2-diphenyl- |
| U134 | 7664-39-3 | Hydrofluoric acid (C,T) |
| U134 | 7664-39-3 | Hydrogen fluoride (C,T) |
| U135 | 7783-06-4 | Hydrogen sulfide |
| U135 | 7783-06-4 | Hydrogen Sulfide $H_2S$ |
| U096 | 80-15-9 | Hydroperoxide, 1-methyl-1-phenylethyl-(R) |
| U116 | 96-45-7 | 2-Imidazolidinethione |
| U137 | 193-39-5 | Indeno[1,2,3-cd]pyrene |
| U190 | 85-44-9 | 1,3-Isobenzofurandione |
| U140 | 78-83-1 | Isobutyl alcohol (I,T) |
| U141 | 120-58-1 | Isosafrole |
| U142 | 143-50-0 | Kepone |
| U143 | 303-34-4 | Lasiocarpine |
| U144 | 301-04-2 | Lead acetate |
| U146 | 1335-32-6 | Lead,bis(acetato-O) tetrahydroxytri- |
| U145 | 7446-27-7 | Lead phosphate |
| U146 | 1335-32-6 | Lead subacetate |
| U129 | 58-89-9 | Lindane |
| U163 | 70-25-7 | MNNG |
| U147 | 108-31-6 | Maleic anhydride |
| U148 | 123-33-1 | Maleic hydrazide |
| U149 | 109-77-3 | Malononitrile |
| U150 | 148-82-3 | Melphalan |
| U151 | 7439-97-6 | Mercury |
| U152 | 126-98-7 | Methacrylonitrile (I,T) |
| U092 | 124-40-3 | Methanamine, N-methyl-(I) |
| U029 | 74-83-9 | Methane, bromo- |
| U045 | 74-87-3 | Methane, chloro-(I,T) |
| U046 | 107-30-2 | Methane, chloromethoxy- |
| U068 | 74-95-3 | Methane, dibromo- |
| U080 | 75-09-2 | Methane, dichloro- |
| U075 | 75-71-8 | Methane, dichlorodifluoro- |
| U138 | 74-88-4 | Methane, iodo- |
| U119 | 62-50-0 | Methanesulfonic acid, ethyl ester |
| U211 | 56-23-5 | Methane, tetrachloro- |
| U153 | 74-93-1 | Methanethiol (I,T) |
| U225 | 75-25-2 | Methane, tribromo- |
| U044 | 67-66-3 | Methane, trichloro- |
| U121 | 75-69-4 | Methane, trichlorofluoro- |
| U036 | 57-74-9 | 4,7-Methano-1H-indene,1,2,4,5,6,7,8,8-octa-chloro-2,3,3a,4,7,7a-hexahydro- |
| U154 | 67-56-1 | Methanol (I) |
| U155 | 91-80-5 | Methapyrilene |
| U142 | 143-50-0 | 1,3,4-Metheno-2H-cyclobuta- [cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a, 5b,6- decachlorooctahydro- |
| U247 | 72-43-5 | Methoxychlor |
| U154 | 67-56-1 | Methyl alcohol (I) |
| U029 | 74-83-9 | Methyl bromide |

**Table 4. Toxic Wastes**
**(Alphabetical Order by Substance)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U186 | 504-60-9 | 1-Methylbutadiene (I) |
| U045 | 74-87-3 | Methyl chloride (I,T) |
| U156 | 79-22-1 | Methyl chlorocarbonate (I,T) |
| U226 | 71-55-6 | Methyl chloroform |
| U157 | 56-49-5 | 3-Methylcholanthrene |
| U158 | 101-14-4 | 4,4'-Methylenebis(2-chloroaniline) |
| U068 | 74-95-3 | Methylene bromide |
| U080 | 75-09-2 | Methylene chloride |
| U159 | 78-93-3 | Methyl ethyl ketone (MEK) (I,T) |
| U160 | 1338-23-4 | Methyl ethyl ketone peroxide (R,T) |
| U138 | 74-88-4 | Methyl iodide |
| U161 | 108-10-1 | Methyl isobutyl ketone (I) |
| U162 | 80-62-6 | Methyl methacrylate (I,T) |
| U161 | 108-10-1 | 4-Methyl-2-pentanone (I) |
| U164 | 56-04-2 | Methylthiouracil |
| U010 | 50-07-7 | Mitomycin C |
| U059 | 20830-81-3 | 5,12-Naphthacenedione, 8-acetyl-10-[(3- amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)- oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)- |
| U026 | 494-03-1 | Naphthalenamine,N,N'-bis (2-chloroethyl)- |
| U167 | 134-32-7 | 1-Naphthalenamine |
| U168 | 91-59-8 | 2-Naphthalenamine |
| U165 | 91-20-3 | Naphthalene |
| U047 | 91-58-7 | Naphthalene, 2-chloro- |
| U166 | 130-15-4 | 1,4-Naphthalenedione |
| U236 | 72-57-1 | 2,7-Naphthalenedisulfonic acid,3,3'-[(3,3'-dimethyl- [1,1'-biphenyl]-4,4'-diyl) bis(azo)bis[5-amino-4-hydroxy]-,tetrasodium salt |
| U279 | 63-25-2 | 1-Naphthalenol, methylcarbamate |
| U166 | 130-15-4 | 1,4-Naphthoquinone |
| U167 | 134-32-7 | alpha-Naphthylamine |
| U168 | 91-59-8 | beta-Naphthylamine |
| U217 | 10102-45-1 | Nitric acid, thallium(1+)salt |
| U169 | 98-95-3 | Nitrobenzene (I,T) |
| U170 | 100-02-7 | p-Nitrophenol |
| U171 | 79-46-9 | 2-Nitropropane (I,T) |
| U172 | 924-16-3 | N-Nitrosodi-n-butylamine |
| U173 | 1116-54-7 | N-Nitrosodiethanolamine |
| U174 | 55-18-5 | N-Nitrosodiethylamine |
| U176 | 759-73-9 | N-Nitroso-N-ethylurea |
| U177 | 684-93-5 | N-Nitroso-N-methylurea |
| U178 | 615-53-2 | N-Nitroso-N-methylurethane |
| U179 | 100-75-4 | N-Nitrosopiperidine |
| U180 | 930-55-2 | N-Nitrosopyrrolidine |
| U181 | 99-55-8 | 5-Nitro-o-toluidine |
| U193 | 1120-71-4 | 1,2-Oxathiolane, 2,2-dioxide |
| U058 | 50-18-0 | 2H-1,3,2-Oxazaphosphorin-2-amine,N,N- bis(2-chloroethyl) tetrahydro-,2-oxide |
| U115 | 75-21-8 | Oxirane (I,T) |
| U126 | 765-34-4 | Oxiranecarboxyaldehyde |
| U041 | 106-89-8 | Oxirane, (chloromethyl)- |
| U182 | 123-63-7 | Paraldehyde |
| U183 | 608-93-5 | Pentachlorobenzene |
| U184 | 76-01-7 | Pentachloroethane |
| U185 | 82-68-8 | Pentachloronitrobenzene (PCNB) |
| See F027 | 87-86-5 | Pentachlorophenol |
| U161 | 108-10-1 | Pentanol, 4-methyl- |
| U186 | 504-60-9 | 1,3-Pentadiene (I) |
| U187 | 62-44-2 | Phenacetin |
| U188 | 108-95-2 | Phenol |
| U048 | 95-57-8 | Phenol, 2-chloro- |
| U039 | 59-50-7 | Phenol, 4-chloro-3-methyl- |
| U081 | 120-83-2 | Phenol, 2,4-dichloro- |
| U082 | 87-65-0 | Phenol, 2,6-dichloro- |
| U089 | 56-53-1 | Phenol, 4,4'-(1,2-diethyl-1,2- ethenediyl) bis-, (E)- |
| U101 | 105-67-9 | Phenol, 2,4-dimethyl- |

| Table 4. Toxic Wastes (Alphabetical Order by Substance) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| U052 | 1319-77-3 | Phenol, methyl- |
| U132 | 70-30-4 | Phenol, 2,2'-methylenebis[3,4,6- trichloro- |
| U411 | 114-26-1 | Phenol, 2-(1-methylethoxy)-, methylcarbamate |
| U170 | 100-02-7 | Phenol, 4-nitro- |
| See F027 | 87-86-5 | Phenol, pentachloro- |
| See F027 | 58-90-2 | Phenol, 2,3,4,6-tetrachloro- |
| See F027 | 95-95-4 | Phenol, 2,4,5-trichloro- |
| See F027 | 88-06-2 | Phenol, 2,4,6-trichloro- |
| U150 | 148-82-3 | L-Phenylalanine, 4-[bis (2-chloroethyl)amino]- |
| U145 | 7446-27-7 | Phosphoric acid, lead(2+)salt(2:3) |
| U087 | 3288-58-2 | Phosphorodithioic acid, O,O-diethyl,S-methyl ester |
| U189 | 1314-80-3 | Phosphorus sulfide (R) |
| U190 | 85-44-9 | Phthalic anhydride |
| U191 | 109-06-8 | 2-Picoline |
| U179 | 100-75-4 | Piperidine,1-nitroso- |
| U192 | 23950-58-5 | Pronamide |
| U194 | 107-10-8 | 1-Propanamine (I,T) |
| U111 | 621-64-7 | 1-Propanamine, N-nitroso- N-propyl- |
| U110 | 142-84-7 | 1-Propanamine, N-propyl-(I) |
| U066 | 96-12-8 | Propane, 1,2-dibromo-3-chloro- |
| U083 | 78-87-5 | Propane, 1,2-dichloro- |
| U149 | 109-77-3 | Propanedinitrile |
| U171 | 79-46-9 | Propane, 2-nitro-(I,T) |
| U027 | 108-60-1 | Propane, 2,2'-oxybis[2-chloro- |
| U193 | 1120-71-4 | 1,3-Propane sultone |
| See F027 | 93-72-1 | Propanoic acid,2-(2,4,5-trichlorophenoxy)- |
| U235 | 126-72-7 | 1-Propanol, 2,3-dibromo-, phosphate (3:1) |
| U140 | 73-83-1 | 1-Propanol, 2-methyl-(I,T) |
| U002 | 67-64-1 | 2-Propanone (I) |
| U007 | 79-06-1 | 2-Propenamide |
| U084 | 542-75-6 | 1-Propene, 1,3-dichloro- |
| U243 | 1888-71-7 | 1-Propene, 1,1,2,3,3,3-hexachloro- |
| U009 | 107-13-1 | 2-Propenenitrile |
| U152 | 126-98-7 | 2-Propenenitrile, 2-methyl-(I,T) |
| U008 | 79-10-7 | 2-Propenoic acid (I) |
| U113 | 140-88-5 | 2-Propenoic acid, ethyl ester (I) |
| U118 | 97-63-2 | 2-Propenoic acid, 2-methyl-, ethyl ester |
| U162 | 80-62-6 | 2-Propenoic acid, 2-methyl-, methyl ester (I,T) |
| U373 | 122-42-9 | Propham |
| U411 | 114-26-1 | Propoxur |
| U194 | 107-10-8 | n-Propylamine (I,T) |
| U083 | 78-87-5 | Propylene dichloride |
| U387 | 52888-80-9 | Prosulfocarb |
| U148 | 123-33-1 | 3,6-Pyridazinedione,1,2-dihydro- |
| U196 | 110-86-1 | Pyridine |
| U191 | 109-06-8 | Pyridine, 2-methyl- |
| U237 | 66-75-1 | 2,4-(1H,3H)-Pyrimidinedione, 5- [bis(2-chloroethyl) amino]- |
| U164 | 56-04-2 | 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- |
| U180 | 930-55-2 | Pyrrolidine, 1-nitroso- |
| U200 | 50-55-5 | Reserpine |
| U201 | 108-46-3 | Resorcinol |
| U202 | [1]81-07-2 | Saccharin and salts |
| U203 | 94-59-7 | Safrole |
| U204 | 7783-00-8 | Selenious acid |
| U204 | 7783-00-8 | Selenium dioxide |
| U205 | 7488-56-4 | Selenium sulfide |
| U205 | 7488-56-4 | Selenium sulfide $SeS_2$(R,T) |
| U015 | 115-02-6 | L-Serine, diazoacetate (ester) |
| See F027 | 93-72-1 | Silvex (2,4,5-TP) |
| U206 | 18883-66-4 | Streptozotocin |
| U103 | 77-78-1 | Sulfuric acid, dimethyl ester |
| U189 | 1314-80-3 | Sulfur phosphide (R) |

**Table 4. Toxic Wastes**
**(Alphabetical Order by Substance)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| See F027 | 93-76-5 | 2,4,5-T |
| U207 | 95-94-3 | 1,2,4,5-Tetrachlorobenzene |
| U208 | 630-20-6 | 1,1,1,2-Tetrachloroethane |
| U209 | 79-34-5 | 1,1,2,2,-Tetrachloroethane |
| U210 | 127-18-4 | Tetrachloroethylene |
| See F027 | 58-90-2 | 2,3,4,6-Tetrachlorophenol |
| U213 | 109-99-9 | Tetrahydrofuran (I) |
| U214 | 563-68-8 | Thallium(I) acetate |
| U215 | 6533-73-9 | Thallium(I) carbonate |
| U216 | 7791-12-0 | Thallium (I) chloride |
| U216 | 7791-12-0 | Thallium chloride TlCl |
| U217 | 10102-45-1 | Thallium (I) nitrate |
| U218 | 62-55-5 | Thioacetamide |
| U410 | 59669-26-0 | Thiodicarb |
| U153 | 74-93-1 | Thiomethanol (I,T) |
| U244 | 137-26-8 | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2 S_2$, tetramethyl- |
| U409 | 23564-05-8 | Thiophanatemethyl |
| U219 | 62-56-6 | Thiourea |
| U244 | 137-26-8 | Thiram |
| U220 | 108-88-3 | Toluene |
| U221 | 25376-45-8 | Toluenediamine |
| U223 | 26471-62-5 | Toluene diisocyanate (R,T) |
| U328 | 95-53-4 | o-Toluidine |
| U353 | 106-49-0 | p-Toluidine |
| U222 | 636-21-5 | o-Toluidine hydrochloride |
| U389 | 2303-17-5 | Triallate |
| U011 | 61-82-5 | 1H-1,2,4-Triazol-3-amine |
| U226 | 71-55-6 | 1,1,1-Trichloroethane |
| U227 | 79-00-5 | 1,1,2-Trichloroethane |
| U228 | 79-01-6 | Trichloroethylene |
| See F027 | 95-95-4 | 2,4,5-Trichlorophenol |
| See F027 | 88-06-2 | 2,4,6-Trichlorophenol |
| U404 | 121-44-8 | Triethylamine |
| U234 | 99-35-4 | 1,3,5-Trinitrobenzene (R,T) |
| U182 | 123-63-7 | 1,3,5-Trioxane, 2,4,6-trimethyl- |
| U121 | 75-69-4 | Trichloromonofluoromethane |
| U235 | 126-72-7 | Tris(2,3-dibromopropyl) phosphate |
| U236 | 72-57-1 | Trypan blue |
| U237 | 66-75-1 | Uracil mustard |
| U176 | 759-73-9 | Urea, N-ethyl-N-nitroso- |
| U177 | 684-93-5 | Urea, N-methyl-N-nitroso- |
| U043 | 75-01-4 | Vinyl chloride |
| U248 | [1]81-81-2 | Warfarin, and salts, when present at concentrations of 0.3 percent or less |
| U239 | 1330-20-7 | Xylene (I) |
| U200 | 50-55-5 | Yohimban-16-carboxylic acid,11,17-dimethoxy-18- [(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester,(3beta, 16beta,17alpha,18beta,20alpha)- |
| U249 | 1314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations of 10 percent or less |

[1] CAS Number given for parent compound only.

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U001 | 75-07-0 | Acetaldehyde (I) |
| U001 | 75-07-0 | Ethanal (I) |
| U002 | 67-64-1 | Acetone (I) |
| U002 | 67-64-1 | 2-Propanone (I) |
| U003 | 75-05-8 | Acetonitrile (I,T) |
| U004 | 98-86-2 | Acetophenone |

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U004 | 98-86-2 | Ethanone, 1-phenyl- |
| U005 | 53-96-3 | Acetamide, N-9H-fluoren-2-yl- |
| U005 | 53-96-3 | 2-Acetylaminofluorene |
| U006 | 75-36-5 | Acetyl chloride (C,R,T) |
| U007 | 79-06-1 | Acrylamide |
| U007 | 79-06-1 | 2-Propenamide |
| U008 | 79-10-7 | Acrylic acid (I) |
| U008 | 79-10-7 | 2-Propenoic acid (I) |
| U009 | 107-13-1 | Acrylonitrile |
| U009 | 107-13-1 | 2-Propenenitrile |
| U010 | 50-07-7 | Azirino [2',3':3,4]pyrrolo[1,2-a] indole-4,7-dione,6-amino-8- [[(aminocarbonyl)oxy]methyl]- 1,1a,2,8,8a,8b,-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balpha)]- |
| U010 | 50-07-7 | Mitomycin C |
| U011 | 61-82-5 | Amitrole |
| U011 | 61-82-5 | 1H-1,2,4-Triazol-3-amine |
| U012 | 62-53-3 | Aniline (I,T) |
| U012 | 62-53-3 | Benzenamine (I,T) |
| U014 | 492-80-8 | Auramine |
| U014 | 492-80-8 | Benzenamine,4,4'-carbonimidoylbis (N,N-dimethyl- |
| U015 | 115-02-6 | Azaserine |
| U015 | 115-02-6 | L-Serine, diazoacetate (ester) |
| U016 | 225-51-4 | Benz(c)acridine |
| U017 | 98-87-3 | Benzal chloride |
| U017 | 98-87-3 | Benzene, (dichloromethyl)- |
| U018 | 56-55-3 | Benz[a]anthracene |
| U019 | 71-43-2 | Benzene (I,T) |
| U020 | 98-09-9 | Benzenesulfonic acid chloride (C,R) |
| U020 | 98-09-9 | Benzenesulfonyl chloride (C,R) |
| U021 | 92-87-5 | Benzidine |
| U021 | 92-87-5 | (1,1'-Biphenyl)-4,4'-diamine |
| U022 | 50-32-8 | Benzo[a]pyrene |
| U023 | 98-07-7 | Benzene, (trichloromethyl)- |
| U023 | 98-07-7 | Benzotrichloride (C,R,T) |
| U024 | 111-91-1 | Dichloromethoxy ethane |
| U024 | 111-91-1 | Ethane, 1,1'-[methylenebis (oxy)]bis[2-chloro- |
| U025 | 111-44-4 | Dichloroethyl ether |
| U025 | 111-44-4 | Ethane, 1,1'-oxybis [2-chloro- |
| U026 | 494-03-1 | Chlornaphazin |
| U026 | 494-03-1 | Naphthalenamine,N,N'-bis (2-chloroethyl)- |
| U027 | 108-60-1 | Dichloroisopropyl ether |
| U027 | 108-60-1 | Propane, 2,2'-oxybis[2-chloro- |
| U028 | 117-81-7 | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester |
| U028 | 117-81-7 | Diethylhexyl phthalate |
| U029 | 74-83-9 | Methane, bromo- |
| U029 | 74-83-9 | Methyl bromide |
| U030 | 101-55-3 | Benzene, 1-bromo-4-phenoxy- |
| U030 | 101-55-3 | 4-Bromophenyl phenyl ether |
| U031 | 71-36-3 | 1-Butanol (I) |
| U031 | 71-36-3 | n-Butyl alcohol (I) |
| U032 | 13765-19-0 | Calcium chromate |
| U032 | 13765-19-0 | Chromic acid $H_2CrO_4$, calcium salt |
| U033 | 353-50-4 | Carbonic difluoride |
| U033 | 353-50-4 | Carbon oxyfluoride (R,T) |
| U034 | 75-87-6 | Acetaldehyde, trichloro- |
| U034 | 75-87-6 | Chloral |
| U035 | 305-03-3 | Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]- |
| U035 | 305-03-3 | Chlorambucil |
| U036 | 57-74-9 | Chlordane, alpha and gamma isomers |
| U036 | 57-74-9 | 4,7-Methano-1H-indene,1,2,4,5,6,7,8,8-octa-chloro-2,3,3a,4,7,7a-hexahydro- |
| U037 | 108-90-7 | Benzene, chloro- |
| U037 | 108-90-7 | Chlorobenzene |
| U038 | 510-15-6 | Benzeneacetic acid, 4-chloro-alpha- (4-chlorophenyl)-alpha-hydroxy-, ethyl ester |

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U038 | 510-15-6 | Chlorobenzilate |
| U039 | 59-50-7 | p-Chloro-m-cresol |
| U039 | 59-50-7 | Phenol, 4-chloro-3-methyl- |
| U041 | 106-89-8 | Epichlorohydrin |
| U041 | 106-89-8 | Oxirane, (chloromethyl)- |
| U042 | 110-75-8 | 2-Chloroethyl vinyl ether |
| U042 | 110-75-8 | Ethene, (2-chloroethoxy)- |
| U043 | 75-01-4 | Ethene, chloro- |
| U043 | 75-01-4 | Vinyl chloride |
| U044 | 67-66-3 | Chloroform |
| U044 | 67-66-3 | Methane, trichloro- |
| U045 | 74-87-3 | Methane, chloro-(I,T) |
| U045 | 74-87-3 | Methyl chloride (I,T) |
| U046 | 107-30-2 | Chloromethyl methyl ether |
| U046 | 107-30-2 | Methane, chloromethoxy- |
| U047 | 91-58-7 | beta-Chloronaphthalene |
| U047 | 91-58-7 | Naphthalene, 2-chloro- |
| U048 | 95-57-8 | o-Chlorophenol |
| U048 | 95-57-8 | Phenol, 2-chloro- |
| U049 | 3165-93-3 | Benzenamine, 4-chloro-2-methyl-, hydrochloride |
| U049 | 3165-93-3 | 4-Chloro-o-toluidine, hydrochloride |
| U050 | 218-01-9 | Chrysene |
| U051 | | Creosote |
| U052 | 1319-77-3 | Cresols (Cresylic acid) |
| U052 | 1319-77-3 | Phenol, methyl- |
| U053 | 4170-30-3 | 2-Butenal |
| U053 | 4170-30-3 | Crotonaldehyde |
| U055 | 98-82-8 | Benzene, (1-methylethyl)-(I) |
| U055 | 98-82-8 | Cumene (I) |
| U056 | 110-82-7 | Benzene, hexahydro-(I) |
| U056 | 110-82-7 | Cyclohexane (I) |
| U057 | 108-94-1 | Cyclohexanone (I) |
| U058 | 50-18-0 | Cyclophosphamide |
| U058 | 50-18-0 | 2H-1,3,2-Oxazaphosphorin-2-amine,N,N- bis(2-chloroethyl) tetrahydro-,2-oxide |
| U059 | 20830-81-3 | Daunomycin |
| U059 | 20830-81-3 | 5,12-Naphthacenedione, 8-acetyl-10-[(3- amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)- oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)- |
| U060 | 72-54-8 | Benzene, 1, 1'-(2, 2-dichloroethylidene)bis [4-chloro- |
| U060 | 72-54-8 | DDD |
| U061 | 50-29-3 | Benzene, 1, 1'-(2,2,2-trichloroethylidene)bis[4-chloro- |
| U061 | 50-29-3 | DDT |
| U062 | 2303-16-4 | Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2- propenyl)ester |
| U062 | 2303-16-4 | Diallate |
| U063 | 53-70-3 | Dibenz[a,h]anthracene |
| U064 | 189-55-9 | Benzo[rst]pentaphene |
| U064 | 189-55-9 | Dibenzo[a,i]pyrene |
| U066 | 96-12-8 | 1,2-Dibromo-3-chloropropane |
| U066 | 96-12-8 | Propane, 1,2-dibromo-3-chloro- |
| U067 | 106-93-4 | Ethane, 1,2-dibromo- |
| U067 | 106-93-4 | Ethylene dibromide |
| U068 | 74-95-3 | Methane, dibromo- |
| U068 | 74-95-3 | Methylene bromide |
| U069 | 84-74-2 | 1,2-Benzenedicarboxylic acid, dibutyl ester |
| U069 | 84-74-2 | Dibutyl phthalate |
| U070 | 95-50-1 | Benzene, 1,2-dichloro- |
| U070 | 95-50-1 | o-Dichlorobenzene |
| U071 | 541-73-1 | Benzene, 1,3-dichloro- |
| U071 | 541-73-1 | m-Dichlorobenzene |
| U072 | 106-46-7 | Benzene, 1,4-dichloro- |
| U072 | 106-46-7 | p-Dichlorobenzene |
| U073 | 91-94-1 | (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro- |
| U073 | 91-94-1 | 3,3'-Dichlorobenzidine |

| Table 4. Toxic Wastes (Numerical Order by EPA Hazardous Waste Number) | | |
|---|---|---|
| **EPA Hazardous Waste Number** | **Chemical Abstract Number** | **Hazardous Waste (Substance)** |
| U074 | 764-41-0 | 2-Butene, 1,4-dichloro- (I,T) |
| U074 | 764-41-0 | 1,4-Dichloro-2-butene (I,T) |
| U075 | 75-71-8 | Dichlorodifluoromethane |
| U075 | 75-71-8 | Methane, dichlorodifluoro- |
| U076 | 75-34-3 | Ethane, 1,1-dichloro- |
| U076 | 75-34-3 | Ethylidene dichloride |
| U077 | 107-06-2 | Ethane, 1,2-dichloro- |
| U077 | 107-06-2 | Ethylene dichloride |
| U078 | 75-35-4 | 1,1-Dichloroethylene |
| U078 | 75-35-4 | Ethene, 1,1-dichloro- |
| U079 | 156-60-5 | 1,2-Dichloroethylene |
| U079 | 156-60-5 | Ethene, 1,2-dichloro-, (E)- |
| U080 | 75-09-2 | Methane, dichloro- |
| U080 | 75-09-2 | Methylene chloride |
| U081 | 120-83-2 | 2,4-Dichlorophenol |
| U081 | 120-83-2 | Phenol, 2,4-dichloro- |
| U082 | 87-65-0 | 2,6-Dichlorophenol |
| U082 | 87-65-0 | Phenol, 2,6-dichloro- |
| U083 | 78-87-5 | Propane, 1,2-dichloro- |
| U083 | 78-87-5 | Propylene dichloride |
| U084 | 542-75-6 | 1,3-Dichloropropene |
| U084 | 542-75-6 | 1-Propene, 1,3-dichloro- |
| U085 | 1464-53-5 | 2,2'-Bioxirane |
| U085 | 1464-53-5 | 1,2:3,4-Diepoxybutane (I,T) |
| U086 | 1615-80-1 | N,N'-Diethylhydrazine |
| U086 | 1615-80-1 | Hydrazine, 1,2-diethyl- |
| U087 | 3288-58-2 | O,O-Diethyl-S-methyl-dithiophosphate |
| U087 | 3288-58-2 | Phosphorodithioic acid, O,O-diethyl,S-methyl ester |
| U088 | 84-66-2 | 1,2-Benzenedicarboxylic acid, diethyl ester |
| U088 | 84-66-2 | Diethyl phthalate |
| U089 | 56-53-1 | Diethylstilbestrol |
| U089 | 56-53-1 | Phenol, 4,4'-(1,2-diethyl-1,2- ethenediyl) bis-, (E)- |
| U090 | 94-58-6 | 1,3-Benzodioxole, 5-propyl- |
| U090 | 94-58-6 | Dihydrosafrole |
| U091 | 119-90-4 | (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy- |
| U091 | 119-90-4 | 3,3'-Dimethoxybenzidine |
| U092 | 124-40-3 | Dimethylamine (I) |
| U092 | 124-40-3 | Methanamine, N-methyl-(I) |
| U093 | 60-11-7 | Benzenamine,N,N-dimethyl-4-(phenylazo)- |
| U093 | 60-11-7 | p-Dimethylaminoazobenzene |
| U094 | 57-97-6 | Benz[a]anthracene, 7,12-dimethyl- |
| U094 | 57-97-6 | 7,12-Dimethylbenz[a]anthracene |
| U095 | 119-93-7 | (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl- |
| U095 | 119-93-7 | 3,3'-Dimethylbenzidine |
| U096 | 80-15-9 | alpha,alpha-Dimethyl-benzylhydroperoxide (R) |
| U096 | 80-15-9 | Hydroperoxide, 1-methyl-1-phenylethyl-(R) |
| U097 | 79-44-7 | Carbamic chloride, dimethyl- |
| U097 | 79-44-7 | Dimethylcarbamoyl chloride |
| U098 | 57-14-7 | 1,1-Dimethylhydrazine |
| U098 | 57-14-7 | Hydrazine, 1,1-dimethyl- |
| U099 | 540-73-8 | 1,2-Dimethylhydrazine |
| U099 | 540-73-8 | Hydrazine, 1,2-dimethyl- |
| U101 | 105-67-9 | 2,4-Dimethylphenol |
| U101 | 105-67-9 | Phenol, 2,4-dimethyl- |
| U102 | 131-11-3 | 1,2-Benzenedicarboxylic acid, dimethyl ester |
| U102 | 131-11-3 | Dimethyl phthalate |
| U103 | 77-78-1 | Dimethyl sulfate |
| U103 | 77-78-1 | Sulfuric acid, dimethyl ester |
| U105 | 121-14-2 | Benzene, 1-methyl-2,4-dinitro- |
| U105 | 121-14-2 | 2,4-Dinitrotoluene |
| U106 | 606-20-2 | Benzene, 2-methyl-1,3-dinitro- |
| U106 | 606-20-2 | 2,6-Dinitrotoluene |

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U107 | 117-84-0 | 1,2-Benzenedicarboxylic acid, dioctyl ester |
| U107 | 117-84-0 | Di-n-octyl phthalate |
| U108 | 123-91-1 | 1,4-Diethyleneoxide |
| U108 | 123-91-1 | 1,4-Dioxane |
| U109 | 122-66-7 | 1,2-Diphenylhydrazine |
| U109 | 122-66-7 | Hydrazine, 1,2-diphenyl- |
| U110 | 142-84-7 | Dipropylamine (I) |
| U110 | 142-84-7 | 1-Propanamine, N-propyl-(I) |
| U111 | 621-64-7 | Di-n-propylnitrosamine |
| U111 | 621-64-7 | 1-Propanamine, N-nitroso- N-propyl- |
| U112 | 141-78-6 | Acetic acid, ethyl ester (I) |
| U112 | 141-78-6 | Ethyl acetate (I) |
| U113 | 140-88-5 | Ethyl acrylate (I) |
| U113 | 140-88-5 | 2-Propenoic acid, ethyl ester (I) |
| U114 | [1]111-54-6 | Carbamodithioic acid, 1,2-ethanediylbis-,salts and esters |
| U114 | [1]111-54-6 | Ethylenebisdithiocarbamic acid, salts and esters |
| U115 | 75-21-8 | Ethylene oxide (I,T) |
| U115 | 75-21-8 | Oxirane (I,T) |
| U116 | 96-45-7 | Ethylene thiourea |
| U116 | 96-45-7 | 2-Imidazolidinethione |
| U117 | 60-29-7 | Ethane,1,1'-oxybis-(I) |
| U117 | 60-29-7 | Ethyl ether (I) |
| U118 | 97-63-2 | Ethyl methacrylate |
| U118 | 97-63-2 | 2-Propenoic acid, 2-methyl-, ethyl ester |
| U119 | 62-50-0 | Ethyl methanesulfonate |
| U119 | 62-50-0 | Methanesulfonic acid, ethyl ester |
| U120 | 206-44-0 | Fluoranthene |
| U121 | 75-69-4 | Methane, trichlorofluoro- |
| U121 | 75-69-4 | Trichloromonofluoromethane |
| U122 | 50-00-0 | Formaldehyde |
| U123 | 64-18-6 | Formic acid (C,T) |
| U124 | 110-00-9 | Furan (I) |
| U124 | 110-00-9 | Furfuran (I) |
| U125 | 98-01-1 | 2-Furancarboxaldehyde (I) |
| U125 | 98-01-1 | Furfural (I) |
| U126 | 765-34-4 | Glycidylaldehyde |
| U126 | 765-34-4 | Oxiranecarboxyaldehyde |
| U127 | 118-74-1 | Benzene, hexachloro- |
| U127 | 118-74-1 | Hexachlorobenzene |
| U128 | 87-68-3 | 1,3-Butadiene,1,1,2,3,4,4-hexachloro- |
| U128 | 87-68-3 | Hexachlorobutadiene |
| U129 | 58-89-9 | Cyclohexane,1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha, 5alpha,6beta)- |
| U129 | 58-89-9 | Lindane |
| U130 | 77-47-4 | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- |
| U130 | 77-47-4 | Hexachlorocyclopentadiene |
| U131 | 67-72-1 | Ethane, hexachloro- |
| U131 | 67-72-1 | Hexachloroethane |
| U132 | 70-30-4 | Hexachlorophene |
| U132 | 70-30-4 | Phenol, 2,2'-methylenebis[3,4,6- trichloro- |
| U133 | 302-01-2 | Hydrazine (R,T) |
| U134 | 7664-39-3 | Hydrofluoric acid (C,T) |
| U134 | 7664-39-3 | Hydrogen fluoride (C,T) |
| U135 | 7783-06-4 | Hydrogen sulfide |
| U135 | 7783-06-4 | Hydrogen Sulfide $H_2S$ |
| U136 | 75-60-5 | Arsinic acid, dimethyl- |
| U136 | 75-60-5 | Cacodylic acid |
| U137 | 193-39-5 | Indeno[1,2,3-cd]pyrene |
| U138 | 74-88-4 | Methane, iodo- |
| U138 | 74-88-4 | Methyl iodide |
| U140 | 78-83-1 | Isobutyl alcohol (I,T) |
| U140 | 73-83-1 | 1-Propanol, 2-methyl-(I,T) |
| U141 | 120-58-1 | 1,3-Benzodioxole, 5-(1-propenyl)- |

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U141 | 120-58-1 | Isosafrole |
| U142 | 143-50-0 | Kepone |
| U142 | 143-50-0 | 1,3,4-Metheno-2H-cyclobuta- [cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a, 5b,6- decachlorooctahydro- |
| U143 | 303-34-4 | 2-Butenoic acid, 2-methyl-,7-[[2,3- dihydroxy-2-(1-methoxyethyl)-3- methyl-1-oxobutoxy]methyl]- 2,3,5,7a-tetrahydro-1H-pyrrolizin- 1-yl ester, [1S-[1alpha(Z), 7(2S*,3R*), 7aalpha]]- |
| U143 | 303-34-4 | Lasiocarpine |
| U144 | 301-04-2 | Acetic acid, lead (2+) salt |
| U144 | 301-04-2 | Lead acetate |
| U145 | 7446-27-7 | Lead phosphate |
| U145 | 7446-27-7 | Phosphoric acid, lead(2+)salt(2:3) |
| U146 | 1335-32-6 | Lead,bis(acetato-O) tetrahydroxytri- |
| U146 | 1335-32-6 | Lead subacetate |
| U147 | 108-31-6 | 2,5-Furandione |
| U147 | 108-31-6 | Maleic anhydride |
| U148 | 123-33-1 | Maleic hydrazide |
| U148 | 123-33-1 | 3,6-Pyridazinedione,1,2-dihydro- |
| U149 | 109-77-3 | Malononitrile |
| U149 | 109-77-3 | Propanedinitrile |
| U150 | 148-82-3 | Melphalan |
| U150 | 148-82-3 | L-Phenylalanine, 4-[bis (2-chloroethyl)amino]- |
| U151 | 7439-97-6 | Mercury |
| U152 | 126-98-7 | Methacrylonitrile (I,T) |
| U152 | 126-98-7 | 2-Propenenitrile, 2-methyl-(I,T) |
| U153 | 74-93-1 | Methanethiol (I,T) |
| U153 | 74-93-1 | Thiomethanol (I,T) |
| U154 | 67-56-1 | Methanol (I) |
| U154 | 67-56-1 | Methyl alcohol (I) |
| U155 | 91-80-5 | 1,2-Ethanediamine,-N,N-dimethyl-N'-2- pyridinyl-N'-(2-thienylmethyl)- |
| U155 | 91-80-5 | Methapyrilene |
| U156 | 79-22-1 | Carbonochloridic acid, methyl ester (I,T) |
| U156 | 79-22-1 | Methyl chlorocarbonate (I,T) |
| U157 | 56-49-5 | Benz (j) aceanthrylene, 1,2-dihydro-3-methyl- |
| U157 | 56-49-5 | 3-Methylcholanthrene |
| U158 | 101-14-4 | Benzenamine, 4,4'-methylenebis [2-chloro- |
| U158 | 101-14-4 | 4,4'-Methylenebis(2-chloroaniline) |
| U159 | 78-93-3 | 2-Butanone (I,T) |
| U159 | 78-93-3 | Methyl ethyl ketone (MEK) (I,T) |
| U160 | 1338-23-4 | 2-Butanone, peroxide (R,T) |
| U160 | 1338-23-4 | Methyl ethyl ketone peroxide (R,T) |
| U161 | 108-10-1 | Methyl isobutyl ketone (I) |
| U161 | 108-10-1 | 4-Methyl-2-pentanone (I) |
| U161 | 108-10-1 | Pentanol, 4-methyl- |
| U162 | 80-62-6 | Methyl methacrylate (I,T) |
| U162 | 80-62-6 | 2-Propenoic acid, 2-methyl-, methyl ester (I,T) |
| U163 | 70-25-7 | Guanidine,N-methyl-N'-nitro-N-nitroso- |
| U163 | 70-25-7 | MNNG |
| U164 | 56-04-2 | Methylthiouracil |
| U164 | 56-04-2 | 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- |
| U165 | 91-20-3 | Naphthalene |
| U166 | 130-15-4 | 1,4-Naphthalenedione |
| U166 | 130-15-4 | 1,4-Naphthoquinone |
| U167 | 134-32-7 | 1-Naphthalenamine |
| U167 | 134-32-7 | alpha-Naphthylamine |
| U168 | 91-59-8 | 2-Naphthalenamine |
| U168 | 91-59-8 | beta-Naphthylamine |
| U169 | 98-95-3 | Benzene, nitro- |
| U169 | 98-95-3 | Nitrobenzene (I,T) |
| U170 | 100-02-7 | p-Nitrophenol |
| U170 | 100-02-7 | Phenol, 4-nitro- |
| U171 | 79-46-9 | 2-Nitropropane (I,T) |
| U171 | 79-46-9 | Propane, 2-nitro-(I,T) |
| U172 | 924-16-3 | 1-Butanamine, N-butyl-N-nitroso- |

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U172 | 924-16-3 | N-Nitrosodi-n-butylamine |
| U173 | 1116-54-7 | Ethanol,2,2'-(nitrosoimino)bis- |
| U173 | 1116-54-7 | N-Nitrosodiethanolamine |
| U174 | 55-18-5 | Ethanamine, N-ethyl-N-nitroso- |
| U174 | 55-18-5 | N-Nitrosodiethylamine |
| U176 | 759-73-9 | N-Nitroso-N-ethylurea |
| U176 | 759-73-9 | Urea, N-ethyl-N-nitroso- |
| U177 | 684-93-5 | N-Nitroso-N-methylurea |
| U177 | 684-93-5 | Urea, N-methyl-N-nitroso- |
| U178 | 615-53-2 | Carbamic acid, methylnitroso-,ethyl ester |
| U178 | 615-53-2 | N-Nitroso-N-methylurethane |
| U179 | 100-75-4 | N-Nitrosopiperidine |
| U179 | 100-75-4 | Piperidine,1-nitroso- |
| U180 | 930-55-2 | N-Nitrosopyrrolidine |
| U180 | 930-55-2 | Pyrrolidine, 1-nitroso- |
| U181 | 99-55-8 | Benzenamine, 2-methyl-5-nitro- |
| U181 | 99-55-8 | 5-Nitro-o-toluidine |
| U182 | 123-63-7 | Paraldehyde |
| U182 | 123-63-7 | 1,3,5-Trioxane, 2,4,6-trimethyl- |
| U183 | 608-93-5 | Benzene, pentachloro |
| U183 | 608-93-5 | Pentachlorobenzene |
| U184 | 76-01-7 | Ethane, pentachloro- |
| U184 | 76-01-7 | Pentachloroethane |
| U185 | 82-68-8 | Benzene, pentachloronitro- |
| U185 | 82-68-8 | Pentachloronitrobenzene (PCNB) |
| U186 | 504-60-9 | 1-Methylbutadiene (I) |
| U186 | 504-60-9 | 1,3-Pentadiene (I) |
| U187 | 62-44-2 | Acetamide, N-(4-ethoxyphenyl)- |
| U187 | 62-44-2 | Phenacetin |
| U188 | 108-95-2 | Phenol |
| U189 | 1314-80-3 | Phosphorus sulfide (R) |
| U189 | 1314-80-3 | Sulfur phosphide (R) |
| U190 | 85-44-9 | 1,3-Isobenzofurandione |
| U190 | 85-44-9 | Phthalic anhydride |
| U191 | 109-06-8 | 2-Picoline |
| U191 | 109-06-8 | Pyridine, 2-methyl- |
| U192 | 23950-58-5 | Benzamide,3,5-dichloro-N-(1,1-dimethyl-2 propynyl)- |
| U192 | 23950-58-5 | Pronamide |
| U193 | 1120-71-4 | 1,2-Oxathiolane, 2,2-dioxide |
| U193 | 1120-71-4 | 1,3-Propane sultone |
| U194 | 107-10-8 | 1-Propanamine (I,T) |
| U194 | 107-10-8 | n-Propylamine (I,T) |
| U196 | 110-86-1 | Pyridine |
| U197 | 106-51-4 | p-Benzoquinone |
| U197 | 106-51-4 | 2,5-Cyclohexadiene-1,4-dione |
| U200 | 50-55-5 | Reserpine |
| U200 | 50-55-5 | Yohimban-16-carboxylic acid,11,17-dimethoxy-18- [(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester,(3beta, 16beta,17alpha,18beta,20alpha)- |
| U201 | 108-46-3 | 1,3-Benzenediol |
| U201 | 108-46-3 | Resorcinol |
| U202 | [1]81-07-2 | 1,2-Benzisothiazol-3 (2H)- one,1,1,-dioxide, and salts |
| U202 | [1]81-07-2 | Saccharin and salts |
| U203 | 94-59-7 | 1,3-Benzodioxole, 5-(2-propenyl)- |
| U203 | 94-59-7 | Safrole |
| U204 | 7783-00-8 | Selenious acid |
| U204 | 7783-00-8 | Selenium dioxide |
| U205 | 7488-56-4 | Selenium sulfide |
| U205 | 7488-56-4 | Selenium sulfide $SeS_2$(R,T) |
| U206 | 18883-66-4 | Glucopyranose,2-deoxy-2-(3-methyl-3- nitrosoureido)-, D- |
| U206 | 18883-66-4 | D-Glucose, 2-deoxy-2- [[(methylnitrosoamino)- carbonyl]amino]- |
| U206 | 18883-66-4 | Streptozotocin |
| U207 | 95-94-3 | Benzene, 1,2,4,5-tetrachloro- |

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U207 | 95-94-3 | 1,2,4,5-Tetrachlorobenzene |
| U208 | 630-20-6 | Ethane, 1,1,1,2-tetrachloro- |
| U208 | 630-20-6 | 1,1,1,2-Tetrachloroethane |
| U209 | 79-34-5 | Ethane, 1,1,2,2-tetrachloro- |
| U209 | 79-34-5 | 1,1,2,2,-Tetrachloroethane |
| U210 | 127-18-4 | Ethene, tetrachloro- |
| U210 | 127-18-4 | Tetrachloroethylene |
| U211 | 56-23-5 | Carbon tetrachloride |
| U211 | 56-23-5 | Methane, tetrachloro- |
| U213 | 109-99-9 | Furan, tetrahydro-(I) |
| U213 | 109-99-9 | Tetrahydrofuran (I) |
| U214 | 563-68-8 | Acetic acid, thallium(1+) salt |
| U214 | 563-68-8 | Thallium(I) acetate |
| U215 | 6533-73-9 | Carbonic acid, dithallium (1+) salt |
| U215 | 6533-73-9 | Thallium(I) carbonate |
| U216 | 7791-12-0 | Thallium (I) chloride |
| U216 | 7791-12-0 | Thallium chloride TlCl |
| U217 | 10102-45-1 | Nitric acid, thallium(1+)salt |
| U217 | 10102-45-1 | Thallium (I) nitrate |
| U218 | 62-55-5 | Ethanethioamide |
| U218 | 62-55-5 | Thioacetamide |
| U219 | 62-56-6 | Thiourea |
| U220 | 108-88-3 | Benzene, methyl- |
| U220 | 108-88-3 | Toluene |
| U221 | 25376-45-8 | Benzenediamine, ar-methyl- |
| U221 | 25376-45-8 | Toluenediamine |
| U222 | 636-21-5 | Benzenamine, 2-methyl-, hydrochloride |
| U222 | 636-21-5 | o-Toluidine hydrochloride |
| U223 | 26471-62-5 | Benzene,1,3-diisocyanatomethyl-(R,T) |
| U223 | 26471-62-5 | Toluene diisocyanate (R,T) |
| U225 | 75-25-2 | Bromoform |
| U225 | 75-25-2 | Methane, tribromo- |
| U226 | 71-55-6 | Ethane, 1,1,1-trichloro- |
| U226 | 71-55-6 | Methyl chloroform |
| U226 | 71-55-6 | 1,1,1-Trichloroethane |
| U227 | 79-00-5 | Ethane, 1,1,2-trichloro- |
| U227 | 79-00-5 | 1,1,2-Trichloroethane |
| U228 | 79-01-6 | Ethene, trichloro- |
| U228 | 79-01-6 | Trichloroethylene |
| U234 | 99-35-4 | Benzene, 1,3,5-trinitro- |
| U234 | 99-35-4 | 1,3,5-Trinitrobenzene (R,T) |
| U235 | 126-72-7 | 1-Propanol, 2,3-dibromo-, phosphate (3:1) |
| U235 | 126-72-7 | Tris(2,3-dibromopropyl) phosphate |
| U236 | 72-57-1 | 2,7-Naphthalenedisulfonic acid,3,3'-[(3,3'-dimethyl- [1,1'-biphenyl]-4,4'-diyl) bis(azo)bis[5-amino-4-hydroxy]-,tetrasodium salt |
| U236 | 72-57-1 | Trypan blue |
| U237 | 66-75-1 | 2,4-(1H,3H)-Pyrimidinedione, 5- [bis(2-chloroethyl) amino]- |
| U237 | 66-75-1 | Uracil mustard |
| U238 | 51-79-6 | Carbamic acid, ethyl ester |
| U238 | 51-79-6 | Ethyl carbamate (urethane) |
| U239 | 1330-20-7 | Benzene, dimethyl-(I,T) |
| U239 | 1330-20-7 | Xylene (I) |
| U240 | [1]94-75-7 | Acetic acid, (2,4-dichloro- phenoxy)-, salts and esters |
| U240 | [1]94-75-7 | 2,4-D, salts and esters |
| U243 | 1888-71-7 | Hexachloropropene |
| U243 | 1888-71-7 | 1-Propene, 1,1,2,3,3,3-hexachloro- |
| U244 | 137-26-8 | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2 S_2$, tetramethyl- |
| U244 | 137-26-8 | Thiram |
| U246 | 506-68-3 | Cyanogen bromide (CN) Br |
| U247 | 72-43-5 | Benzene, 1, 1'-(2,2,2-trichloroethylidene)bis[4-methoxy- |
| U247 | 72-43-5 | Methoxychlor |
| U248 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, and salts, when present at concentrations of 0.3 percent or less |
| U248 | [1]81-81-2 | Warfarin, and salts, when present at concentrations of 0.3 percent or less |

**Table 4. Toxic Wastes**
**(Numerical Order by EPA Hazardous Waste Number)**

| EPA Hazardous Waste Number | Chemical Abstract Number | Hazardous Waste (Substance) |
|---|---|---|
| U249 | 1314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations of 10 percent or less |
| U271 | 17804-35-2 | Benomyl |
| U271 | 17804-35-2 | Carbamic acid, [1-[(butylamino)carbonyl]-1H- benzimidazol-2-yl]-, methyl ester |
| U278 | 22781-23-3 | Bendiocarb |
| U278 | 22781-23-3 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate |
| U279 | 63-25-2 | Carbaryl |
| U279 | 63-25-2 | 1-Naphthalenol, methylcarbamate |
| U280 | 101-27-9 | Barban |
| U280 | 101-27-9 | Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester |
| U328 | 95-53-4 | Benzenamine, 2-methyl- |
| U328 | 95-53-4 | o-Toluidine |
| U353 | 106-49-0 | Benzenamine, 4-methyl- |
| U353 | 106-49-0 | p-Toluidine |
| U359 | 110-80-5 | Ethanol,2-ethoxy- |
| U359 | 110-80-5 | Ethylene glycol monoethyl ether |
| U364 | 22961-82-6 | Bendiocarb phenol |
| U364 | 22961-82-6 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl- |
| U367 | 1563-38-8 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- |
| U367 | 1563-38-8 | Carbofuran phenol |
| U372 | 10605-21-7 | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester |
| U372 | 10605-21-7 | Carbendazim |
| U373 | 122-42-9 | Carbamic acid, phenyl-, 1-methylethyl ester |
| U373 | 122-42-9 | Propham |
| U387 | 52888-80-9 | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester |
| U387 | 52888-80-9 | Prosulfocarb |
| U389 | 2303-17-5 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester |
| U389 | 2303-17-5 | Triallate |
| U394 | 30558-43-1 | A2213 |
| U394 | 30558-43-1 | Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester |
| U395 | 5952-26-1 | Diethylene glycol, dicarbamate |
| U395 | 5952-26-1 | Ethanol, 2,2'-oxybis-, dicarbamate |
| U404 | 121-44-8 | Ethanamine, N,N-diethyl- |
| U404 | 121-44-8 | Triethylamine |
| U409 | 23564-05-8 | Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester |
| U409 | 23564-05-8 | Thiophanatemethyl |
| U410 | 59669-26-0 | Ethanimidothioic acid, N,N'-[thiobis[(methylimino) carbonyloxy]]bis-,dimethyl ester |
| U410 | 59669-26-0 | Thiodicarb |
| U411 | 114-26-1 | Phenol, 2-(1-methylethoxy)-, methylcarbamate |
| U411 | 114-26-1 | Propoxur |
| See F027 | 93-76-5 | Acetic acid, (2,4,5-trichlorophenoxy)- |
| See F027 | 87-86-5 | Pentachlorophenol |
| See F027 | 87-86-5 | Phenol, pentachloro- |
| See F027 | 58-90-2 | Phenol, 2,3,4,6-tetrachloro- |
| See F027 | 95-95-4 | Phenol, 2,4,5-trichloro- |
| See F027 | 88-06-2 | Phenol, 2,4,6-trichloro- |
| See F027 | 93-72-1 | Propanoic acid,2-(2,4,5-trichlorophenoxy)- |
| See F027 | 93-72-1 | Silvex (2,4,5-TP) |
| See F027 | 93-76-5 | 2,4,5-T |
| See F027 | 58-90-2 | 2,3,4,6-Tetrachlorophenol |
| See F027 | 95-95-4 | 2,4,5-Trichlorophenol |
| See F027 | 88-06-2 | 2,4,6-Trichlorophenol |

[1]CAS Number given for parent compound only.

G. Constituents that Serve as a Basis for Listing Hazardous Waste. Table 6 of this Section lists constituents that serve as a basis for listing hazardous waste.

| Table 6. Table of Constituents that Serve as a Basis for Listing Hazardous Waste |
|---|
| **EPA Hazardous Waste Number F001** |
| Tetrachloroethylene; methylene chloride; trichloroethylene; 1,1,1-trichloroethane; carbon tetrachloride; chlorinated fluorocarbons |
| **EPA Hazardous Waste Number F002** |
| Tetrachloroethylene; methylene chloride; trichloroethylene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; chlorobenzene; 1,1,2-trichloro-1,2,2-trifluoroethane; ortho-dichlorobenzene; trichlorofluoromethane |
| **EPA Hazardous Waste Number F003** |
| N.A. |
| **EPA Hazardous Waste Number F004** |
| Cresols and cresylic acid; nitrobenzene |
| **EPA Hazardous Waste Number F005** |
| Toluene; methyl ethyl ketone; carbon disulfide; isobutanol; pyridine; 2-ethoxyethanol; benzene; 2-nitropropane |
| **EPA Hazardous Waste Number F006** |
| Cadmium; hexavalent chromium; nickel; cyanide (complexed) |
| **EPA Hazardous Waste Number F007** |
| Cyanide (salts) |
| **EPA Hazardous Waste Number F008** |
| Cyanide (salts) |
| **EPA Hazardous Waste Number F009** |
| Cyanide (salts) |
| **EPA Hazardous Waste Number F010** |
| Cyanide (salts) |
| **EPA Hazardous Waste Number F011** |
| Cyanide (salts) |
| **EPA Hazardous Waste Number F012** |
| Cyanide (complexed) |
| **EPA Hazardous Waste Number F019** |
| Hexavalent chromium; cyanide (complexed) |
| **EPA Hazardous Waste Number F020** |
| Tetra- and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine, and other salts |
| **EPA Hazardous Waste Number F021** |
| Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives |
| **EPA Hazardous Waste Number F022** |
| Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans |
| **EPA Hazardous Waste Number F023** |
| Tetra- and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine, and other salts |
| **EPA Hazardous Waste Number F024** |
| Chloromethane; dichloromethane; trichloromethane; carbon tetrachloride; chloroethylene; 1,1-dichloroethane; 1,2-dichloroethane; trans-1-2-dichloroethylene; 1,1-dichloroethylene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; trichloroethylene; 1,1,1,2-tetrachloroethane; 1,1,2,2-tetrachloroethane; tetrachloroethylene; pentachloroethane; hexachloroethane; allyl chloride (3-chloropropene); dichloropropane; dichloropropene; 2-chloro-1,3-butadiene; hexachloro-1,3-butadiene; hexachlorocyclopentadiene; hexachlorocyclohexane; benzene; chlorobenzene; dichlorobenzenes; 1,2,4-trichlorobenzene; tetrachlorobenzene; pentachlorobenzene; hexachlorobenzene; toluene; naphthalene |
| **EPA Hazardous Waste Number F025** |
| Chloromethane; dichloromethane; trichloromethane; carbon tetrachloride; chloroethylene; 1,1-dichloroethane; 1,2-dichloroethane; trans-1,2-dichloroethylene; 1,1-dichloroethylene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; trichloroethylene; 1,1,1,2-tetrachloroethane; 1,1,2,2-tetrachloroethane; tetrachloroethylene; pentachloroethane; hexachloroethane; allyl chloride (3-chloropropene); dichloropropane; dichloropropene; 2-chloro-1,3-butadiene; hexachloro-1,3-butadiene; hexachlorocyclopentadiene; benzene; chlorobenzene; dichlorobenzenes; 1,2,4-trichlorobenzene; tetrachlorobenzene; pentachlorobenzene; hexachlorobenzene; toluene; naphthalene |
| **EPA Hazardous Waste Number F026** |
| Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans |
| **EPA Hazardous Waste Number F027** |
| Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine, and other salts |
| **EPA Hazardous Waste Number F028** |
| Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine, and other salts |
| **EPA Hazardous Waste Number F032** |
| Benz(a)anthracene; benzo(a)pyrene; dibenz(a,h)anthracene; indeno(1,2,3-cd)pyrene; pentachlorophenol; arsenic; chromium; tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins; tetra-, penta-, hexa-, heptachlorodibenzofurans |
| **EPA Hazardous Waste Number F034** |
| Benz(a)anthracene; benzo(k)fluoranthene; benzo(a)pyrene; dibenz(a,h)anthracene; indeno(1,2,3-cd)pyrene; naphthalene; arsenic; chromium |
| **EPA Hazardous Waste Number F035** |
| Arsenic; chromium; lead |

| Table 6. Table of Constituents that Serve as a Basis for Listing Hazardous Waste |
|---|
| **EPA Hazardous Waste Number F037** |
| Benzene; benzo(a)pyrene; chrysene; lead; chromium |
| **EPA Hazardous Waste Number F038** |
| Benzene; benzo(a)pyrene; chrysene; lead; chromium |
| **EPA Hazardous Waste Number F039** |
| All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under LAC 33:V.2299, Table 2 |
| **EPA Hazardous Waste Number K001** |
| Pentachlorophenol; phenol; 2-chlorophenol; p-chloro-m-cresol; 2,4-dimethylphenol; 2,4-dinitrophenol; trichlorophenols; tetrachlorophenols; 2,4-dinitrophenol; creosote; chrysene; naphthalene; fluoranthene; benzo(b)fluoranthene; benzo(a)pyrene; indeno(1,2,3-cd)pyrene; benz(a)anthracene; dibenz(a)anthracene; acenaphthalene |
| **EPA Hazardous Waste Number K002** |
| Hexavalent chromium; lead |
| **EPA Hazardous Waste Number K003** |
| Hexavalent chromium; lead |
| **EPA Hazardous Waste Number K004** |
| Hexavalent chromium |
| **EPA Hazardous Waste Number K005** |
| Hexavalent chromium; lead |
| **EPA Hazardous Waste Number K006** |
| Hexavalent chromium |
| **EPA Hazardous Waste Number K007** |
| Cyanide (complexed); hexavalent chromium |
| **EPA Hazardous Waste Number K008** |
| Hexavalent chromium |
| **EPA Hazardous Waste Number K009** |
| Chloroform; formaldehyde; methylene chloride; methyl chloride; paraldehyde; formic acid |
| **EPA Hazardous Waste Number K010** |
| Chloroform; formaldehyde; methylene chloride; methyl chloride; paraldehyde; formic acid; chloroacetaldehyde |
| **EPA Hazardous Waste Number K011** |
| Acrylonitrile; acetonitrile; hydrocyanic acid |
| **EPA Hazardous Waste Number K013** |
| Hydrocyanic acid; acrylonitrile; acetonitrile |
| **EPA Hazardous Waste Number K014** |
| Acetonitrile; acrylamide |
| **EPA Hazardous Waste Number K015** |
| Benzyl chloride; chlorobenzene; toluene; benzotrichloride |
| **EPA Hazardous Waste Number K016** |
| Hexachlorobenzene; hexachlorobutadiene; carbon tetrachloride; hexachloroethane; perchloroethylene |
| **EPA Hazardous Waste Number K017** |
| Epichlorohydrin; chloroethers [bis(chloromethyl) ether and bis(2-chloroethyl) ether]; trichloropropane; dichloropropanols |
| **EPA Hazardous Waste Number K018** |
| 1,2-dichloroethane; trichloroethylene; hexachlorobutadiene; hexachlorobenzene |
| **EPA Hazardous Waste Number K019** |
| Ethylene dichloride; 1,1,1-trichloroethane; 1,1,2-trichloroethane; tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane); trichloroethylene; tetrachloroethylene; carbon tetrachloride; chloroform; vinyl chloride; vinylidene chloride |
| **EPA Hazardous Waste Number K020** |
| Ethylene dichloride; 1,1,1-trichloroethane; 1,1,2-trichloroethane; tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane); trichloroethylene; tetrachloroethylene; carbon tetrachloride; chloroform; vinyl chloride; vinylidene chloride |
| **EPA Hazardous Waste Number K021** |
| Antimony; carbon tetrachloride; chloroform |
| **EPA Hazardous Waste Number K022** |
| Phenol; tars (polycyclic aromatic hydrocarbons) |
| **EPA Hazardous Waste Number K023** |
| Phthalic anhydride; maleic anhydride |
| **EPA Hazardous Waste Number K024** |
| Phthalic anhydride; 1,4-naphthoquinone |
| **EPA Hazardous Waste Number K025** |
| Meta-dinitrobenzene; 2,4-dinitrotoluene |
| **EPA Hazardous Waste Number K026** |
| Paraldehyde; pyridines; 2-picoline |
| **EPA Hazardous Waste Number K027** |
| Toluene diisocyanate; toluene-2,4-diamine |
| **EPA Hazardous Waste Number K028** |
| 1,1,1-trichloroethane; vinyl chloride |
| **EPA Hazardous Waste Number K029** |
| 1,2-dichloroethane; 1,1,1-trichloroethane; vinyl chloride; vinylidene chloride; chloroform |

| Table 6. Table of Constituents that Serve as a Basis for Listing Hazardous Waste |
|---|
| **EPA Hazardous Waste Number K030** |
| Hexachlorobenzene; hexachlorobutadiene; hexachloroethane; 1,1,1,2-tetrachloroethane; 1,1,2,2-tetrachloroethane; ethylene dichloride |
| **EPA Hazardous Waste Number K031** |
| Arsenic |
| **EPA Hazardous Waste Number K032** |
| Hexachlorocyclopentadiene |
| **EPA Hazardous Waste Number K033** |
| Hexachlorocyclopentadiene |
| **EPA Hazardous Waste Number K034** |
| Hexachlorocyclopentadiene |
| **EPA Hazardous Waste Number K035** |
| Creosote; chrysene; naphthalene; fluoranthene; benzo(b)fluoranthene; benzo(a)pyrene; indeno(1,2,3-cd)pyrene; benzo(a)anthracene; dibenzo(a)anthracene; acenaphthalene |
| **EPA Hazardous Waste Number K036** |
| Toluene; phosphorodithioic and phosphorothioic acid esters |
| **EPA Hazardous Waste Number K037** |
| Toluene; phosphorodithioic and phosphorothioic acid esters |
| **EPA Hazardous Waste Number K038** |
| Phorate; formaldehyde; phosphorodithioic and phosphorothioic acid esters |
| **EPA Hazardous Waste Number K039** |
| Phosphorodithioic and phosphorothioic acid esters |
| **EPA Hazardous Waste Number K040** |
| Phorate; formaldehyde; phosphorodithioic and phosphorothioic acid esters |
| **EPA Hazardous Waste Number K041** |
| Toxaphene |
| **EPA Hazardous Waste Number K042** |
| Hexachlorobenzene; ortho-dichlorobenzene |
| **EPA Hazardous Waste Number K043** |
| 2,4-dichlorophenol; 2,6-dichlorophenol; 2,4,6-trichlorophenol |
| **EPA Hazardous Waste Number K044** |
| N.A. |
| **EPA Hazardous Waste Number K045** |
| N.A. |
| **EPA Hazardous Waste Number K046** |
| Lead |
| **EPA Hazardous Waste Number K047** |
| N.A. |
| **EPA Hazardous Waste Number K048** |
| Hexavalent chromium; lead |
| **EPA Hazardous Waste Number K049** |
| Hexavalent chromium; lead |
| **EPA Hazardous Waste Number K050** |
| Hexavalent chromium |
| **EPA Hazardous Waste Number K051** |
| Hexavalent chromium; lead |
| **EPA Hazardous Waste Number K052** |
| Lead |
| **EPA Hazardous Waste Number K060** |
| Cyanide; naphthalene; phenolic compounds; arsenic |
| **EPA Hazardous Waste Number K061** |
| Hexavalent chromium; lead; cadmium |
| **EPA Hazardous Waste Number K062** |
| Hexavalent chromium; lead |
| **EPA Hazardous Waste Number K064** |
| Lead; cadmium |
| **EPA Hazardous Waste Number K065** |
| Do |
| **EPA Hazardous Waste Number K066** |
| Do |
| **EPA Hazardous Waste Number K069** |
| Hexavalent chromium; lead; cadmium |
| **EPA Hazardous Waste Number K071** |
| Mercury |
| **EPA Hazardous Waste Number K073** |
| Chloroform; carbon tetrachloride; hexachloroethane; trichloroethane; tetrachloroethylene; dichloroethylene; 1,1,2,2-tetrachloroethane |

| Table 6. Table of Constituents that Serve as a Basis for Listing Hazardous Waste |
|---|
| **EPA Hazardous Waste Number K083** |
| Aniline; diphenylamine; nitrobenzene; phenylenediamine |
| **EPA Hazardous Waste Number K084** |
| Arsenic |
| **EPA Hazardous Waste Number K085** |
| Benzene; dichlorobenzenes; trichlorobenzenes; tetrachlorobenzenes; pentachlorobenzene; hexachlorobenzene; benzyl chloride |
| **EPA Hazardous Waste Number K086** |
| Lead; hexavalent chromium |
| **EPA Hazardous Waste Number K087** |
| Phenol; naphthalene |
| **EPA Hazardous Waste Number K088** |
| Cyanide (complexes) |
| **EPA Hazardous Waste Number K090** |
| Chromium |
| **EPA Hazardous Waste Number K091** |
| Do |
| **EPA Hazardous Waste Number K093** |
| Phthalic anhydride; maleic anhydride |
| **EPA Hazardous Waste Number K094** |
| Phthalic anhydride |
| **EPA Hazardous Waste Number K095** |
| 1,1,2-trichloroethane; 1,1,1,2-tetrachloroethane; 1,1,2,2-tetrachloroethane |
| **EPA Hazardous Waste Number K096** |
| 1,2-dichloroethane; 1,1,1-trichloroethane; 1,1,2-trichloroethane |
| **EPA Hazardous Waste Number K097** |
| Chlordane; heptachlor |
| **EPA Hazardous Waste Number K098** |
| Toxaphene |
| **EPA Hazardous Waste Number K099** |
| 2,4-dichlorophenol; 2,4,6-trichlorophenol |
| **EPA Hazardous Waste Number K100** |
| Hexavalent chromium; lead; cadmium |
| **EPA Hazardous Waste Number K101** |
| Arsenic |
| **EPA Hazardous Waste Number K102** |
| Arsenic |
| **EPA Hazardous Waste Number K103** |
| Aniline; nitrobenzene; phenylenediamine |
| **EPA Hazardous Waste Number K104** |
| Aniline; benzene; diphenylamine; nitrobenzene; phenylenediamine |
| **EPA Hazardous Waste Number K105** |
| Benzene; monochlorobenzene; dichlorobenzenes; 2,4,6-trichlorophenol |
| **EPA Hazardous Waste Number K106** |
| Mercury |
| **EPA Hazardous Waste Number K107** |
| 1,1-dimethylhydrazine (UDMH) |
| **EPA Hazardous Waste Number K108** |
| 1,1-dimethylhydrazine (UDMH) |
| **EPA Hazardous Waste Number K109** |
| 1,1-dimethylhydrazine (UDMH) |
| **EPA Hazardous Waste Number K110** |
| 1,1-dimethylhydrazine (UDMH) |
| **EPA Hazardous Waste Number K111** |
| 2,4-dinitrotoluene |
| **EPA Hazardous Waste Number K112** |
| 2,4-toluenediamine; o-toluidine; p-toluidine; aniline |
| **EPA Hazardous Waste Number K113** |
| 2,4-toluenediamine; o-toluidine; p-toluidine; aniline |
| **EPA Hazardous Waste Number K114** |
| 2,4-toluenediamine; o-toluidine; p-toluidine |
| **EPA Hazardous Waste Number K115** |
| 2,4-toluenediamine |
| **EPA Hazardous Waste Number K116** |
| Carbon tetrachloride; tetrachloroethylene; chloroform; phosgene |
| **EPA Hazardous Waste Number K117** |
| Ethylene dibromide |

| Table 6. Table of Constituents that Serve as a Basis for Listing Hazardous Waste |
|---|
| **EPA Hazardous Waste Number K118** |
| Ethylene dibromide |
| **EPA Hazardous Waste Number K123** |
| Ethylene thiourea |
| **EPA Hazardous Waste Number K124** |
| Ethylene thiourea |
| **EPA Hazardous Waste Number K125** |
| Ethylene thiourea |
| **EPA Hazardous Waste Number K126** |
| Ethylene thiourea |
| **EPA Hazardous Waste Number K131** |
| Dimethyl sulfate; methyl bromide |
| **EPA Hazardous Waste Number K132** |
| Methyl bromide |
| **EPA Hazardous Waste Number K136** |
| Ethylene dibromide |
| **EPA Hazardous Waste Number K141** |
| Benzene; benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; dibenz(a,h)anthracene; indeno(1,2,3-cd)pyrene |
| **EPA Hazardous Waste Number K142** |
| Benzene; benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; dibenz(a,h)anthracene; indeno(1,2,3-cd)pyrene |
| **EPA Hazardous Waste Number K143** |
| Benzene; benz(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene |
| **EPA Hazardous Waste Number K144** |
| Benzene; benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; dibenz(a,h)anthracene |
| **EPA Hazardous Waste Number K145** |
| Benzene; benz(a)anthracene; benzo(a)pyrene; dibenz(a,h)anthracene; naphthalene |
| **EPA Hazardous Waste Number K147** |
| Benzene; benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; dibenz(a,h)anthracene; indeno(1,2,3-cd)pyrene |
| **EPA Hazardous Waste Number K148** |
| Benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; dibenz(a,h)anthracene; indeno(1,2,3-cd)pyrene |
| **EPA Hazardous Waste Number K149** |
| Benzotrichloride; benzyl chloride; chloroform; chloromethane; chlorobenzene; 1,4-dichlorobenzene; hexachlorobenzene; pentachlorobenzene; 1,2,4,5-tetrachlorobenzene; toluene |
| **EPA Hazardous Waste Number K150** |
| Carbon tetrachloride; chloroform; chloromethane; 1,4-dichlorobenzene; hexachlorobenzene; pentachlorobenzene; 1,2,4,5-tetrachlorobenzene; 1,1,2,2-tetrachloroethane; tetrachloroethylene; 1,2,4-trichlorobenzene |
| **EPA Hazardous Waste Number K151** |
| Benzene; carbon tetrachloride; chloroform; hexachlorobenzene; pentachlorobenzene; toluene; 1,2,4,5-tetrachlorobenzene; tetrachloroethylene |
| **EPA Hazardous Waste Number K156** |
| Benomyl; carbaryl; carbendazim; carbofuran; carbosulfan; formaldehyde; methylene chloride; triethylamine |
| **EPA Hazardous Waste Number K157** |
| Carbon tetrachloride; formaldehyde; methyl chloride; methylene chloride; pyridine; triethylamine |
| **EPA Hazardous Waste Number K158** |
| Benomyl; carbendazim; carbofuran; carbosulfan; chloroform; methylene chloride |
| **EPA Hazardous Waste Number K159** |
| Benzene; butylate; EPTC; molinate; pebulate; vernolate |
| **EPA Hazardous Waste Number K161** |
| Antimony; arsenic; metam-sodium; ziram |
| **EPA Hazardous Waste Number K169** |
| Benzene |
| **EPA Hazardous Waste Number K170** |
| Benzo(a)pyrene; dibenz(a,h)anthracene; benz(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; 3-methylcholanthrene; 7,12-dimethylbenz(a)anthracene |
| **EPA Hazardous Waste Number K171** |
| Benzene; arsenic |
| **EPA Hazardous Waste Number K172** |
| Benzene; arsenic |
| **EPA Hazardous Waste Number K174** |
| 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD); 1,2,3,4,6,7,8-heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF); 1,2,3,4,7,8,9-heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF); HxCDDs (all hexachlorodibenzo-p-dioxins); HxCDFs (all hexachlorodibenzofurans); PeCDDs (all pentachlorodibenzo-p-dioxins); OCDD (1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin); OCDF (1,2,3,4,6,7,8,9-octachlorodibenzofuran); PeCDFs (all pentachlorodibenzofurans); TCDDs (all tetrachlorodibenzo-p-dioxins); TCDFs (all tetrachlorodibenzofurans) |

| Table 6. Table of Constituents that Serve as a Basis for Listing Hazardous Waste |
|---|
| **EPA Hazardous Waste Number K175** |
| Mercury |
| **EPA Hazardous Waste Number K176** |
| Arsenic; lead |
| **EPA Hazardous Waste Number K177** |
| Antimony |
| **EPA Hazardous Waste Number K178** |
| Thallium |
| **EPA Hazardous Waste Number K181** |
| Aniline; o-anisidine; 4-chloroaniline; p-cresidine; 2,4-dimethylaniline; 1,2-phenylenediamine; 1,3-phenylenediamine |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 11:1139 (December 1985), LR 12:319 (May 1986), LR 13:84 (February 1987), LR 13:433 (August 1987), LR 14:426 (July 1988), LR 14:791 (November 1988), LR 15:182 (March 1989), LR 16:220 (March 1990), LR 16:614 (July 1990), LR 16:1057 (December 1990), LR 17:369 (April 1991), LR 17:478 (May 1991), LR 17:658 (July 1991), LR 18:723 (July 1992), LR 18:1256 (November 1992), LR 18:1375 (December 1992), LR 20:1000 (September 1994), LR 21:266 (March 1995), LR 21:944 (September 1995), LR 22:829, 840 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:1522 (November 1997), LR 24:321 (February 1998), LR 24:686 (April 1998), LR 24:1754 (September 1998), LR 25:487 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:304 (March 2001), LR 27:715 (May 2001), LR 28:1009 (May 2002), LR 29:324 (March 2003), amended by the Office of Environmental Assessment, LR 31:1573 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 32:831 (May 2006), LR 33:1627 (August 2007), LR 34:635 (April 2008), LR 34:1020 (June 2008), LR 34:2392 (November 2008).

## §4903. Category II Hazardous Wastes

A. Category II hazardous wastes are wastes designated as hazardous based on classical analytical procedures (see *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference at LAC 33:V.110, for guidance on the procedures). There are four hazardous waste categories for wastes not otherwise characterized: ignitability, corrosivity, reactivity, and toxicity. LAC 33:V.Subpart 1 applies to those materials that exhibit the characteristics of ignitability, corrosivity, reactivity, and/or toxicity.

B. Ignitability. A solid waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number D001. A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties.

1. It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60°C (140°F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80, as incorporated by reference in LAC 33:V.110, or by a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D 3278-78, as incorporated by reference in LAC 33:V.110.

2. It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

3. It is an ignitable compressed gas.

a. The term *compressed gas* designates any material or mixture having in the container an absolute pressure exceeding 40 p.s.i. at 70°F or, regardless of the pressure at 70°F, having an absolute pressure exceeding 104 p.s.i. at 130°F; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100°F as determined by ASTM Test D-323.

b. A compressed gas shall be characterized as ignitable if any one of the following occurs:

i. either a mixture of 13 percent or less (by volume) with air forms a flammable mixture or the flammable range with air is wider than 12 percent regardless of the lower limit. These limits shall be determined at atmospheric temperature and pressure. The method of sampling and test procedure shall be acceptable to the Bureau of Explosives and approved by the Director, Pipeline and Hazardous Materials Technology, U.S. Department of Transportation (see Note 2 to this Subsection);

ii. using the Bureau of Explosives' Flame Projection Apparatus (see Note 1 to this Subsection), the flame projects more than 18 inches beyond the ignition source with valve opened fully, or the flame flashes back and burns at the valve with any degree of valve opening;

iii. using the Bureau of Explosives' Open Drum Apparatus (see Note 1 to this Subsection), there is any significant propagation of flame away from the ignition source; or

iv. using the Bureau of Explosives' Closed Drum Apparatus (see Note 1 to this Subsection), there is any explosion of the vapor-air mixture in the drum.

4. It is an oxidizer. An oxidizer, for the purposes of these regulations, is a substance, such as a chlorate, permanganate, inorganic peroxide, or nitrate, that yields oxygen readily to stimulate the combustion of organic matter (see Note 4 to this Subsection). An organic compound containing the bivalent -O-O- structure and that may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals must be classed as an organic peroxide unless:

a. the material meets the definition of a Class A explosive or a Class B explosive, as defined in LAC 33:V.4903.D.8, in which case it must be classed as an explosive;

b. the material is forbidden to be offered for transportation according to 49 CFR 172.101 or 49 CFR 173.21;

c. it is determined that the predominant hazard of the material containing an organic peroxide is other than that of an organic peroxide; or

d. according to data on file with the Pipeline and Hazardous Materials Safety Administration in the U.S. Department of Transportation (see Note 3 to this Subsection), it has been determined that the material does not present a hazard in transportation.

[Note 1: A description of the Bureau of Explosives' Flame Projection Apparatus, Open Drum Apparatus, Closed Drum Apparatus, and method of tests may be procured from the Bureau of Explosives.]

[Note 2: As part of a U.S. Department of Transportation (DOT) reorganization, the Office of Hazardous Materials Technology (OHMT), which was the office listed in the 1980 publication of 49 CFR 173.300 for the purposes of approving sampling and test procedures for a flammable gas, ceased operations on February 20, 2005. OHMT programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.]

[Note 3: As part of a U.S. Department of Transportation (DOT) reorganization, the Research and Special Programs Administration (RSPA), which was the office listed in the 1980 publication of 49 CFR 173.151a for the purposes of determining that a material does not present a hazard in transport, ceased operations on February 20, 2005. RSPA programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.]

[Note 4: The DOT regulatory definition of an oxidizer was contained in §173.151 of 49 CFR, and the definition of an organic peroxide was contained in paragraph 173.151a. An organic peroxide is a type of oxidizer.]

C. Corrosivity. A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number D002. A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties.

1. It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040C in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.

2. It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by Method 1110A in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, and as incorporated by reference in LAC 33:V.110.

D. Reactivity. A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number D003. A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties.

1. It is normally unstable and readily undergoes violent change without detonating.

2. It reacts violently with water.

3. It forms potentially explosive mixtures with water.

4. When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

5. It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2.0 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

6. It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

7. It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

8. It is a forbidden explosive as defined in LDPS Regulation LAC 33:V.Subpart 2.Chapter 101, or a Class A explosive as defined in LDPS Regulation LAC 33:V.Subpart 2.Chapter 101 or a Class B explosive as defined in LDPS Regulation LAC 33:V.Subpart 2.Chapter 101.

E. Toxicity Characteristic

1. A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, Method 1311 described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference at LAC 33:V.110, the extract from a representative sample of the waste contains any of the contaminants listed in Table 5 of this Section at the concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purposes of this Section.

2. A solid waste that exhibits the characteristic of toxicity, but is not listed as a hazardous waste in LAC 33:V.4901, has the Hazardous Waste Number specified in Table 5 of this Section that corresponds to the toxic contaminant causing it to be hazardous.

**Table 5. Maximum Concentrations of Contaminants for the Toxicity Characteristic**

| EPA HW Number[1] | Contaminant | CAS Number[2] | Regulatory Level (mg/L) |
|---|---|---|---|
| D004 | Arsenic | 7440-38-2 | 5.0 |
| D005 | Barium | 7440-39-3 | 100.0 |
| D018 | Benzene | 71-43-2 | 0.5 |
| D006 | Cadmium | 7440-43-9 | 1.0 |
| D019 | Carbon tetrachloride | 56-23-5 | 0.5 |
| D020 | Chlordane | 57-74-9 | 0.03 |

**Table 5. Maximum Concentrations of Contaminants for the Toxicity Characteristic**

| EPA HW Number[1] | Contaminant | CAS Number[2] | Regulatory Level (mg/L) |
|---|---|---|---|
| D021 | Chlorobenzene | 108-90-7 | 100.0 |
| D022 | Chloroform | 67-66-3 | 6.0 |
| D007 | Chromium | 7440-47-3 | 5.0 |
| D023 | o-Cresol | 95-48-7 | [4]200.0 |
| D024 | m-Cresol | 108-39-4 | [4]200.0 |
| D025 | p-Cresol | 106-44-5 | [4]200.0 |
| D026 | Cresol | -------- | [4]200.0 |
| D016 | 2,4-D | 94-75-7 | 10.0 |
| D027 | 1,4-Dichlorobenzene | 106-46-7 | 7.5 |
| D028 | 1,2-Dichlorethane | 107-06-2 | 0.5 |
| D029 | 1,1-Dichloroethylene | 75-35-4 | 0.7 |
| D030 | 2,4-Dinitrotoluene | 121-14-2 | [3]0.13 |
| D012 | Endrin | 72-20-8 | 0.02 |
| D031 | Heptachlor (and its epoxide) | 76-44-8 | 0.008 |
| D032 | Hexachlorobenzene | 118-74-1 | [3]0.13 |
| D033 | Hexachlorobutadiene | 87-68-3 | 0.5 |
| D034 | Hexachloroethane | 67-72-1 | 3.0 |
| D008 | Lead | 7439-92-1 | 5.0 |
| D013 | Lindane | 58-89-9 | 0.4 |
| D009 | Mercury | 7439-97-6 | 0.2 |
| D014 | Methoxychlor | 72-43-5 | 10.0 |
| D035 | Methyl ethyl ketone | 78-93-3 | 200.0 |
| D036 | Nitrobenzene | 98-95-3 | 2.0 |
| D037 | Pentachlorophenol | 87-86-5 | 100.0 |
| D038 | Pyridine | 110-86-1 | [3]5.0 |
| D010 | Selenium | 7782-49-2 | 1.0 |
| D011 | Silver | 7440-22-4 | 5.0 |
| D039 | Tetrachloroethylene | 127-18-4 | 0.7 |
| D015 | Toxaphene | 8001-35-2 | 0.5 |
| D040 | Trichloroethylene | 79-01-6 | 0.5 |
| D041 | 2,4,5-Trichlorophenol | 95-95-4 | 400.0 |
| D042 | 2,4,6-Trichlorophenol | 88-06-2 | 2.0 |
| D017 | 2,4,5-TP (silvex) | 93-72-1 | 1.0 |
| D043 | Vinyl chloride | 75-01-4 | 0.2 |

[1] Hazardous Waste Number
[2] Chemical Abstracts Service Number
[3] Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
[4] If o-, m- and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/L.

F. A hazardous waste that is listed in LAC 33:V.4901 and/or is identified by one or more of the characteristics in this Section is assigned every EPA Hazardous Waste Number that is applicable as set forth in LAC 33:V.Chapter 49. These waste code numbers must be used in complying with all applicable notification, recordkeeping, and reporting requirements.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 10:496 (July 1984), LR 16:1057 (December 1990), LR 17:369 (April 1991), LR 18:723 (July 1992), LR 18:1256 (November 1992), LR 22:829 (September 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:325 (March 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 34:644 (April 2008), LR 34:1020 (June 2008).

## §4907. Criteria for Listing Hazardous Waste

A. The administrative authority shall list a solid waste as a hazardous waste upon determining that the solid waste meets one of the following criteria.

1. It exhibits any of the characteristics of hazardous waste identified in LAC 33:V.4903.

2. It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity (rat) of less than 2 milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated Acute or Acutely Hazardous Waste.)

3. It contains any of the toxic constituents listed in LAC 33:V.3105, Table 1, and after considering the following factors, the administrative authority concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed:

a. the nature of the toxicity presented by the constituent;

b. the concentration of the constituent in the waste;

c. the potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in LAC 33:V.4907.A.3.g;

d. the persistence of the constituent or any toxic degradation product of the constituent;

e. the potential for the constituent or any toxic degradation product of the constituent to degrade into nonharmful constituents and the rate of degradation;

f. the degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems;

g. the plausible types of improper management to which the waste could be subjected;

h. the quantities of the waste generated at individual generation sites or on a regional or national basis;

i. the nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent;

j. action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent; and

k. such other factors as may be appropriate.

Substances will be listed in LAC 33:V.3105, Table 1 only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms. (Wastes listed in accordance with these criteria will be designated "Toxic" wastes.)

B. The administrative authority may list classes or types of solid waste as hazardous waste if he or she has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of *hazardous waste* found in LAC 33:V.109.

C. The administrative authority shall use the criteria for listing specified in this Chapter to establish the exclusion limits referred to in LAC 33:V.108.C.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 17:478 (May 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:715 (May 2001).

## §4909. Comparable/Syngas Fuel Exclusion

A. Wastes that meet the following comparable/syngas fuel requirements are not solid wastes.

B. Comparable Fuel Specifications

1. Physical Specifications

a. Heating Value. The heating value must exceed 5,000 Btu/lbs. (11,500 J/g).

b. Viscosity. The viscosity must not exceed: 50 cs, as-fired.

2. Constituent Specifications. For compounds listed in Table 7 of this Section the specification levels and, where nondetect is the specification, minimum required detection limits are listed in Table 7 of this Section.

C. Synthesis Gas Fuel Specification. Synthesis gas fuel (i.e., syngas fuel) that is generated from hazardous waste must:

1. have a minimum Btu value of 100 Btu/Scf;

2. contain less than 1 ppmv of total halogen;

3. contain less than 300 ppmv of total nitrogen other than diatomic nitrogen ($N_2$);

4. contain less than 200 ppmv of hydrogen sulfide; and

5. contain less than 1 ppmv of each hazardous constituent in the target list of LAC 33:V.3105, Table 1.

| Table 7: Detection and Detection Limit Values for Comparable Fuel Specification | | | | | |
|---|---|---|---|---|---|
| **Chemical Name** | **CAS Number** | **Composite Value (mg/kg)** | **Heating Value (Btu/lb)** | **Concentration Limit (mg/kg at required 10,000 Btu/lb)** | **Minimum Required Detection Limit (mg/kg)** |
| Total Nitrogen as N | NA | 9000 | 18400 | 4900 | |
| Total Halogens as Cl | NA | 1000 | 18400 | 540 | |
| Total Organic Halogens as Cl | NA | | | 25 or individual halogenated organics listed below | |
| Polychlorinated biphenyls, total [Arocolors, total] | 1336-36-3 | Nondetect | | Nondetect | 1.4 |
| Cyanide, total | 57-12-5 | Nondetect | | Nondetect | 1.0 |
| **Metals** | | | | | |
| Antimony, total | 7440-36-0 | Nondetect | | 12 | |
| Arsenic, total | 7440-38-2 | Nondetect | | 0.23 | |
| Barium, total | 7440-39-3 | Nondetect | | 23 | |
| Beryllium, total | 7440-41-7 | Nondetect | | 1.2 | |
| Cadmium, total | 7440-43-9 | | Nondetect | | 1.2 |
| Chromium, total | 7440-47-3 | Nondetect | | 2.3 | |
| Cobalt | 7440-48-4 | Nondetect | | 4.6 | |
| Lead, total | 7439-92-1 | 57 | 18100 | 31 | |
| Manganese | 7439-96-5 | Nondetect | | 1.2 | |
| Mercury, total | 7439-97-6 | Nondetect | | 0.25 | |
| Nickel, total | 7440-02-0 | 106 | 18400 | 58 | |
| Selenium, total | 7782-49-2 | Nondetect | | 0.23 | |
| Silver, total | 7440-22-4 | Nondetect | | 2.3 | |
| Thallium, total | 7440-28-0 | Nondetect | | 23 | |
| **Hydrocarbons** | | | | | |
| Benzo[a]anthracene | 56-55-3 | Nondetect | | 2400 | |
| Benzene | 71-43-2 | 8000 | 19600 | 4100 | |
| Benzo[b]fluoranthene | 205-99-2 | Nondetect | | 2400 | |
| Benzo[k]fluoranthene | 207-08-9 | Nondetect | | 2400 | |
| Benzo[a]pyrene | 50-32-8 | Nondetect | | 2400 | |
| Chrysene | 218-01-9 | Nondetect | | 2400 | |
| Dibenzo[a,h]anthracene | 53-70-3 | Nondetect | | 2400 | |
| 7,12-Dimethylbenz[a]anthracene | 57-97-6 | Nondetect | | 2400 | |
| Fluoranthene | 206-44-0 | Nondetect | | 2400 | |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | Nondetect | | 2400 | |
| 3-Methylcholanthrene | 56-49-5 | Nondetect | | 2400 | |
| Naphthalene | 91-20-3 | 6200 | 19400 | 3200 | |
| Toluene | 108-88-3 | 69000 | 19400 | 36000 | |
| **Oxygenates** | | | | | |
| Acetophenone | 98-86-2 | Nondetect | | 2400 | |
| Acrolein | 107-02-8 | Nondetect | | 39 | |
| Allyl alcohol | 107-18-6 | Nondetect | | 30 | |
| Bis(2-ethylhexyl)phthalate [Di-2-ethylhexyl phthalate] | 117-81-7 | Nondetect | | 2400 | |
| Butyl benzyl phthalate | 85-68-7 | Nondetect | | 2400 | |
| o-Cresol [2-Methyl phenol] | 95-48-7 | Nondetect | | 2400 | |
| m-Cresol [3-Methyl phenol] | 108-39-4 | Nondetect | | 2400 | |
| p-Cresol [4-Methyl phenol] | 106-44-5 | Nondetect | | 2400 | |
| Di-n-butyl phthalate | 84-74-2 | Nondetect | | 2400 | |
| Diethyl phthalate | 84-66-2 | Nondetect | | 2400 | |
| 2,4-Dimethylphenol | 105-67-9 | Nondetect | | 2400 | |
| Dimethyl phthalate | 131-11-3 | Nondetect | | 2400 | |
| Di-n-octyl phthalate | 117-84-0 | Nondetect | | 2400 | |
| Endothall | 145-73-3 | Nondetect | | 100 | |
| Ethyl methacrylate | 97-63-2 | Nondetect | | 39 | |
| 2-Ethoxyethanol [Ethylene glycol monoethyl ether] | 110-80-5 | Nondetect | | 100 | |
| Isobutyl alcohol | 78-83-1 | Nondetect | | 39 | |
| Isosafrole | 120-58-1 | Nondetect | | 2400 | |
| Methyl ethyl ketone [2-Butanone] | 78-93-3 | Nondetect | | 39 | |
| Methyl methacrylate | 80-62-6 | Nondetect | | 39 | |
| 1,4-Naphthoquinone | 130-15-4 | Nondetect | | 2400 | |
| Phenol | 108-95-2 | Nondetect | | 2400 | |
| Propargyl alcohol [2-Propyn-l-ol] | 107-19-7 | Nondetect | | 30 | |
| Safrole | 94-59-7 | Nondetect | | 2400 | |

| Table 7: Detection and Detection Limit Values for Comparable Fuel Specification | | | | | |
|---|---|---|---|---|---|
| **Chemical Name** | **CAS Number** | **Composite Value (mg/kg)** | **Heating Value (Btu/lb)** | **Concentration Limit (mg/kg at required 10,000 Btu/lb)** | **Minimum Required Detection Limit (mg/kg)** |
| **Sulfonated Organics** | | | | | |
| Carbon disulfide | 75-15-0 | Nondetect | | Nondetect | 39 |
| Disulfoton | 298-04-4 | Nondetect | | Nondetect | 2400 |
| Ethyl methanesulfonate | 62-50-0 | Nondetect | | Nondetect | 2400 |
| Methyl methanesulfonate | 66-27-3 | Nondetect | | Nondetect | 2400 |
| Phorate | 298-02-2 | Nondetect | | Nondetect | 2400 |
| 1,3-Propane sultone | 1120-71-4 | Nondetect | | Nondetect | 100 |
| Tetraethyldithiopyrophosphate [Sulfotepp] | 3689-24-5 | Nondetect | | Nondetect | 2400 |
| Thiophenol [Benzenethiol] | 108-98-5 | Nondetect | | Nondetect | 30 |
| O,O,O-Triethyl phosphorothioate | 126-68-1 | Nondetect | | Nondetect | 2400 |
| **Nitrogenated Organics** | | | | | |
| Acetonitrile [Methyl cyanide] | 75-05-8 | Nondetect | | Nondetect | 39 |
| 2-Acetylaminofluorene [2-AAF] | 53-96-3 | Nondetect | | Nondetect | 2400 |
| Acrylonitrile | 107-13-1 | Nondetect | | Nondetect | 39 |
| 4-Aminobiphenyl | 92-67-1 | Nondetect | | Nondetect | 2400 |
| 4-Aminopyridine | 504-24-5 | Nondetect | | Nondetect | 100 |
| Aniline | 62-53-3 | Nondetect | | Nondetect | 2400 |
| Benzidine | 92-87-5 | Nondetect | | Nondetect | 2400 |
| Dibenz[a,j]acridine | 224-42-0 | Nondetect | | Nondetect | 2400 |
| O,O-Diethyl O-pyrazinyl phosphoro-thioate [Thionazin] | 297-97-2 | Nondetect | | Nondetect | 2400 |
| Dimethoate | 60-51-5 | Nondetect | | Nondetect | 2400 |
| p-(Dimethylamino)azobenzene [4-Dimethylaminoazobenzene] | 60-11-7 | Nondetect | | Nondetect | 2400 |
| 3,3'-Dimethylbenzidine | 119-93-7 | Nondetect | | Nondetect | 2400 |
| α,α-Dimethylphenethylamine | 122-09-8 | Nondetect | | Nondetect | 2400 |
| 3,3'-Dimethoxybenzidine | 119-90-4 | Nondetect | | Nondetect | 100 |
| 1,3-Dinitrobenzene [m-Dinitrobenzene] | 99-65-0 | Nondetect | | Nondetect | 2400 |
| 4,6-Dinitro-o-cresol | 534-52-1 | Nondetect | | Nondetect | 2400 |
| 2,4-Dinitrophenol | 51-28-5 | Nondetect | | Nondetect | 2400 |
| 2,4-Dinitrotoluene | 121-14-2 | Nondetect | | Nondetect | 2400 |
| 2,6-Dinitrotoluene | 606-20-2 | Nondetect | | Nondetect | 2400 |
| Dinoseb [2-sec-Butyl-4,6-dinitrophenol] | 88-85-7 | Nondetect | | Nondetect | 2400 |
| Diphenylamine | 122-39-4 | Nondetect | | Nondetect | 2400 |
| Ethyl carbamate [Urethane] | 51-79-6 | Nondetect | | Nondetect | 100 |
| Ethylenethiourea (2-Imidazolidinethione) | 96-45-7 | Nondetect | | Nondetect | 110 |
| Famphur | 52-85-7 | Nondetect | | Nondetect | 2400 |
| Methacrylonitrile | 126-98-7 | Nondetect | | Nondetect | 39 |
| Methapyrilene | 91-80-5 | Nondetect | | Nondetect | 2400 |
| Methomyl | 16752-77-5 | Nondetect | | Nondetect | 57 |
| 2-Methyllactonitrile [Acetone cyanohydrin] | 75-86-5 | Nondetect | | Nondetect | 100 |
| Methyl parathion | 298-00-0 | Nondetect | | Nondetect | 2400 |
| MNNG (N-Metyl-N-nitroso-N'-nitroguanidine) | 70-25-7 | Nondetect | | Nondetect | 110 |
| 1-Naphthylamine, [α-Naphthylamine] | 134-32-7 | Nondetect | | Nondetect | 2400 |
| 2-Naphthylamine, [β-Naphthylamine] | 91-59-8 | Nondetect | | Nondetect | 2400 |
| Nicotine | 54-11-5 | Nondetect | | Nondetect | 100 |
| 4-Nitroaniline, [p-Nitroaniline] | 100-01-6 | Nondetect | | Nondetect | 2400 |
| Nitrobenzene | 98-95-3 | Nondetect | | Nondetect | 2400 |
| p-Nitrophenol, [p-Nitrophenol] | 100-02-7 | Nondetect | | Nondetect | 2400 |
| 5-Nitro-o-toluidine | 99-55-8 | Nondetect | | Nondetect | 2400 |
| N-Nitrosodi-n-butylamine | 924-16-3 | Nondetect | | Nondetect | 2400 |
| N-Nitrosodiethylamine | 55-18-5 | Nondetect | | Nondetect | 2400 |
| N-Nitrosodiphenylamine, [Diphenylnitrosamine] | 86-30-6 | Nondetect | | Nondetect | 2400 |
| N-Nitroso-N-methylethylamine | 10595-95-6 | Nondetect | | Nondetect | 2400 |
| N-Nitrosomorpholine | 59-89-2 | Nondetect | | Nondetect | 2400 |
| N-Nitrosopiperidine | 100-75-4 | Nondetect | | Nondetect | 2400 |
| N-Nitrosopyrrolidine | 930-55-2 | Nondetect | | Nondetect | 2400 |
| 2-Nitropropane | 79-46-9 | Nondetect | | Nondetect | 30 |
| Parathion | 56-38-2 | Nondetect | | Nondetect | 2400 |
| Phenacetin | 62-44-2 | Nondetect | | Nondetect | 2400 |
| 1,4-Phenylenediamine, [p-Phenylenediamine] | 106-50-3 | Nondetect | | Nondetect | 2400 |

| Table 7: Detection and Detection Limit Values for Comparable Fuel Specification | | | | | |
|---|---|---|---|---|---|
| **Chemical Name** | **CAS Number** | **Composite Value (mg/kg)** | **Heating Value (Btu/lb)** | **Concentration Limit (mg/kg at required 10,000 Btu/lb)** | **Minimum Required Detection Limit (mg/kg)** |
| N-Phenylthiourea | 103-85-5 | Nondetect | | Nondetect | 57 |
| 2-Picoline [alpha-Picoline] | 109-06-8 | Nondetect | | Nondetect | 2400 |
| Propylthioracil [6-Propyl-2-thiouracil] | 51-52-5 | Nondetect | | Nondetect | 100 |
| Pyridine | 110-86-1 | Nondetect | | Nondetect | 2400 |
| Strychnine | 57-24-9 | Nondetect | | Nondetect | 100 |
| Thioacetamide | 62-55-5 | Nondetect | | Nondetect | 57 |
| Thiofanox | 39196-18-4 | Nondetect | | Nondetect | 100 |
| Thiourea | 62-56-6 | Nondetect | | Nondetect | 57 |
| Toluene-2,4-diamine [2,4-Diaminotoluene] | 95-80-7 | Nondetect | | Nondetect | 57 |
| Toluene-2,6-diamine [2,6-Diaminotoluene] | 823-40-5 | Nondetect | | Nondetect | 57 |
| o-Toluidine | 95-53-4 | Nondetect | | Nondetect | 2400 |
| p-Toluidine | 106-49-0 | Nondetect | | Nondetect | 100 |
| 1,3,5-Trinitrobenzene, [sym-Trinitrobenzene] | 99-35-4 | Nondetect | | Nondetect | 2400 |
| **Halogenated Organics** | | | | | |
| Allyl chloride | 107-05-1 | Nondetect | | Nondetect | 39 |
| Aramite | 140-57-8 | Nondetect | | Nondetect | 2400 |
| Benzal chloride [Dichloromethyl benzene] | 98-87-3 | Nondetect | | Nondetect | 100 |
| Benzyl chloride | 100-44-77 | Nondetect | | Nondetect | 100 |
| Bis(2-chloroethyl)ether [Dichloroethyl ether] | 111-44-4 | Nondetect | | Nondetect | 2400 |
| Bromoform [Tribromomethane] | 75-25-2 | Nondetect | | Nondetect | 39 |
| Bromomethane [Methyl bromide] | 74-83-9 | Nondetect | | Nondetect | 39 |
| 4-Bromophenyl phenyl ether [p-Bromo diphenyl ether] | 101-55-3 | Nondetect | | Nondetect | 2400 |
| Carbon tetrachloride | 56-23-5 | Nondetect | | Nondetect | 39 |
| Chlordane | 57-74-9 | Nondetect | | Nondetect | 14 |
| p-Chloroaniline | 106-47-8 | Nondetect | | Nondetect | 2400 |
| Chlorobenzene | 108-90-7 | Nondetect | | Nondetect | 39 |
| Chlorobenzilate | 510-15-6 | Nondetect | | Nondetect | 2400 |
| p-Chloro-m-cresol | 59-50-7 | Nondetect | | Nondetect | 2400 |
| 2-Chloroethyl vinyl ether | 110-75-8 | Nondetect | | Nondetect | 39 |
| Chloroform | 67-66-3 | Nondetect | | Nondetect | 39 |
| Chloromethane [Methyl chloride] | 74-87-3 | Nondetect | | Nondetect | 39 |
| 2-Chloronaphthalene [beta-Chloronaphthalene] | 91-58-7 | Nondetect | | Nondetect | 2400 |
| 2-Chlorophenol [o-Chlorophenol] | 95-57-8 | Nondetect | | Nondetect | 2400 |
| Chloroprene [2-Chloro-1,3-butadiene] | 1126-99-8 | Nondetect | | Nondetect | 39 |
| 2,4-D [2,4-Dichlorophenoxyacetic acid] | 94-75-7 | Nondetect | | Nondetect | 7.0 |
| Diallate | 2303-16-4 | Nondetect | | Nondetect | 2400 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | Nondetect | | Nondetect | 39 |
| 1,2-Dichlorobenzene [o-Dichlorobenzene] | 95-50-1 | Nondetect | | Nondetect | 2400 |
| 1,3-Dichlorobenzene [m-Dichlorobenzene] | 541-73-1 | Nondetect | | Nondetect | 2400 |
| 1,4-Dichlorobenzene [p-Dichlorobenzene] | 106-46-7 | Nondetect | | Nondetect | 2400 |
| 3,3'-Dichlorobenzidine | 91-94-1 | Nondetect | | Nondetect | 2400 |
| Dichlorodifluoromethane [CFC-12] | 75-71-8 | Nondetect | | Nondetect | 39 |
| 1,2-Dichloroethane [Ethylene dichloride] | 107-06-2 | Nondetect | | Nondetect | 39 |
| 1,1-Dichloroethylene [Vinylidene chloride] | 75-35-4 | Nondetect | | Nondetect | 39 |
| Dichloromethoxy ethane [Bis(2-chloroethoxy)methane] | 111-91-1 | Nondetect | | Nondetect | 2400 |
| 2,4-Dichlorophenol | 120-83-2 | Nondetect | | Nondetect | 2400 |
| 2,6-Dichlorophenol | 87-65-0 | Nondetect | | Nondetect | 2400 |
| 1,2-Dichloropropane [Propylene dichloride] | 78-87-5 | Nondetect | | Nondetect | 39 |
| cis-1,3-Dichloropropylene | 10061-01-5 | Nondetect | | Nondetect | 39 |
| trans-1,3-Dichloropropylene | 10061-02-6 | Nondetect | | Nondetect | 39 |
| 1,3-Dichloro-2-propanol | 96-23-1 | Nondetect | | Nondetect | 30 |
| Endosulfan I | 959-98-8 | Nondetect | | Nondetect | 1.4 |
| Endosulfan II | 33213-65-9 | Nondetect | | Nondetect | 1.4 |

| Table 7: Detection and Detection Limit Values for Comparable Fuel Specification | | | | | |
|---|---|---|---|---|---|
| **Chemical Name** | **CAS Number** | **Composite Value (mg/kg)** | **Heating Value (Btu/lb)** | **Concentration Limit (mg/kg at required 10,000 Btu/lb)** | **Minimum Required Detection Limit (mg/kg)** |
| Endrin | 72-20-8 | Nondetect | | Nondetect | 1.4 |
| Endrin aldehyde | 7421-93-4 | Nondetect | | Nondetect | 1.4 |
| Endrin Ketone | 53494-70-5 | Nondetect | | Nondetect | 1.4 |
| Epichlorohydrin [1-Chloro-2,3-epoxy propane] | 106-89-8 | Nondetect | | Nondetect | 30 |
| Ethylidene dichloride [1,1-Dichloroethane] | 75-34-3 | Nondetect | | Nondetect | 39 |
| 2-Fluoroacetamide | 640-19-7 | Nondetect | | Nondetect | 100 |
| Heptachlor | 76-44-8 | Nondetect | | Nondetect | 1.4 |
| Heptachlor epoxide | 1024-57-3 | Nondetect | | Nondetect | 2.8 |
| Hexachlorobenzene | 118-74-1 | Nondetect | | Nondetect | 2400 |
| Hexachloro-1,3-butadiene [Hexachlorobutadiene] | 87-68-3 | Nondetect | | Nondetect | 2400 |
| Hexachlorocyclopentadiene | 77-47-4 | Nondetect | | Nondetect | 2400 |
| Hexachloroethane | 67-72-1 | Nondetect | | Nondetect | 2400 |
| Hexachlorophene | 70-30-4 | Nondetect | | Nondetect | 59000 |
| Hexachloropropene [Hexachloropropylene] | 1888-71-7 | Nondetect | | Nondetect | 2400 |
| Isodrin | 465-73-6 | Nondetect | | Nondetect | 2400 |
| Kepone [Chlordecone] | 143-50-0 | Nondetect | | Nondetect | 4700 |
| Lindane [gamma-Hexachlorocyclohexane] [gamma-BHC] | 58-89-9 | Nondetect | | Nondetect | 1.4 |
| Methylene chloride [Dichloromethane] | 75-09-2 | Nondetect | | Nondetect | 39 |
| 4,4'-methylene-bis(2-chloroaniline) | 101-14-4 | Nondetect | | Nondetect | 100 |
| Methyl iodide [Iodomethane] | 74-88-4 | Nondetect | | Nondetect | 39 |
| Pentachlorobenzene | 608-93-5 | Nondetect | | Nondetect | 2400 |
| Pentachloroethane | 76-01-7 | Nondetect | | Nondetect | 39 |
| Pentachloronitrobenzene [PCNB] [Quintobenzene] [Quintozene] | 82-68-8 | Nondetect | | Nondetect | 2400 |
| Pentachlorophenol | 87-86-5 | Nondetect | | Nondetect | 2400 |
| Pronamide | 23950-58-5 | Nondetect | | Nondetect | 2400 |
| Silvex [2,4,5-Trichlorophenoxypropionic acid] | 93-72-1 | Nondetect | | Nondetect | 7.0 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin [2,3,7,8-TCDD] | 1746-01-6 | Nondetect | | Nondetect | 30 |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | Nondetect | | Nondetect | 2400 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | Nondetect | | Nondetect | 39 |
| Tetrachloroethylene [Perchloroethylene] | 127-18-4 | Nondetect | | Nondetect | 39 |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | Nondetect | | Nondetect | 2400 |
| 1,2,4-Trichlorobenzene | 120-82-1 | Nondetect | | Nondetect | 2400 |
| 1,1,1-Trichloroethane [Methyl chloroform] | 71-55-6 | Nondetect | | Nondetect | 39 |
| 1,1,2-Trichloroethane [Vinyl trichloride] | 79-00-5 | Nondetect | | Nondetect | 39 |
| Trichloroethylene | 79-01-6 | Nondetect | | Nondetect | 39 |
| Trichlorofluoromethane [Trichlormonofluoromethane] | 75-69-4 | Nondetect | | Nondetect | 39 |
| 2,4,5-Trichlorophenol | 95-95-4 | Nondetect | | Nondetect | 2400 |
| 2,4,6-Trichlorophenol | 88-06-02 | Nondetect | | Nondetect | 2400 |
| 1,2,3-Trichloropropane | 96-18-4 | Nondetect | | Nondetect | 39 |
| Vinyl Chloride | 75-01-4 | Nondetect | | Nondetect | 39 |
| Notes:<br>NA – Not Applicable | | | | | |

D. Implementation. Waste that meets the comparable or syngas fuel specifications provided by Subsection B or C of this Section (these constituent levels must be achieved by the comparable fuel when generated, or as a result of treatment or blending, as provided in Paragraph D.3 or 4 of this Section) is excluded from the definition of solid waste provided in Paragraphs D.1-13 of this Section.

1. Notices. For purposes of this Section, the person claiming and qualifying for the exclusion is called the comparable/syngas fuel generator and the person burning the comparable/syngas fuel is called the comparable/syngas fuel burner. The person who generates the comparable fuel or syngas fuel must claim and certify to the exclusion.

a. State RCRA and CAA Authorized States or Regional RCRA and CAA Administrative Authority in Unauthorized States

i. The generator must submit a one-time notice to the regional or state RCRA and CAA administrative authority in whose jurisdiction the exclusion is being claimed and where the comparable/syngas fuel will be burned certifying compliance with the conditions of the exclusion and providing documentation as required by Clause D.1.a.iii of this Section.

ii. If the generator is a company that generates comparable/syngas fuel at more than one facility, the generator shall specify at which sites the comparable/syngas fuel will be generated.

iii. A comparable/syngas fuel generator's notification to the administrative authority must contain the following items:

(a). the name, address, and EPA ID number of the person/facility claiming the exclusion;

(b). the applicable EPA hazardous waste codes for the hazardous waste;

(c). the name and address of the units meeting the requirements of Paragraph D.2 of this Section that will burn the comparable/syngas fuel; and

(d). the following statement signed and submitted by the person claiming the exclusion or his authorized representative:

> "Under penalty of criminal and civil prosecution for making or submitting false statements, representations, or omissions, I certify that the requirements of LAC 33:V.4909 have been met for all waste identified in this notification. Copies of the records and information required at LAC 33:V.4909.D.10 are available at the comparable/syngas fuel generator's facility. Based on my inquiry of the individuals immediately responsible for obtaining the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. Public Notice. Prior to burning an excluded comparable/syngas fuel, the burner must publish in a major newspaper of general circulation local to the site where the fuel will be burned, a notice entitled "Notification of Burning a Comparable/Syngas Fuel Excluded under the Resource Conservation and Recovery Act" containing the following information:

i. the name, address, and EPA ID number of the generating facility;

ii. the name and address of the unit(s) that will burn the comparable/syngas fuel;

iii. a brief, general description of the manufacturing, treatment, or other process generating the comparable/syngas fuel;

iv. an estimate of the average and maximum monthly and annual quantity of the waste claimed to be excluded; and

v. the name and mailing address of the regional or state administrative authority to whom the claim was submitted.

2. Burning. The comparable/syngas fuel exclusion for fuels meeting the requirements of Subsection B or C and Paragraph D.1 of this Section applies only if the fuel is burned in the following units that also shall be subject to federal/state/local air emission requirements, including all applicable CAA MACT requirements:

a. *industrial furnaces* as defined in LAC 33:V.109;

b. *boilers*, as defined in LAC 33:V.109, that are further defined as follows:

i. industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or

ii. utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or

c. hazardous waste incinerators subject to regulation under LAC 33:V.Chapter 31 or Chapter 43.Subchapter N or applicable CAA MACT standards; or

d. gas turbines used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale.

3. Blending to Meet the Viscosity Specification. A hazardous waste blended to meet the viscosity specification shall:

a. as generated and prior to any blending, manipulation, or processing meet the constituent and heating value specifications of Subparagraph B.1.a and Paragraph B.2 of this Section;

b. be blended at a facility that is subject to the applicable requirements of LAC 33:V.Chapters 11, 15, 17, 18, 19, 21, 23, 24, 25, 27, 28, 29, 30, 32, 33, 35, 37, and 43; and

c. not violate the dilution prohibition of Paragraph D.6 of this Section.

4. Treatment to Meet the Comparable Fuel Exclusion Specifications

a. A hazardous waste may be treated to meet the exclusion specifications of Paragraphs B.1 and 2 of this Section provided the treatment:

i. destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying hazardous constituents or materials;

ii. is performed at a facility that is subject to the applicable requirements of LAC 33:V.Chapters 11, 15, 17, 18, 19, 21, 23, 24, 25, 27, 28, 29, 30, 32, 33, 35, 37, and 43; and

iii. does not violate the dilution prohibition of Paragraph D.6 of this Section.

b. Residuals resulting from the treatment of a hazardous waste listed in LAC 33:V.4901 to generate a comparable fuel remain a hazardous waste.

5. Generation of a Syngas Fuel

a. A syngas fuel can be generated from the processing of hazardous wastes to meet the exclusion specifications of Subsection C of this Section provided the processing:

i. destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying constituents or materials;

ii. is performed at a facility that is subject to the applicable requirements of LAC 33:V.Chapters 11, 15, 17, 18, 19, 21, 23, 24, 25, 27, 28, 29, 30, 32, 33, 35, 37, and 43 or is an exempt recycling unit in accordance with LAC 33:V.4115; and

iii. does not violate the dilution prohibition of Paragraph D.6 of this Section.

b. Residuals resulting from the treatment of a hazardous waste listed in LAC 33:V.4901 to generate a syngas fuel remain a hazardous waste.

6. Dilution Prohibition for Comparable and Syngas Fuels. No generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a hazardous waste to meet the exclusion specifications of Subparagraph B.1.a or Paragraph B.2 or Subsection C of this Section.

7. Waste Analysis Plans. The generator of a comparable/syngas fuel shall develop and follow a written waste analysis plan that describes the procedures for sampling and analysis of the hazardous waste to be excluded. The plan shall be followed and retained at the facility excluding the waste.

a. At a minimum, the plan must specify:

i. the parameters for which each hazardous waste will be analyzed and the rationale for the selection of those parameters;

ii. the test methods which will be used to test for these parameters;

iii. the sampling method which will be used to obtain a representative sample of the waste to be analyzed;

iv. the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and

v. if process knowledge is used in the waste determination, any information prepared by the generator in making such determination.

b. The waste analysis plan shall also contain records of the following:

i. the dates and times waste samples were obtained, and the dates the samples were analyzed;

ii. the names and qualifications of the person(s) who obtained the samples;

iii. a description of the temporal and spatial locations of the samples;

iv. the name and address of the laboratory facility at which analyses of the samples were performed;

v. a description of the analytical methods used, including any cleanup and sample preparation methods;

vi. all quantitative limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;

vii. all laboratory results demonstrating that the exclusion specifications have been met for the waste; and

viii. all laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in Paragraph D.11 of this Section and also provides for the availability of the documentation to the claimant upon request.

c. Syngas fuel generators shall submit for approval, prior to performing sampling, analysis, or any management of a syngas fuel as an excluded waste, a waste analysis plan containing the elements of Subparagraph D.7.a of this Section to the appropriate regulatory authority. The approval of waste analysis plans must be stated in writing and received by the facility prior to sampling and analysis to demonstrate the exclusion of a syngas. The approval of the waste analysis plan may contain such provisions and conditions as the regulatory authority deems appropriate.

8. Comparable Fuel Sampling and Analysis

a. General. For each waste for which an exclusion is claimed, the generator of the hazardous waste must test for all the constituents on LAC 33:V.3105, Table 1, except those that the generator determines, based on testing or knowledge, should not be present in the waste. The generator is required to document the basis of each determination that a constituent should not be present. The generator may not determine that any of the following categories of constituents should not be present:

i. a constituent that triggered the toxicity characteristic for the waste constituents that were the basis of the listing of the waste stream, or constituents for which there is a treatment standard for the waste code in LAC 33:V.2223;

ii. a constituent detected in previous analysis of the waste;

iii. constituents introduced into the process that generates the waste; or

iv. constituents that are by-products or side reactions to the process that generates the waste.

[NOTE: Any claim under Paragraph D.8 of this Section must be valid and accurate for all hazardous constituents; a determination not to test for a hazardous constituent will not shield a generator from liability should that constituent later be found in the waste above the exclusion specifications.]

b. For each waste for which the exclusion is claimed where the generator of the comparable/syngas fuel is not the original generator of the hazardous waste, the generator of the comparable/syngas fuel may not use process knowledge in accordance with Subparagraph D.8.a of this Section and must test to determine that all of the constituent specifications of Paragraph B.2 and Subsection C of this Section have been met.

c. The comparable/syngas fuel generator may use any reliable analytical method to demonstrate that no constituent of concern is present at concentrations above the specification levels. It is the responsibility of the generator to ensure that the sampling and analysis are unbiased, precise, and representative of the waste. For the waste to be eligible for exclusion, a generator must demonstrate that:

i. each constituent of concern is not present in the waste above the specification level at the 95 percent upper confidence limit around the mean; and

ii. the analysis could have detected the presence of the constituent at or below the specification level at the 95 percent upper confidence limit around the mean.

d. Nothing in this Section preempts, overrides, or otherwise negates the provision in LAC 33:V.1103 that requires any person who generates a solid waste to determine if that waste is a hazardous waste.

e. In an enforcement action, the burden of proof to establish conformance with the exclusion specification shall be on the generator claiming the exclusion.

f. The generator must conduct sampling and analysis in accordance with their waste analysis plan developed under Paragraph D.7 of this Section.

g. Syngas fuel and comparable fuel that have not been blended in order to meet the kinematic viscosity specifications shall be analyzed as generated.

h. If a comparable fuel is blended in order to meet the kinematic viscosity specifications, the generator shall:

i. analyze the fuel as generated to ensure that it meets the constituent and heating value specifications; and

ii. after blending, analyze the fuel again to ensure that the blended fuel continues to meet all comparable/syngas fuel specifications.

i. Excluded comparable/syngas fuel must be retested, at a minimum, annually and must be retested after a process change that could change the chemical or physical properties of the waste.

9. Speculative Accumulation. Any persons handling a comparable/syngas fuel are subject to the speculative accumulation test under LAC 33:V.109.*Solid Waste*.2.c.

10. Records. The generator must maintain records of the following information on-site:

a. all information required to be submitted to the implementing authority as part of the notification of the claim:

i. the owner/operator name, address, and EPA facility ID number of the person claiming the exclusion;

ii. the applicable EPA hazardous waste codes for each hazardous waste excluded as a fuel; and

iii. the certification signed by the person claiming the exclusion or his authorized representative;

b. a brief description of the process that generated the hazardous waste and process that generated the excluded fuel, if not the same;

c. an estimate of the average and maximum monthly and annual quantities of each waste claimed to be excluded;

d. documentation for any claim that a constituent is not present in the hazardous waste as required under Subparagraph D.8.a of this Section;

e. the results of all analyses and all detection limits achieved as required under Paragraph D.8 of this Section;

f. if the excluded waste was generated through treatment or blending, documentation as required under Paragraph D.3 or 4 of this Section;

g. if the waste is to be shipped off-site, a certification from the burner as required under Paragraph D.12 of this Section;

h. a waste analysis plan and the results of the sampling and analysis that includes the following:

i. the dates and times waste samples were obtained, and the dates the samples were analyzed;

ii. the names and qualifications of the person(s) who obtained the samples;

iii. a description of the temporal and spatial locations of the samples;

iv. the name and address of the laboratory facility at which analyses of the samples were performed;

v. a description of the analytical methods used, including any cleanup and sample preparation methods;

vi. all quantitative limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;

vii. all laboratory analytical results demonstrating that the exclusion specifications have been met for the waste; and

viii. all laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in Paragraph D.11 of this Section and also provides for the availability of the documentation to the claimant upon request; and

i. if the generator ships comparable/syngas fuel off-site for burning, the generator must retain for each shipment the following information on-site:

i. the name and address of the facility receiving the comparable/syngas fuel for burning;

ii. the quantity of comparable/syngas fuel shipped and delivered;

iii. the date of shipment or delivery;

iv. a cross-reference to the record of comparable/syngas fuel analysis or other information used to make the determination that the comparable/syngas fuel meets the specifications as required under Paragraph D.8 of this Section ; and

v. a one-time certification by the burner as required under Paragraph D.12 of this Section.

11. Records Retention. Records must be maintained for a period of three years. A generator must maintain a current waste analysis plan during that three-year period.

12. Burner Certification. Prior to submitting a notification to the state and regional administrative authority, a comparable/syngas fuel generator who intends to ship the fuel off-site for burning must obtain a one-time written, signed statement from the burner:

a. certifying that the comparable/syngas fuel will only be burned in an industrial furnace or boiler, utility boiler, or hazardous waste incinerator, as required under Paragraph D.2 of this Section;

b. identifying the name and address of the units that will burn the comparable/syngas fuel; and

c. certifying that the state in which the burner is located is authorized to exclude wastes as comparable/syngas fuel under the provisions of this Section.

13. Ineligible Waste Codes. Wastes that are listed because of presence of dioxins or furans, as set out in LAC 33:V.4901.G, Table 6, are not eligible for this exclusion, and any fuel produced from or otherwise containing these wastes remains a hazardous waste subject to full RCRA hazardous waste management requirements.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 25:489 (March 1999), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:305 (March 2001), LR 28:1010 (May 2002), amended by the Office of the Secretary, Legal Affairs Division, LR 34:644 (April 2008), LR 34:1021 (June 2008).

## §4911. Conditional Exclusion for Used, Broken Cathode Ray Tubes (CRTs) Undergoing Recycling

A. Prior to processing, broken CRTs are not solid wastes if they are destined for recycling and if they meet the following requirements.

1. Storage. The broken CRTs shall be either:

a. stored in a building with a roof, floor, and walls; or

b. placed in a container (i.e., a package or a vehicle) that is constructed, filled, and closed to minimize identifiable releases to the environment of CRT glass (including fine solid materials).

2. Labeling. Each container in which used, broken CRT material is contained shall be labeled or marked clearly with one of the following phrases: "Used Cathode Ray Tube(s)—Contains Leaded Glass" or “Leaded Glass from Televisions or Computers.” It shall also be labeled: "Do Not Mix with Other Glass Materials."

3. Transportation. The used, broken CRTs shall be transported in a container meeting the requirements of Subparagraph A.1.b and Paragraph A.2 of this Section.

4. Speculative Accumulation and Use Constituting Disposal. The used, broken CRTs are subject to the limitations on speculative accumulation as defined in LAC 33:V.109. If they are used in a manner constituting disposal, they must comply with the applicable requirements of LAC 33:V.4139 and 4141 instead of the requirements of this Section.

5. Exports. In addition to the applicable conditions specified in Paragraphs A.1-4 of this Section, exports of used, broken CRTs must comply with 40 CFR 261.39(a)(5).

B. Requirements for Processing of Used, Broken CRTs. Used, broken CRTs undergoing *CRT processing* as defined in LAC 33:V.109 are not solid wastes if they meet the following requirements.

1. Storage. Used, broken CRTs undergoing processing are subject to the requirements of Paragraphs A.1, 2, and 4 of this Section.

2. Processing. All CRTs shall be processed within a building with a roof, floor, and walls. No activities may be performed that use temperatures high enough to volatilize lead from CRTs.

C. Processed CRT Glass Sent to CRT Glass Making or Lead Smelting. Glass removed from used CRTs that is destined for recycling at a CRT glass manufacturer or a lead smelter after processing is not a solid waste unless it is speculatively accumulated as defined in LAC 33:V.109. Imported, processed glass from CRTs is subject to these requirements as soon as it enters this state.

D. Processed CRT Glass Sent to Other Types of Recycling, except for Use Constituting Disposal. Glass removed from CRTs that is destined for other types of recycling after processing (except use constituting disposal) is not a solid waste if it meets the requirements of Paragraphs A.1-4 of this Section. Imported, processed glass removed from CRTs is subject to these requirements as soon as it enters this state.

E. Use Constituting Disposal. Processed glass removed from CRTs that is used in a manner constituting disposal shall comply with the requirements of Paragraphs A.1-4 of this Section and the applicable requirements of LAC 33:V.4139. Imported, processed glass from CRTs is subject to these requirements as soon as it enters this state.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and in particular R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 31:3122 (December 2005), amended LR 34:645 (April 2008).

### §4913. Conditional Exclusion for Used, Intact Cathode Ray Tubes (CRTs) Exported for Recycling

A. Used, intact CRTs exported for recycling are not solid wastes if they meet the notice and consent conditions of LAC 33:V.4911.A.5, and if they are not speculatively accumulated as defined in LAC 33:V.109.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and in particular R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:645 (April 2008).

### §4915. Notification and Recordkeeping for Used, Intact Cathode Ray Tubes (CRTs) Exported for Reuse

A. Persons who export used, intact CRTs for reuse must send a one-time notification to the EPA's Regional Administrator. The notification must include a statement that the notifier plans to export used, intact CRTs for reuse; the notifier's name, address, and EPA ID number (if applicable); and the name and phone number of a contact person.

B. Persons who export used, intact CRTs for reuse must keep copies of normal business records, such as contracts, demonstrating that each shipment of exported CRTs will be reused. This documentation must be retained for a period of at least three years from the date the CRTs were exported.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and in particular R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:645 (April 2008).

### §4999. Appendices—Appendix A, B, C, D, E, and F

**Appendix A. Reserved**

**Appendix B. Reserved**

**Appendix C. Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test**

**(Method 1310B)**

[NOTE: The EP (Method 1310B) is published in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference in LAC 33:V.110.]

**Appendix D. Representative Sampling Methods**

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the department to be representative of the waste.

*Containerized Liquid Wastes*—"COLIWASA."

*Extremely Viscous Liquid*—ASTM Standard D140-70; Crushed or powdered material−ASTM Standard D346-75; Soil or rock-like material−ASTM Standard D420-69; Soil-like material−ASTM Standard D1452-65.

*Fly Ash-Like Material*—ASTM Standard D2234-76 (ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103).

*Liquid Waste in Pits, Ponds, Lagoons, and Similar Reservoirs*—"Pond Sampler."

[NOTE: These protocols are described in *Samplers and Sampling Procedures for Hazardous Waste Streams*, EPA 600/2-80-018, January 1980.]

**Appendix E. Wastes Excluded under LAC 33:V.105.M**

A. Each facility granted a conditional exclusion must comply with the specific conditions for the waste exclusion as listed in Table 1 of this Appendix. Each facility granted a one-time exclusion is listed in Table 2 of this Appendix. Each waste exclusion listed in Table 1 shall begin with a waste description and include details for the following conditions:

1. testing, including organic and/or inorganic constituents, dioxins, furans, etc.;

2. waste holding and handling;

3. delisting levels, including organic and/or inorganic constituents, dioxins, furans, etc.; and

4. changes in operating conditions or feed streams.

B. Each facility granted a conditional exclusion must comply with the following general conditions pertaining to the waste exclusion listed in Table 1 of this Appendix.

1. Data Submittal

a. The facility must notify the department, in writing, at least two weeks prior to initiating the specific testing required for the waste exclusion.

b. All data obtained to fulfill the required testing must be submitted to the Office of Environmental Assessment within 60 days after each sampling event.

c. Records of operating conditions and analytical data from the required testing must be compiled, summarized, and maintained on-site for a minimum of three years. These records and data must be furnished upon request of the department and made available for inspection.

d. Failure to submit the required data within the specified time period or failure to maintain the required records on-site for the specified time shall be considered by the department, at its discretion, sufficient basis to revoke the exclusion.

e. All data must be accompanied by a signed copy of the following certification statement to attest to the truth and accuracy of the data submitted.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In the event that any of this information is determined by the department, in its sole discretion, to be false, inaccurate, or incomplete, and upon conveyance of this fact to the company, I recognize and agree that this exclusion of waste will be void as if it never had been in effect, or to the extent directed by the department, and that the company will be liable for any actions taken in contravention of the company's environmental obligations under the Louisiana Environmental Quality Act premised upon the company's reliance on the void exclusion."

2. Reopener Language

a. If, at any time after disposal of the delisted waste, the facility possesses or is otherwise made aware of any environmental data (including, but not limited to, leachate data or groundwater monitoring data) or any other data relevant to the delisted waste indicating that any constituent identified in the delisting verification testing is at a level higher than the delisting level allowed by the department in granting the petition, the facility must report the data, in writing, to the department within 10 days of first possessing or being made aware of that data.

b. If the testing of the waste, as required by the waste exclusion, does not meet the specific delisting requirements of the waste exclusion, the facility must report the data, in writing, to the department within 10 days of first possessing or being made aware of that data.

c. Based on the information described herein and any other information received from any source, the department will make a preliminary determination as to whether the reported information requires that the department take action to protect human health or the environment. Further action may include suspending or revoking the exclusion, or such other appropriate response as may be necessary to protect human health and the environment.

d. If the department determines that the reported information does require departmental action, the department will notify the facility, in writing, of the action believed necessary to protect human health and the environment. The notice shall include a statement of the proposed action and a statement providing the facility with an opportunity to present information as to why the proposed action is not necessary. The facility shall have 10 days from the date of the department's notice to present such information.

e. Following the receipt of information from the facility, or if no such information is received within 10 days, the department will issue a final written determination describing the departmental actions that are necessary to protect human health or the environment.

f. Any required action described in the department's determination shall become effective immediately, unless the department provides otherwise.

3. Notification Requirements

a. The facility must provide a one-time written notification to any state regulatory agency in a state to which or through which the delisted waste will be transported, at least 60 days prior to the commencement of such activities.

b. Failure to provide notification will result in a violation of the delisting conditions and a possible revocation of the decision to delist.

| **Table 1 - Wastes Excluded** |
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| **BFI Waste Systems of Louisiana LLC, Colonial Landfill, Sorrento, LA** |
| The BFI Colonial Landfill is a nonhazardous solid waste landfill permitted to receive residential, commercial, and industrial nonhazardous solid waste. Landfill leachate, at a maximum annual generation rate of 36,000 cubic yards per year (approximately 7.2 million gallons per year), is generated as liquid leachate from the landfill. Effective August 6, 1998, the United States Environmental Protection Agency (USEPA) listed four waste streams as hazardous waste. The EPA Hazardous Waste Numbers of these wastes are: K169, K170, K171, and K172. BFI Colonial received these wastes as nonhazardous solid waste prior to August 6, 1998. For the purpose of this exclusion, landfill leachate resulting from petroleum refining operations includes EPA Hazardous Waste Numbers K169, K170, K171, and K172. The constituents of concern for these wastes are listed as arsenic; benzene; benzo(a)pyrene; dibenz(a,h)anthracene; benz(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; 3-methylcholanthrene; and 7,12-dimethylbenz(a)anthracene (see LAC 33:V.4901). BFI Colonial must implement a testing and management program that meets the following conditions for the exclusion to be valid. |
| (1). Testing<br>Sample collection and analyses, including quality control (QC) procedures, must be performed according to methods described in *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, EPA Publication Number SW-846*, as incorporated by reference in LAC 33:V.110. |
| (1)(A). Inorganic Testing<br>During the first 12 consecutive months of this exclusion, BFI Colonial must collect and analyze a monthly composite sample of the leachate. Composite samples must be composed of one grab sample from each of three different days during a representative week of operation. The monthly samples must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the leachate. BFI Colonial must report to the department the unit operating conditions and analytical data (reported in milligrams per liter) for antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, nickel, silver, thallium, tin, vanadium, and zinc, including quality control information. If the department and BFI Colonial concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(A), then BFI Colonial may replace the inorganic testing required in condition (1)(A) with the inorganic testing required in condition (1)(B). Condition (1)(A) shall remain effective until this concurrence is reached. |
| (1)(B). Subsequent Inorganic Testing<br>Following concurrence by the department, BFI Colonial may substitute the following testing conditions for those in condition (1)(A). BFI Colonial must continue to monitor operating conditions and analyze quarterly composite samples representative of normal operations. BFI Colonial must report to the department the unit operating conditions and analytical data (reported in milligrams per liter) for antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, nickel, silver, thallium, tin, vanadium, and zinc, including quality control information. The samples must be composed of one grab sample from each of three different days during a representative week of operation, during the first month of each quarterly period. These quarterly representative composite samples must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the leachate. If delisting levels for any inorganic constituents listed in condition (3)(A) are exceeded in any quarterly sample, BFI Colonial must re-institute testing as required in condition (1)(A). BFI Colonial may, at its discretion, analyze composite samples gathered more frequently to demonstrate that smaller batches of waste are nonhazardous. |
| (1)(C). Organic Testing<br>During the first 12 consecutive months of this exclusion, BFI Colonial must collect and analyze monthly one grab sample of the leachate. These monthly representative grab samples must be analyzed for the constituents listed in condition (3)(B) prior to disposal of the leachate. BFI Colonial must report to the department the landfill operating conditions and analytical data (reported in milligrams per liter) for acenaphthene; anthracene; benzene; bis (2-ethylhexyl) phthalate; 2-butanone; m, p-cresol; o-cresol; diethyl phthalate; ethylbenzene; 2-hexanone; methyl isobutyl ketone; 2-methylnaphthalene; naphthalene; phenanthrene; phenol; toluene; and total xylenes; including quality control information. If the department and BFI Colonial concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(B), then BFI Colonial may replace the organic testing required in condition (1)(C) with the organic testing required in condition (1)(D). Condition (1)(C) shall remain effective until this concurrence is reached. |
| (1)(D). Subsequent Organic Testing<br>Following concurrence by the department, BFI Colonial may substitute the following testing conditions for those in condition (1)(C). BFI Colonial must continue to monitor operating conditions and analyze one quarterly grab sample representative of normal operations. BFI Colonial must report to the department the landfill operating conditions and analytical data (reported in milligrams per liter) for acenaphthene; anthracene; benzene; bis (2-ethylhexyl) phthalate; 2-butanone; m, p-cresol; o-cresol; diethyl phthalate; ethylbenzene; 2-hexanone; methyl isobutyl ketone; 2-methylnaphthalene; naphthalene; phenanthrene; phenol; toluene; and total xylenes; including quality control information. This quarterly representative grab sample must be collected during the first month of each quarterly |

| Table 1 - Wastes Excluded |
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| **BFI Waste Systems of Louisiana LLC, Colonial Landfill, Sorrento, LA** |
| period and analyzed for the constituents listed in condition (3)(B) prior to disposal of the leachate. If delisting levels for any organic constituents listed in condition (3)(B) are exceeded in the quarterly sample, BFI Colonial must re-institute testing as required in condition (1)(C). BFI Colonial may, at its discretion, analyze grab samples gathered more frequently to demonstrate that smaller batches of waste are nonhazardous. |
| (2). Waste Holding and Handling<br>BFI Colonial must treat the leachate as hazardous waste until the verification testing is completed, as specified in conditions (1)(A)-(1)(D), and the leachate has satisfied the delisting criteria, as specified in condition (3). If the levels of constituents in the samples of leachate are below all of the applicable levels set forth in condition (3), then the leachate thereby becomes nonhazardous solid waste and may be managed and disposed of in accordance with all applicable solid waste regulations. If hazardous constituent levels in any monthly composite or other representative sample equal or exceed any of the delisting levels set in condition (3), the leachate must be managed and disposed of in accordance with Subtitle C of RCRA until the leachate meets the delisting levels. BFI Colonial must repeat the analyses for the constituents listed in conditions (3)(A) and (3)(B) prior to disposal. |
| (3). Delisting Levels<br>Concentrations in conditions (3)(A) and (3)(B) must be measured in the extract from the samples by the method specified in LAC 33:V.4903.E. All leachable concentrations in the extract must be less than the following levels (all units are milligrams per liter). |
| (3)(A). Inorganic Constituents (all units are milligrams per liter)<br>Antimony—0.082; Arsenic—0.38; Barium—22.2; Cadmium—0.06; Chromium—0.50; Cobalt—27; Copper—0.50; Lead—0.50; Nickel—5.0; Silver—0.50; Thallium—0.34; Tin—225; Vanadium—8.38; Zinc—50.0. |
| (3)(B). Organic Constituents (all units are milligrams per liter)<br>Acenaphthene—3.0; Anthracene—0.20; Benzene—0.018; Bis (2-ethylhexyl) phthalate—6.74; 2-Butanone—5.0; m, p-Cresol—7.88; o-Cresol—7.88; Diethyl phthalate—18.6; Ethylbenzene—8.4; 2-Hexanone—6.3; Methyl isobutyl ketone—5.0; 2-Methylnaphthalene—5.0; Naphthalene—0.96; Phenanthrene—1.0; Phenol—50.; Toluene—1.0; Xylenes (total)—1.0. |
| (4). Changes in Operating Conditions<br>If BFI Colonial significantly changes the operating conditions specified in the petition, BFI Colonial must notify the department in writing. Following receipt of written approval by the department, BFI Colonial must re-institute the testing required in conditions (1)(A) and (1)(C) for a minimum of four consecutive months. BFI Colonial must report unit operating conditions and test data required by conditions (1)(A) and (1)(C), including quality control data, obtained during this period no later than 60 days after the changes take place. Following written notification by the department, BFI Colonial may replace testing conditions (1)(A) and (1)(C) with (1)(B) and (1)(D). BFI Colonial must fulfill all other requirements in condition (1). |

| Table 1 - Wastes Excluded |
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| **DuPont Dow Elastomers LLC, LaPlace, LA** |
| Dynawave Scrubber Effluent is generated through the combustion of organic waste feed streams carrying the listed EPA Hazardous Waste Numbers F001, F002, F003, and F005. The specific hazardous waste streams being combusted and their EPA Hazardous Waste Numbers are: HCl Feed—D001, D002, and D007; Ponchartrain CD Heels—D001 and F005; Waste Organics—D001, D007, and F005; Catalyst Sludge Receiver (CSR) Sludge—D001, D007, and F005; Isom Purge—D001, D002, and F005; and Louisville CD Heels—D001, D007, D039, F001, F002, F003, and F005. DuPont Dow Elastomers must implement a sampling program that meets the following conditions for the exclusion to be valid. |
| (1). Testing<br>Sample collections and analyses, including quality control (QC) procedures, must be performed according to methodologies described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication Number SW-846, as incorporated by reference in LAC 33:V.110. |

| **Table 1 - Wastes Excluded** |
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| **DuPont Dow Elastomers LLC, LaPlace, LA** |
| (1)(A). Inorganic Testing<br>During the first 12 months of this exclusion, DuPont Dow must collect and analyze a monthly grab sample of the Dynawave Scrubber Effluent. DuPont Dow must report to the department the unit operating conditions and analytical data (reported in milligrams per liter) for chromium, nickel, and zinc, including quality control information. If the department and DuPont Dow concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(A), then DuPont Dow may replace the inorganic testing required in condition (1)(A) with the inorganic testing required in condition (1)(B). Condition (1)(A) shall remain effective until this concurrence is reached. |
| (1)(B). Subsequent Inorganic Testing<br>Following concurrence by the department, DuPont Dow may substitute the following testing conditions for those in condition (1)(A). DuPont Dow must continue to monitor operating conditions and analyze samples representative of each year of operation. The samples must be grab samples from a randomly chosen operating day during the same month of operation as the previous year's sampling event. These annual representative grab samples must be analyzed for chromium, nickel, and zinc. DuPont Dow may, at its discretion, analyze any samples gathered more frequently to demonstrate that smaller batches of waste are nonhazardous. |
| (1)(C). Organic Testing<br>During the first 30 days of this exclusion, DuPont Dow must collect a grab sample of the Dynawave Scrubber Effluent and analyze it for the organic constituents listed in condition (3)(B) below. After completing this initial sampling, DuPont Dow shall sample and analyze for the organic constituents listed in condition (3)(B) on an annual basis. |
| (1)(D). Dioxins and Furans Testing<br>During the first 30 days of this exclusion, DuPont Dow must collect a grab sample of the Dynawave Scrubber Effluent and analyze it for the dioxins and furans in condition (3)(C) below. After completing this initial sampling, DuPont Dow shall sample and analyze for the dioxins and furans in condition (3)(C) once every three years to commence three years after the initial sampling. |
| (2). Waste Holding and Handling<br>Consequent to this exclusion, the Dynawave Scrubber Effluent becomes, on generation, nonhazardous solid waste and may be managed and disposed of on the DuPont Dow plant site in any one of three permitted underground deep injection wells. With prior written authorization from the department, alternative disposal methods may be either a Louisiana Pollution Discharge Elimination System/National Pollution Discharge Elimination System (LPDES/NPDES) permitted outfall or a permitted commercial underground deep injection well. This newly delisted waste must always be managed and disposed of in accordance with all applicable solid waste regulations. If constituent levels in any representative sample equal or exceed any of the delisting levels set in condition (3), the Dynawave Scrubber Effluent must be immediately resampled and reanalyzed for the constituent(s) that exceeded the delisting levels. If the repeat analysis is less than the delisting levels, then DuPont Dow shall resume the normal sampling and analysis schedule as described in condition (1). If the results of the reanalysis equal or exceed any of the delisting levels, then within 45 days DuPont Dow shall submit a report to the department that outlines the probable causes for exceeding the constituent level and recommends corrective action measures. The department shall determine the necessary corrective action and shall notify DuPont Dow of the corrective action needed. DuPont Dow shall implement the corrective action and resume sampling and analysis for the constituent per the schedule in condition (1). Within 30 days after receiving written notification, DuPont Dow may appeal the corrective action determined by the department. During the full period of corrective action determination and implementation, the exclusion of the Dynawave Scrubber Effluent shall remain in force unless the department notifies DuPont Dow in writing of a temporary rescission of the exclusion. Normal sampling and analysis shall continue through this period as long as the exclusion remains in force. |
| (3). Delisting Levels<br>The following delisting levels have been determined safe by taking into account health-based criteria and limits of detection. Concentrations in conditions (3)(A) and (3)(B) must be measured in the extract from the samples by the method specified in LAC 33:V. 4903.E. Concentrations in the extract must be less than the following levels (all units are milligrams per liter). |
| (3)(A). Inorganic Constituents<br>Chromium—2.0; Nickel—2.0; Zinc—200. |
| (3)(B). Organic Constituents<br>Acetone—80; Chlorobenzene—2.0; Chloroform—0.2; Chloroprene—14; Ethylbenzene—14; Methylene Chloride—0.1; Styrene—2.0; Toluene—20; Xylenes—200. |
| (3)(C). Dioxins and Furans<br>The 15 congeners listed in Section 1.1 of EPA Publication Number SW-846 Method 8290—Monitor only. |

| Table 1 - Wastes Excluded |
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| **DuPont Dow Elastomers LLC, LaPlace, LA** |
| (4). Changes in Operating Conditions or Feed Streams<br>If DuPont Dow either significantly changes the operating conditions specified in the petition or adds any previously unspecified feed streams and either of these actions would justify a Class 3 modification to its combustion permit, DuPont Dow must notify the department in writing. Following receipt of written acknowledgement by the department, DuPont Dow must collect a grab sample and analyze it for the full universe of constituents found in 40 CFR Part 264, Appendix IX—Groundwater Monitoring List (LAC 33:V.3325). If the results of the Appendix IX analyses identify no new hazardous constituents, then DuPont Dow must reinstitute the testing required in condition (1)(A) for a minimum of 12 monthly operating periods. During the full period described in this condition, the delisting of the Dynawave Scrubber Effluent shall remain in force unless a new hazardous constituent is identified or the waste volume exceeds 25,000 cubic yards per year; at this time the delisting petition shall be reopened. DuPont Dow may eliminate feeding any stream to the combustion unit at any time without affecting the delisting of the Dynawave Scrubber Effluent or the sampling schedule. |

| Table 1 – Wastes Excluded |
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| **Lyondell Chemical Company, Lake Charles, LA** |
| Incinerator direct contact cooling wastewater and fire suppression automatic sprinkler ("deluge") system wastewater are generated at a maximum annual generation rate of 800,000 cubic yards (162 million gallons) per year. Lyondell's wastestream includes the United States Environmental Protection Agency (USEPA) hazardous waste codes D001, D019, D021, D030, F002, F003, K027, K112-114, U037, U221, and U223. The constituents of concern for these waste codes are listed in LAC 33:V.4901. This exclusion applies only to incinerator direct contact cooling wastewater and fire suppression automatic sprinkler ("deluge") system wastewater at the Lake Charles, LA facility. The cooling wastewater effluent is currently being discharged after treatment under the facility's LPDES permit. After delisting, this effluent will continue to be discharged under the facility's LPDES permit. |
| (1). Testing<br>Sample collection and analyses, including quality control (QC) procedures, must be performed according to methods described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846*, as incorporated by reference in LAC 33:V.110. |
| (1)(A). Inorganic Testing<br>During the first 12 consecutive months of this exclusion, Lyondell must collect and analyze one monthly grab water sample from the fire water pond and one monthly grab water sample from the incinerator blowdown stream. These two monthly samples must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the source water. Lyondell must report to the department the unit operating conditions and analytical data (reported in milligrams per liter), for arsenic, barium, chromium, lead, nickel, vanadium, and zinc, including quality control information. If the department and Lyondell concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(A), Lyondell may replace the testing required in condition (1)(A) with the testing required in condition (1)(B). |
| (1)(B). Subsequent Inorganic Testing<br>After concurrence by the department, Lyondell may substitute the following testing conditions for those in condition (1)(A). Lyondell must continue to analyze quarterly grab water samples from the fire water pond and the incinerator blowdown stream. Lyondell must report to the department the unit operating conditions and analytical data (reported in milligrams per liter), for arsenic, barium, chromium, lead, nickel, vanadium, and zinc, including quality control information. Grab water samples from the fire water pond and the incinerator blowdown stream must be taken during the first month of each quarterly period. These quarterly samples must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the source water. If delisting levels for any constituents listed in condition (3)(A) are exceeded in any quarterly sample, Lyondell must re-institute testing as required in condition (1)(A). |
| (1)(C). Organic Testing<br>During the first 12 consecutive months of this exclusion, Lyondell must collect and analyze one monthly grab water sample from the fire water pond and one monthly grab water sample from the incinerator blowdown stream. These two monthly samples must be analyzed for the constituents listed in condition (3)(B) prior to disposal of the source water. Lyondell must report to the department the unit operating conditions and analytical data (reported in milligrams per liter), for 2,4-dinitrotoluene, bromoform, chloroform, and hexachlorobenzene, including quality control information. If the department and Lyondell concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(B), Lyondell may replace the testing required in condition (1)(C) with the testing required in condition (1)(D). |
| (1)(D). Subsequent Organic Testing<br>After concurrence by the department, Lyondell may substitute the following testing conditions for those in condition (1)(C). Lyondell must continue to analyze quarterly grab water samples from the fire water pond and the incinerator blowdown stream. Lyondell must report to the department the unit operating |

| Table 1 – Wastes Excluded |
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| **Lyondell Chemical Company, Lake Charles, LA** |
| conditions and analytical data (reported in milligrams per liter), for 2,4-dinitrotoluene, bromoform, chloroform, and hexachlorobenzene, including quality control information. Grab water samples from the fire water pond and the incinerator blowdown stream must be taken during the first month of each quarterly period. These quarterly samples must be analyzed for the constituents listed in condition (3)(B) prior to disposal of the source water. If delisting levels for any constituents listed in condition (3)(B) are exceeded in any quarterly sample, Lyondell must re-institute testing as required in condition (1)(C). |
| (2). Waste Holding and Handling<br>Lyondell must treat water in the fire water pond and the incinerator blowdown stream as hazardous wastes until the verification testing is completed, as specified in conditions (1)(A) - (1)(D), and the wastewater has satisfied the delisting criteria, as specified in condition (3). If the levels of constituents in the samples from the fire water pond and the incinerator blowdown stream are below all of the applicable levels set forth in condition (3), then the incinerator direct contact cooling wastewater and the fire suppression automatic sprinkler ("deluge") system wastewater thereby become nonhazardous. If hazardous constituent levels in any monthly grab sample equal or exceed any of the delisting levels set in condition (3), the wastewater must be managed and disposed of in accordance with Subtitle C of RCRA until the wastewater meets the delisting levels. Lyondell must repeat the analyses for the constituents listed in conditions (3)(A) and (3)(B) prior to disposal. |
| (3). Delisting Levels<br>Concentrations in conditions (3)(A) and (3)(B) must be measured in the extract from the samples by the method specified in LAC 33:V.4903.E. All concentrations in the wastewater must be less than the following levels (all units are milligrams per liter). |
| (3)(A). Inorganic Constituents (all units are milligrams per liter)<br>arsenic—0.5; barium—50.0; chromium—1.0; lead—1.0; nickel—10.0; vanadium—15; and zinc—200. |
| (3)(B). Organic Constituents (all units are milligrams per liter)<br>2,4-dinitroluene-—0.02; bromoform—10.0, chloroform—0.14; hexachlorobenzene—0.13. |
| (4). Changes in Operating Conditions<br>If Lyondell significantly changes the operating conditions specified in the petition, Lyondell must notify the department in writing. Following receipt of written approval by the department, Lyondell must re-institute the testing required in conditions (1)(A) and (1)(C) for a minimum of four consecutive months. Lyondell must report unit operating conditions and test data required by conditions (1)(A) and (1)(C), including quality control data, obtained during this period no later than 60 days after the changes take place. Following written notification by the department, Lyondell may replace testing conditions (1)(A) and (1)(C) with (1)(B) and (1)(D). Lyondell must fulfill all other requirements in condition (1). |

| Table 1 - Wastes Excluded |
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| **Marathon Oil Co., Garyville, LA** |
| Residual solids are generated from the thermal desorption treatment of the following wastes: EPA Hazardous Waste Number K048, dissolved air flotation (DAF) float; K049, slop oil emulsion solids; K050, heat exchanger bundle cleaning sludge; K051, American Petroleum Institute (API) separator sludge; F037, primary oil/water/solids separation sludge; and F038, secondary emulsified oil/water/solids separation sludge. The constituents of concern for K048-K051 wastes are listed as hexavalent chromium and lead (see LAC 33:V. 4901). The constituents of concern for F037 and F038 wastes are listed as hexavalent chromium, lead, benzene, benzo(a)pyrene, and chrysene (see LAC 33:V.4901). Marathon must implement a testing program that meets the following conditions for the exclusion to be valid. |
| (1). Testing<br>Sample collection and analyses, including quality control (QC) procedures, must be performed according to methodologies described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication Number SW-846, as incorporated by reference in LAC 33:V.110. If the department judges the desorption process to be effective under the operating conditions used during the initial verification testing, Marathon may replace the testing required in condition (1)(A) with the testing required in condition (1)(B). Marathon must continue to test as specified in condition (1)(A) until and unless notified by the department in writing that testing in condition (1)(A) may be replaced by condition (1)(B), or that testing requirements may be reduced or terminated as described in conditions (1)(C) and (1)(D) to the extent directed by the department. |
| (1)(A). Initial Verification Testing<br>During at least the first four weekly operating periods of full-scale operation of the thermal desorption unit, Marathon must monitor the operating conditions of the thermal desorption unit to maintain a minimum residual solids temperature throughout the high temperature unit of 870°F. The residual solids must be analyzed as weekly composites. The weekly composites must be composed of a minimum of two representative grab samples from each operating day during each weekly period of operation. The samples must be analyzed for the constituents listed in condition (3) prior to disposal of the residual solids. Marathon must report the operational and analytical test data, including quality control information, obtained during this initial period, no later than 90 days after initiating full-scale processing. |

| Table 1 - Wastes Excluded<br>Marathon Oil Co., Garyville, LA |
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| (1)(B). Subsequent Verification Testing<br>Following notification of approval by the department, Marathon may substitute the following testing conditions for those in condition (1)(A). Marathon must continue to monitor operating conditions and analyze samples representative of each month of operation. The samples must be composed of eight representative samples from randomly chosen operating days during the four-week period of operation of each month. These monthly representative composite samples must be analyzed for the constituents listed in condition (3) prior to the disposal of the residual solids. Marathon may, at its discretion, analyze composite samples gathered more frequently to demonstrate that smaller batches of waste are nonhazardous. |
| (1)(C). Termination of Monthly Organic Testing<br>Marathon must continue to monitor unit operating conditions and perform testing as required under condition (1)(B), for the constituents listed in condition (3)(B), until the analyses submitted under condition (1)(B) show a minimum of three consecutive monthly representative samples with levels of constituents significantly below delisting levels listed in condition (3)(B). Following notification of approval by the department, Marathon may terminate monthly testing for the organic constituents found in condition (3)(B). Following termination of monthly testing for organic constituents, Marathon must test a representative composite sample, composited over a one-week time period, for all constituents listed in condition (3)(B) on a quarterly basis. If delisting levels for any organic constituents listed in condition (3)(B) are exceeded in the quarterly sample, Marathon must re-institute testing as required in condition (1)(B). |
| (1)(D). Termination of Monthly Inorganic Testing<br>Marathon must continue to monitor unit operating conditions and perform testing as required under condition (1)(B), for the constituents listed in condition (3)(A), until the analyses submitted under condition (1)(B) show a minimum of three consecutive monthly representative samples with levels of constituents significantly below delisting levels listed in condition (3)(A). Following notification of approval by the department, Marathon may terminate monthly testing for the inorganic constituents found in condition (3)(A). Following termination of monthly testing for inorganic constituents, Marathon must test a representative composite sample, composited over a one-week time period, for all constituents listed in condition (3)(A) on a quarterly basis. If delisting levels for any inorganic constituents listed in condition (3)(A) are exceeded in the quarterly sample, Marathon must re-institute testing as required in condition (1)(B). |
| (2). Waste Holding and Handling<br>Marathon must store as hazardous wastes all residual solids generated until each batch has completed verification testing, as specified in conditions (1)(A)-(1)(D), and has satisfied the delisting criteria, as specified in condition (3). If the levels of constituents in the samples of residual solids are below all of the applicable levels set forth in condition (3), then the residual solids thereby become nonhazardous solid wastes and may be managed and disposed of in accordance with all applicable solid waste regulations. If constituent levels in any weekly composite or other representative sample equal or exceed any of the delisting levels set in condition (3), the residual solids generated during the corresponding period must be retreated to meet the delisting levels or managed and disposed of in accordance with subtitle C of RCRA. |
| (3). Delisting Levels<br>The following delisting levels have been determined safe by taking into account health-based criteria and limits of detection. Concentrations in conditions (3)(A) and (3)(B) must be measured in the extract from the samples by the method specified in LAC 33:V.4903.E. Concentrations in the extract must be less than the following levels (all units are milligrams per liter). |
| (3)(A). Inorganic Constituents<br>Antimony—0.22; Arsenic—0.40; Barium—72; Beryllium—0.14; Cadmium—0.18; Chromium—3.6; Lead—0.54; Mercury—0.072; Nickel—3.6; Selenium—1.0; Silver—5.0; Vanadium—7.2. |
| (3)(B). Organic Constituents<br>Acenapthene—72; Benzene—0.18; Benzo(a)anthracene—0.050; Benzo(a)pyrene—0.050; Benzo(b)fluoranthrene—0.050; Bis(2-ethylhexyl)phthalate—0.22; Chrysene—0.05; Ethylbenzene—25; Fluoranthrene—72; Fluorene—72; Naphthalene—36; Pyrene—72; Toluene—36. |
| (4). Changes in Operating Conditions<br>After completing the initial verification test period in condition (1)(A), if Marathon significantly changes the operating conditions specified in the petition, Marathon must notify the department in writing. Following receipt of written approval by the department, Marathon must re-institute the testing required in condition (1)(A) for a minimum of four weekly operating periods. Marathon must report unit operating conditions and test data required by condition (1)(A), including quality control data, obtained during this period no later than 60 days after the changes take place. Following written notification by the department, Marathon may replace testing condition (1)(A) with (1)(B), or reduce or terminate testing requirements as described in conditions (1)(C) and (1)(D) to the extent directed by the department. Marathon must fulfill all other requirements in condition (1). |

| Table 1 - Wastes Excluded |
|---|
| **Marathon Oil Co., Garyville, LA** |
| (4)(A). Processing Equipment<br>Marathon may elect to change thermal desorption processing equipment based on operational performance and economic considerations. In the event that Marathon changes operating equipment, i.e., generic thermal desorption units, Marathon must re-institute processing and initiate testing required in condition (1)(A) for a minimum of four weekly operating periods. Marathon must report unit operating conditions and test data required in condition (1)(A), including quality control data, obtained during this period no later than 60 days after the changes take place. Following written notification by the department, Marathon may replace testing condition (1)(A) with (1)(B), or reduce or terminate testing requirements as described in conditions (1)(C) and (1)(D) to the extent directed by the department. Marathon must fulfill all other requirements in condition (1). |
| (4)(B). Batch Processing<br>Marathon may periodically elect to change operating conditions to accommodate batch processing of single-event waste generations. In the event that Marathon initiates batch processing and changes the operating conditions established under condition (1), Marathon must re-institute the testing required in condition (1)(A) during such batch processing events and monitor unit operating conditions and perform testing required by condition (1)(A), as appropriate. Following the completion of batch processing operations, Marathon must return to the operating conditions applicable prior to initiation of the batch processing and may return to the testing conditions that were applicable prior to the initiation of the batch processing activities. |

| Table 1 - Wastes Excluded |
|---|
| **Motiva Enterprises LLC, Norco, LA** |
| Residual solids, at a maximum annual generation rate of 10,000 cubic yards per year (7,500 tons/year), are generated from the thermal desorption recycling of oil-bearing secondary materials resulting from petroleum processing operations, which are classified as newly generated EPA Hazardous Waste Number F037, petroleum refinery primary oil/water/solids separation sludge (effective February 8, 1999, per the updated definition promulgated on August 6, 1998, and the corrected definition dated June 8, 2000). For the purpose of this exclusion, oil-bearing hazardous secondary materials resulting from petroleum refining operations include EPA Hazardous Waste Numbers K048-K052, K169-K170, F037, and F038. The constituents of concern for F037 waste are listed as hexavalent chromium, lead, benzene, benzo(a)pyrene, and chrysene (see LAC 33:V.4901). Motiva must implement a testing and management program that meets the following conditions for the exclusion to be valid. |
| (1). Testing<br>Sample collection and analyses, including quality control (QC) procedures, must be performed according to methodologies described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication Number SW-846, as incorporated by reference in LAC 33:V.110. |
| (1)(A). Inorganic Testing<br>During the first 12 months of this exclusion, Motiva must collect and analyze a monthly composite sample of the residual solids. Composite samples must be composed of a minimum of two representative grab samples from each operating day during a representative week of operation. The samples must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the residual solids. Motiva must report to the department the unit operating conditions and analytical data (reported in milligrams per liter) for antimony, arsenic, barium, chromium, lead, mercury, nickel, selenium, silver, vanadium, and zinc, including quality control information. If the department and Motiva concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(A), then Motiva may replace the inorganic testing required in condition (1)(A) with the inorganic testing required in condition (1)(B). Condition (1)(A) shall remain effective until this concurrence is reached. |
| (1)(B). Subsequent Inorganic Testing<br>Following concurrence by the department, Motiva may substitute the following testing conditions for those in condition (1)(A). Motiva must continue to monitor operating conditions and analyze quarterly composite samples representative of normal operations. The samples must be composed of representative grab samples from each operating day during a representative week of operation, during the first month of each quarterly period. These quarterly representative composite samples must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the residual solids. If delisting levels for any inorganic constituents listed in condition (3)(A) are exceeded in the quarterly sample, Motiva must re-institute testing as required in condition (1)(A). Motiva may, at its discretion, analyze composite samples gathered more frequently to demonstrate that smaller batches of waste are nonhazardous. |
| (1)(C). Organic Testing<br>During the first 12 months of this exclusion, Motiva must collect and analyze two monthly grab samples of the residual solids. These two representative grab samples should be collected on different operating days during a representative week of operation. The samples must be analyzed for the constituents listed in condition (3)(B) prior to disposal of the residual solids. Motiva must report to the department the unit |

| Table 1 - Wastes Excluded |
|---|
| **Motiva Enterprises LLC, Norco, LA** |
| operating conditions and analytical data (reported in milligrams per liter) for anthracene, benzene, toluene, xylenes, carbon disulfide, chrysene, naphthalene, and pyrene, including quality control information. If the department and Motiva concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(B), then Motiva may replace the organic testing required in condition (1)(C) with the organic testing required in condition (1)(D). Condition (1)(C) shall remain effective until this concurrence is reached. |
| (1)(D). Subsequent Organic Testing<br>Following concurrence by the department, Motiva may substitute the following testing conditions for those in condition (1)(C). Motiva must continue to monitor operating conditions and analyze two annual grab samples representative of normal operations. The samples must be representative grab samples from different operating days during a representative week of operation, during the first month of each annual period. These annual representative grab samples must be analyzed for the constituents listed in condition (3)(B) prior to disposal of the residual solids. If delisting levels for any organic constituents listed in condition (3)(B) are exceeded in the annual sample, Motiva must re-institute testing as required in condition (1)(C). Motiva may, at its discretion, analyze grab samples gathered more frequently to demonstrate that smaller batches of waste are nonhazardous. |
| (2). Waste Holding and Handling<br>Motiva must store as hazardous wastes all residual solids generated until each batch has completed verification testing, as specified in conditions (1)(A) - (1)(D), and has satisfied the delisting criteria, as specified in condition (3). If the levels of constituents in the samples of residual solids are below all of the applicable levels set forth in condition (3), then the residual solids thereby become nonhazardous solid wastes and may be managed and disposed of in accordance with all applicable solid waste regulations. If hazardous constituent levels in any monthly composite or other representative sample equal or exceed any of the delisting levels set in condition (3), the residual solids generated during the corresponding period must be retreated and/or stabilized as allowed below until the residual solids meet the delisting levels, or managed and disposed of in accordance with Subtitle C of RCRA. If the residual solids contain leachable inorganic concentrations at or above the delisting levels set forth in condition (3)(A), then Motiva may stabilize the material with Type 1 portland cement and/or hydrated lime, as demonstrated in the petition, to immobilize the metals. Following stabilization, Motiva must repeat analyses in condition (3)(A) prior to disposal. |
| (3). Delisting Levels<br>Concentrations in conditions (3)(A) and (3)(B) must be measured in the extract from the samples by the method specified in LAC 33:V.4903.E. All leachable concentrations in the extract must be less than the following levels (all units are milligrams per liter). |
| (3)(A). Inorganic Constituents<br>Antimony—0.50; Arsenic—0.50; Barium—50.0; Chromium—0.50; Lead—0.50; Mercury—0.05; Nickel—5.0; Selenium—1.0; Silver—0.5; Vanadium—1.6; Zinc—50.0. |
| (3)(B). Organic Constituents<br>Anthracene—0.20; Benzene—0.10; Carbon disulfide—4.8; Chrysene—0.05; Naphthalene—0.05; Pyrene—0.05; Toluene—0.10; Xylenes—0.10. |
| (4). Changes in Operating Conditions<br>If Motiva significantly changes the operating conditions specified in the petition, Motiva must notify the department in writing. Following receipt of written approval by the department, Motiva must re-institute the testing required in conditions (1)(A) and (1)(C) for a minimum of four months. Motiva must report unit operating conditions and test data required by conditions (1)(A) and (1)(C), including quality control data, obtained during this period no later than 60 days after the changes take place. Following written notification by the department, Motiva may replace testing conditions (1)(A) and (1)(C) with (1)(B) and (1)(D). Motiva must fulfill all other requirements in condition (1). |
| (4)(A). Processing Equipment<br>Motiva may elect to change thermal desorption processing equipment based on operational performance and economic considerations. In the event that Motiva changes operating equipment, i.e., generic thermal desorption units, Motiva must re-institute processing and initiate testing required in conditions (1)(A) and (1)(C) for a minimum of four months. Motiva must report unit operating conditions and test data required in conditions (1)(A) and (1)(C), including quality control data, obtained during this period, no later than 60 days after the changes take place. Following written notification by the department, Motiva may replace testing conditions (1)(A) and (1)(C) with (1)(B) and (1)(D). Motiva must fulfill all other requirements in condition (1). |
| (4)(B). Batch Processing<br>Motiva may periodically elect to change operating conditions to accommodate batch processing of single-event waste generations. In the event that Motiva initiates batch processing and changes the operating conditions established under condition (1), Motiva must re-institute the testing required in conditions (1)(A) and (1)(C) during such batch processing events, monitor unit operating conditions, and perform testing required by conditions (1)(A) and (1)(C), as appropriate. Following the completion of batch processing operations, Motiva must return to the operating conditions applicable prior to initiation of the |

| Table 1 - Wastes Excluded |
|---|
| **Motiva Enterprises LLC, Norco, LA** |
| batch processing and may return to the testing conditions that were applicable prior to the initiation of the batch processing activities. |

| Table 1 - Wastes Excluded |
|---|
| **Syngenta Crop Protection, Inc., St. Gabriel, LA** |
| Incinerator ash, at a maximum annual generation rate of 3,600 cubic yards per year, and incinerator scrubber water, at a maximum annual generation rate of 420,000 cubic yards per year (approximately 85 million gallons per year), result from incineration at the Syngenta Crop Protection, Inc., facility in St. Gabriel, Louisiana. Syngenta's waste stream includes the United States Environmental Protection Agency (USEPA) hazardous waste codes F001-F005, F024, K157-K159, and all P and U codes. The constituents of concern for these waste codes are listed in LAC 33:V.4901. This exclusion applies only to incinerator ash and incinerator scrubber water resulting from incineration conducted at Syngenta's St. Gabriel facility. Syngenta must implement a testing and management program that meets the following conditions for the exclusion to be valid. |
| (1). Testing<br>Sample collection and analyses, including quality control (QC) procedures, must be performed according to methods described in *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, EPA Publication Number SW-846*, as incorporated by reference in LAC 33:V.110. |
| (1)(A). Inorganic Testing<br>During the first 12 consecutive months of this exclusion, Syngenta must collect and analyze one monthly composite sample of the incinerator ash and two grab samples of the scrubber water. Composite samples of incinerator ash must be composed of one grab sample from each of two different days during a representative week of operation. The grab samples of scrubber water must be collected on two different days during a representative week of operation. The monthly samples must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the source incinerator ash and scrubber water. Syngenta must report to the department the unit operating conditions and analytical data (reported in milligrams per liter), including quality control information. If the department and Syngenta concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(A), Syngenta may replace the inorganic testing required in condition (1)(A) with the inorganic testing required in condition (1)(B). Condition (1)(A) shall remain effective until this concurrence is reached. |
| (1)(B). Subsequent Inorganic Testing<br>After concurrence by the department, Syngenta may substitute the following testing conditions for those in condition (1)(A). Syngenta must continue to monitor operating conditions and analyze quarterly samples representative of normal operations. Syngenta must report to the department the unit operating conditions and analytical data (reported in milligrams per liter), including quality control information. Composite samples of incinerator ash must be composed of one grab sample from each of two different days during a representative week of operation, during the first month of each quarterly period. The grab samples of scrubber water must be collected on two different days during a representative week of operation, during the first month of each quarterly period. These quarterly representative samples of incinerator ash and scrubber water must be analyzed for the constituents listed in condition (3)(A) prior to disposal of the source incinerator ash and scrubber water. If delisting levels for any inorganic constituents listed in condition (3)(A) are exceeded in any quarterly sample, Syngenta must re-institute testing as required in condition (1)(A). Syngenta may, at its discretion, analyze incinerator ash composite samples or scrubber water grab samples gathered more frequently than quarterly to demonstrate that smaller batches of waste are nonhazardous. |
| (1)(C). Organic Testing<br>During the first 12 consecutive months of this exclusion, Syngenta must collect and analyze monthly one grab sample of incinerator ash and one grab sample of scrubber water. These monthly representative grab samples must be analyzed for the constituents listed in condition (3)(B) prior to disposal of the source incinerator ash and scrubber water. Syngenta must report to the department the incinerator operating conditions and analytical data (reported in milligrams per liter), including quality control information. If the department and Syngenta concur that the analytical results obtained during the 12 monthly testing periods have been significantly below the delisting levels in condition (3)(B), Syngenta may replace the organic testing required in condition (1)(C) with the organic testing required in condition (1)(D). Condition (1)(C) shall remain effective until this concurrence is reached. |

| **Table 1 - Wastes Excluded** |
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| **Syngenta Crop Protection, Inc., St. Gabriel, LA** |
| (1)(D). Subsequent Organic Testing<br>After concurrence by the department, Syngenta may substitute the following testing conditions for those in condition (1)(C). Syngenta must continue to monitor operating conditions and analyze one quarterly grab sample of incinerator ash and one quarterly grab sample of scrubber water representative of normal operations. Syngenta must report to the department the unit operating conditions and analytical data (reported in milligrams per liter), including quality control information. These quarterly representative grab samples of incinerator ash and scrubber water must be collected during the first month of each quarterly period and analyzed for the constituents listed in condition (3)(B) prior to disposal of the source incinerator ash and scrubber water. If delisting levels for any organic constituents listed in condition (3)(B) are exceeded in the quarterly sample, Syngenta must re-institute testing as required in condition (1)(C). Syngenta may, at its discretion, analyze incinerator ash composite samples or scrubber water grab samples gathered more frequently than quarterly to demonstrate that smaller batches of waste are nonhazardous. |
| (2). Waste Holding and Handling<br>Syngenta must treat the incinerator ash and scrubber water as hazardous wastes until the verification testing is completed, as specified in conditions (1)(A) - (1)(D), and the incinerator ash and scrubber water have satisfied the delisting criteria, as specified in condition (3). If the levels of constituents in the samples of incinerator ash and scrubber water are below all of the applicable levels set forth in condition (3), then the incinerator ash and scrubber water thereby become nonhazardous solid wastes and may be managed and disposed of in accordance with all applicable solid waste regulations. If hazardous constituent levels in any monthly composite or other representative sample equal or exceed any of the delisting levels set in condition (3), the incinerator ash and scrubber water must be managed and disposed of in accordance with Subtitle C of RCRA until the incinerator ash and scrubber water meet the delisting levels. Syngenta must repeat the analyses for the constituents listed in conditions (3)(A) and (3)(B) prior to disposal. |
| (3). Delisting Levels<br>Concentrations in conditions (3)(A) and (3)(B) must be measured in an extract from the waste samples by the method specified in LAC 33:V.4903.E. All leachable concentrations in the waste extract must be less than the following levels (all units are milligrams per liter). |
| (3)(A). Inorganic Constituents (all units are milligrams per liter)<br>antimony—0.15; arsenic—0.50; barium—39.0; cadmium—0.11; chromium—5.0; copper—0.50; lead—5.0; nickel—20.0; vanadium—15; and zinc—200. |
| (3)(B). Organic Constituents (all units are milligrams per liter)<br>acetone—26.0; benzene—0.05; carbon tetrachloride—0.18; chloroform—0.14; 1,2-dichlorobenzene—0.77; hexachlorobenzene—0.13; nitrobenzene—0.14; pentachlorobenzene—0.04; pyridine—0.26; toluene—10.0; toxaphene—0.089; and vinyl chloride—0.05. |
| (4). Changes in Operating Conditions<br>If Syngenta significantly changes the operating conditions specified in the petition, Syngenta must notify the department in writing. After receipt of written approval by the department, Syngenta must re-institute the testing required in conditions (1)(A) and (1)(C) for a minimum of four consecutive months. Syngenta must report unit operating conditions and test data required by conditions (1)(A) and (1)(C), including quality control data, obtained during this period no later than 60 days after the changes take place. After written notification by the department, Syngenta may replace testing conditions (1)(A) and (1)(C) with (1)(B) and (1)(D). Syngenta must fulfill all other requirements in condition (1). |
| (4)(A). Processing Equipment<br>Syngenta may elect to change processing equipment based on operational performance and economic considerations. In the event that Syngenta changes operating equipment, Syngenta must re-institute processing and initiate testing required in conditions (1)(A) and (1)(C) for a minimum of four consecutive months. Syngenta must report unit operating conditions and test data required in conditions (1)(A) and (1)(C), including quality control data, obtained during this period, no later than 60 days after the changes take place. Following written notification by the department, Syngenta may replace testing conditions (1)(A) and (1)(C) with (1)(B) and (1)(D). Syngenta must fulfill all other requirements in condition (1). |

| **Table 2 – One-Time Wastes Excluded** |
|---|
| **Murphy Exploration and Production Company, Amelia, LA** |
| Hazardous waste incinerator ash was generated by the combustion of hazardous wastes and nonhazardous wastes in a rotary kiln incinerator at Marine Shale Processors in Amelia, Louisiana. In 1986 and 1987, this ash was used as fill material for the Rim Tide barge slip area at Murphy Exploration and Production Company (Murphy) in Amelia, Louisiana. For the purpose of this exclusion, ash used as fill material by Murphy includes all hazardous waste codes listed in LAC 33:V.4901. This is a one-time exclusion for a maximum volume of 6,200 cubic yards of ash subsequent to its excavation from the Rim Tide barge slip area at Murphy for the purpose of transportation and disposal in a Subtitle D landfill after June 20, 2007. |

## Appendix F. Recordkeeping Instructions

A. The recordkeeping provisions of LAC 33:V.4357 specify that an owner or operator must keep a written operating record at his facility. This appendix provides additional instructions for keeping portions of the operating record. See LAC 33:V.4357.B for additional recordkeeping requirements.

B. The following information concerning each hazardous waste received, treated, stored, or disposed of at the facility must be recorded, as it becomes available, and maintained in the operating record until closure of the facility, in the following manner:

1. a description of the waste, identified by its common name and the EPA hazardous waste number(s) from LAC 33:V.Chapter 49 that apply to the waste. The waste description must include the waste's physical form, i.e., liquid, sludge, solid, or contained gas. If the waste is not listed in LAC 33:V.Chapter 49, the description also must include the process that produced it (for example, "solid filter cake from production of [ ___ ], EPA Hazardous Waste Number W051"). Each hazardous waste listed in LAC 33:V.4901, and each hazardous waste characteristic defined in LAC 33:V.4903, has a four-digit EPA hazardous waste number assigned to it. This number must be used for recordkeeping and reporting purposes. Where a hazardous waste contains more than one listed hazardous waste, or where more than one hazardous waste characteristic applies to the waste, the waste description must include all applicable EPA hazardous waste numbers;

2. the estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1:

**Table 1—Units of Measure**

| Unit of Measure | Code[1] |
|---|---|
| Gallons | G |
| Gallons per Hour | E |
| Gallons per Day | U |
| Liters | L |
| Liters Per Hour | H |
| Liters Per Day | V |
| Short Tons Per Hour | D |
| Metric Tons Per Hour | W |
| Short Tons Per Day | N |
| Metric Tons Per Day | S |
| Pounds Per Hour | J |
| Kilograms Per Hour | R |
| Cubic Yards | Y |
| Cubic Meters | C |
| Acres | B |
| Acre-feet | A |
| Hectares | Q |
| Hectare-meter | F |
| Btu's per Hour | I |
| Pounds | P |
| Short tons | T |
| Kilograms | K |
| Tons | M |

**Table 1—Units of Measure**

| Unit of Measure | Code[1] |
|---|---|
| Gallons | G |
| Gallons per Hour | E |
| Gallons per Day | U |
| Liters | L |
| Liters Per Hour | H |
| Liters Per Day | V |
| Short Tons Per Hour | D |
| Metric Tons Per Hour | W |
| Short Tons Per Day | N |
| Metric Tons Per Day | S |
| Pounds Per Hour | J |
| Kilograms Per Hour | R |
| Cubic Yards | Y |
| Cubic Meters | C |
| Acres | B |
| Acre-feet | A |
| Hectares | Q |
| Hectare-meter | F |
| Btu's per Hour | I |
| Pounds | P |
| Short tons | T |
| Kilograms | K |
| Tons | M |

[1] Single digit symbols are used here for data processing purposes.

3. the method(s) (by handling code(s) as specified in Table 2) and date(s) of treatment, storage, or disposal. Use the handling code(s) listed in Table 2 that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

**Table 2—Handling Codes for Treatment, Storage, and Disposal Methods**

| Handling Code | Technique |
|---|---|
| A. Storage | |
| S01 | Container (barrel, drum, etc.) |
| S02 | Tank |
| S03 | Waste Pile |
| S04 | Surface Impoundment |
| S05 | Drip Pad |
| S06 | Containment Building (Storage) |
| S99 | Other Storage (specify) |
| B. Treatment | |
| 1. Thermal Treatment | |
| T06 | Liquid injection incinerator |
| T07 | Rotary kiln incinerator |
| T08 | Fluidized bed incinerator |
| T09 | Multiple hearth incinerator |
| T10 | Infrared furnace incinerator |
| T11 | Molten salt destructor |
| T12 | Pyrolysis |
| T13 | Wet air oxidation |
| T14 | Calcination |
| T15 | Microwave discharge |
| T18 | Other (specify) |
| 2. Chemical Treatment | |
| T19 | Absorption mound |
| T20 | Absorption field |
| T21 | Chemical fixation |
| T22 | Chemical oxidation |
| T23 | Chemical precipitation |

| Table 2—Handling Codes for Treatment, Storage, and Disposal Methods | |
|---|---|
| **Handling Code** | **Technique** |
| T24 | Chemical reduction |
| T25 | Chlorination |
| T26 | Chlorinolysis |
| T27 | Cyanide destruction |
| T28 | Degradation |
| T29 | Detoxification |
| T30 | Ion exchange |
| T31 | Neutralization |
| T32 | Ozonation |
| T33 | Photolysis |
| T34 | Other (specify) |
| 3. Physical Treatment | |
| a. Separation of Components | |
| T35 | Centrifugation |
| T36 | Clarification |
| T37 | Coagulation |
| T38 | Decanting |
| T39 | Encapsulation |
| T40 | Filtration |
| T41 | Flocculation |
| T42 | Flotation |
| T43 | Foaming |
| T44 | Sedimentation |
| T45 | Thickening |
| T46 | Ultrafiltration |
| T47 | Other (specify) |
| b. Removal of Specific Components | |
| T48 | Absorption-molecular sieve |
| T49 | Activated carbon |
| T50 | Blending |
| T51 | Catalysis |
| T52 | Crystallization |
| T53 | Dialysis |
| T54 | Distillation |
| T55 | Electrodialysis |
| T56 | Electrolysis |
| T57 | Evaporation |
| T58 | High gradient magnetic separation |
| T59 | Leaching |
| T60 | Liquid ion exchange |
| T61 | Liquid-liquid extraction |
| T62 | Reverse osmosis |
| T63 | Solvent recovery |
| T64 | Stripping |
| T65 | Sand filter |
| T66 | Other (specify) |
| 4. Biological Treatment | |
| T67 | Activated sludge |
| T68 | Aerobic lagoon |
| T69 | Aerobic tank |
| T70 | Anaerobic tank |
| T71 | Composting |
| T72 | Septic tank |
| T73 | Spray irrigation |
| T74 | Thickening filter |
| T75 | Trickling filter |
| T76 | Waste stabilization pond |
| T77 | Other (specify) |
| T78-T79 | [Reserved] |
| 5. Boilers and Industrial Furnaces | |
| T80 | Boiler |
| T81 | Cement Kiln |
| T82 | Lime Kiln |
| T83 | Aggregate Kiln |

| Table 2—Handling Codes for Treatment, Storage, and Disposal Methods | |
|---|---|
| **Handling Code** | **Technique** |
| T84 | Phosphate Kiln |
| T85 | Coke Oven |
| T86 | Blast Furnace |
| T87 | Smelting, Melting, or Refining Furnace |
| T88 | Titanium Dioxide Chloride Process Oxidation Reactor |
| T89 | Methane Reforming Furnace |
| T90 | Pulping Liquor Recovery Furnace |
| T91 | Combustion Device Used in the Recovery of Sulfur Values From Spent Sulfuric Acid |
| T92 | Halogen Acid Furnace |
| T93 | Other Industrial Furnaces Listed in 40 CFR 260.10 (specify) |
| 6. Other Treatment | |
| T94 | Containment Building (Treatment) |
| C. Disposal | |
| D79 | Underground Injection |
| D80 | Landfill |
| D81 | Land Treatment |
| D82 | Ocean Disposal |
| D83 | Surface Impoundment (to be closed as a landfill) |
| D99 | Other Disposal (specify) |
| D. Miscellaneous | |
| X01 | Open Burning/Open Detonation |
| X02 | Mechanical Processing |
| X03 | Thermal Unit |
| X04 | Geologic Repository |
| X99 | Other (specify) |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, LR 20:1000 (September 1994), amended by the Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 21:944 (September 1995), LR 22:830 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 23:952 (August 1997), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:2397 (December 1999), LR 26:2509 (November 2000), LR 29:1084 (July 2003), repromulgated LR 29:1475 (August 2003), amended by the Office of Environmental Assessment, LR 30:2464 (November 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 33:445 (March 2007), LR 33:825 (May 2007), LR 33:1016 (June 2007), LR 34:73 (January 2008), LR 34:1021 (June 2008), LR 34:1613 (August 2008).

# Chapter 51. Fee Schedules

## §5101. Applicability

A. The regulations in this Chapter apply to generators of hazardous waste as well as treaters, storers, and disposers of hazardous waste except as provided in LAC 33:V.1101 and LAC 33:V.1501.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 18:724 (July 1992).

## §5103. Scope and Purpose

A. It is the purpose of these regulations to establish a fee system for funding the monitoring, investigation, and other activities required to be conducted for the maintenance of a safe and healthful environment by the Department of Environmental Quality in accordance with the Louisiana Environmental Quality Act (R.S. 30:2014 et seq.). Fees are required for all permits, licenses, registrations, and variances authorized by the Act.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 18:724 (July 1992).

## §5105. Authority

A. These regulations provide fees as required by R.S. 30:2014.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986).

## §5107. Definitions

(See LAC 33:V.109)

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986).

## §5109. Application Fees

A. Treaters, Storers, and/or Disposers

1. A one-time application fee is charged to cover application, evaluation, and other related program costs.

2. Each application thereto for which a fee is prescribed shall be accompanied by a remittance in the full amount of the fee. No application or amendments thereto shall be accepted or processed prior to payment of the full amount specified unless approved by the administrative authority. Major amendments of applications for operating permits, closure/post-closure permits, and modifications of permits may be considered as separate applications for purposes of calculating fees.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Solid Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 16:684 (August 1990), LR 18:724 (July 1992).

## §5111. Calculation of Application Fees

A. The applicant is required to calculate the appropriate application fee and, if applicable, siting fee according to the schedule included in the permit application form. Payment shall be made in accordance with the requirements of LAC 33:V.5127.

B. Application Fee Schedule

| Item | Fee |
|---|---|
| Site Analysis—per acre site size | $330[1] |
| Process and Plan Analysis | $1,320 |
| Facility Analysis—per facility[2] | $660 |
| Management/Financial Analysis | $1,320 |

[NOTE: Fee equals total of the four items.]

[1] Up to 100 acres, no additional fee thereafter.

[2] Incinerator, land farm, treatment pond, etc., each counted as a facility.

C. Administrative Cost Fee

Application Fee x 0.30 = Administrative Cost Fee

D. Siting Fee. This fee will be applicable to new commercial hazardous waste treatment, storage, and disposal facilities. This fee will be used to assess the impact of the location of the facility on the citizens in the surrounding area, the local infrastructure, and on the environment. A portion of this fee shall be allocated to the local governmental subdivision for the preparation of an infrastructure assessment report as determined by the secretary. When siting a commercial facility, the secretary shall determine whether the local governmental subdivision should be compensated for any reasonable and necessary cost for preparation of the infrastructure report:

Application Fee x 0.05 = Siting Fee

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq., and R.S. 49:316.1(A)(2)(a) and (c).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:318 (May 1986), LR 12:676 (October 1986), LR 13:433 (August 1987), LR 18:724 (July 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:288 (March 2001), LR 29:685 (May 2003), LR 29:2048 (October 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 35:2179 (October 2009).

## §5113. Provision for Collection of Additional Fees Should Application Fees Paid Be Less Than Program Costs

A. Operators who paid an application fee of $15,000 will be assessed an additional fee equaling the deficit, apportioned equally, provided that no operator pays more than the calculated fee of LAC 33:V.5111.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 14:621 (September 1988).

## §5115. Provision of Funds Collected in Excess of Program Costs

A. Excess funds over program cost generated by this fee shall be credited to the following year's budget.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 14:621 (September 1988).

## §5117. Annual Monitoring and Maintenance Fees—Treaters, Storers, and/or Disposers

A. All annual fees provided by this Chapter shall be paid within 30 days from receipt of billing.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 13:433 (August 1987), LR 14:621 (September 1988), LR 16:684 (August 1990).

## §5119. Calculation of Annual Maintenance Fees

A. Fee per Site

| | |
|---|---|
| Off-Site Disposer (Commercial) | $105,336 |
| Reclaimer (compensated for waste removed) | $46,200 |
| Reclaimer (uncompensated for waste removed or pays for waste removed) | $33,000 |
| Off-Site Disposer (Noncommercial) | $26,400 |
| On-Site Disposer | $13,200 |

[NOTE: The higher fee for off-site disposal is due to the cost of the manifest system and emergency response to transport spills (neither cost is applicable to on-site disposers).]

B. Fee per Hazardous Waste Facility Type

| Unit Type | Fee |
|---|---|
| **Storage:** | |
| Container/Tank/Waste Pile/etc. | $4,320 |
| **Treatment:** | |
| Incinerator/Boiler/Industrial Furnace/Filtration Unit/etc. | $6,956 |
| **Disposal:** | |
| Landfill/Miscellaneous Unit/etc. | $10,916 |

C. Fee Based on Volume

| | |
|---|---|
| Less than 1,000 tons | $2,577 |
| Less than 10,000 tons | $6,473 |
| Less than 100,000 tons | $10,370 |
| Less than 1,000,000 tons | $14,267 |
| More than 1,000,000 tons | $18,163 |

D. Administrative Cost Fee

| |
|---|
| Annual Maintenance Fee x 0.30 = Administrative Cost Fee |

E. Land Disposal Prohibitions Fee. The land disposal prohibitions fee includes treatment, processing (including use, reuse, recycling), and/or disposal facility annual fee (not on storage facilities). This fee applies to facilities handling wastes subject to the land disposal prohibitions in LAC 33:V.Chapter 22.

| | |
|---|---|
| On-Site | $1,320 |
| Off-Site Noncommercial | $2,640 |
| Reclaimer | $3,300 |
| Off-Site Commercial | $6,600 |

F. Groundwater Protection Fee. (This fee applies only to sites with groundwater monitoring.) This fee shall be calculated in accordance with LAC 33:V.5139.

G. Incinerator and Boiler/Industrial Furnace Inspection and Monitoring Fee. This fee shall be calculated in accordance with LAC 33:V.5141.

H. Annual Landfill Inspection and Monitoring Fee. This fee shall be calculated in accordance with LAC 33:V.5143.

I. Annual Land Treatment Unsaturated Zone Monitoring Inspection Fee. This fee shall be calculated in accordance with LAC 33:V.5145.

J. Formula to Apportion Fees

| |
|---|
| Annual Maintenance Fee = Fee per Site + Fee per Facility + Fee based on Volume + Administrative Cost Fee + Land Disposal Prohibitions Fee + Groundwater Protection Annual Fee + Incineration Inspection and Monitoring Fee + Boiler/Industrial Furnace Inspection and Monitoring Fee + Annual Landfill Inspection and Monitoring Fee + Annual Land Treatment Unsaturated Zone Monitoring Inspection Fee |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:318 (May 1986), LR 12:676 (October 1986), LR 13:433 (August 1987), LR 15:378 (May 1989), LR 16:684 (August 1990), LR 16:1057 (December 1990), LR 18:723 (July 1992), LR 18:1375 (December 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:685 (May 2003), LR 29:2049 (October 2003), amended by the Office of the Secretary, Legal Affairs Division, LR 35:0000 (October 2009).

## §5120. Land Disposal Prohibition Petition Fees

A. Petitions submitted in accordance with R.S. 30:2193(E)(2) and/or LAC 33:V.Chapter 22 are subject to additional fees as noted below for each petition submitted. These fees must be submitted at the time a petition is submitted.

| | |
|---|---|
| Variance | $13,200 |
| Exemption | $59,400 |
| Extension | $6,600 |
| No-Alternatives Determinations: | |
| Original Petition | $13,200 |
| Renewal Petition/Request | $13,200 |
| Request for determination for addition of a hazardous waste(s) not covered by existing determination | $1,320 |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 15:378 (May 1989), amended LR 17:658 (July 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:1803 (October 1999), LR 29:686 (May 2003), LR 29:2049 (October 2003).

## §5121. Generators of Hazardous Waste

A. All generators of hazardous waste must file or have on file a notification of that facility, using Notification Form HW-1 available from the administrative authority (See LAC 33:V.303.A).

B. For generators of hazardous waste, the Notification Form HW-1 shall be deemed a registration upon acceptance and approval by the administrative authority.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 14:621 (September 1988).

## §5123. Registration Fees, HW-1

A. An initial registration fee is charged for each generator, transporter, or TSD facility obtaining an EPA Identification Number from the department. There is no fee for modifying an existing registration based on any change of information submitted on Notification Form HW-1.

| | |
|---|---|
| Initial Fee | $12.50 |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:319 (May 1986), LR 12:676 (October 1986), LR 13:433 (August 1987), LR 14:622 (September 1988), LR 18:725 (July 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:686 (May 2003), LR 29:2049 (October 2003).

## §5125. Annual Monitoring and Maintenance Fee

A. Fee will annually be $375, plus the prohibited waste fee.

B. Annual prohibited waste fee is $132 for each generator who generates for land disposal as provided in LAC 33:V.Chapter 22. The generator will be subject to this fee if any waste generated is prohibited from disposal at any time during the year for which the fee is assessed.

C. All annual fees provided by this Chapter shall be paid by the due date indicated on the invoice.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:321 (May 1986), LR 12:676 (October 1986), LR 13:433 (August 1987), LR 15:378 (May 1989), LR 17:658 (July 1991), amended by the Office of Management and Finance, Fiscal Services Division, LR 22:18 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:686 (May 2003), LR 29:2049 (October 2003).

## §5127. Methods of Payment

A. All payments made by check, draft, or money order shall be made payable to the Department of Environmental Quality, and mailed to the department at the address provided on the invoice.

B. Electronic Methods of Payment

1. Persons wishing to make payments using the electronic pay (e-pay) method shall access the department's website and follow the instructions provided on the website.

2. Persons wishing to make payments using the electronic funds transfer (EFT) method shall contact the Office of Management and Finance for further instructions.

C. Cash is not an acceptable form of payment.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq., and R.S. 49:316.1(A)(2)(a) and (c).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 18:725 (July 1992), amended by the Office of Management and Finance, Fiscal Services Division, LR 22:18 (January 1996), amended by the Office of the Secretary, Legal Affairs Division, LR 35:2180 (October 2009).

## §5129. Late Payment Fee

A. Payments not received within 15 days of the due date will be charged a late payment fee. Any late payment fee shall be calculated from the due date indicated on the invoice.

1. Payments not received by the department by the fifteenth day from the due date will be assessed a 5 percent late payment fee on the original assessed fee.

2. Payments not received by the department by the thirtieth day from the due date will be assessed an additional 5 percent late payment fee on the original assessed fee.

3. Payments not received by the department by the sixtieth day from the due date will be assessed an additional 5 percent late payment fee on the original assessed fee.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986), LR 18:725 (July 1992), amended by the Office of Management and Finance, Fiscal Services Division, LR 22:18 (January 1996), LR 25:427 (March 1999).

## §5131. Failure to Pay

A. Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:321 (May 1986), LR 12:676 (October 1986), LR 13:433 (August 1987), LR 18:725 (July 1992), amended by the Office of Management and Finance, Fiscal Services Division, LR 25:427 (March 1999).

## §5133. Effective Date

A. The application fees prescribed herein shall be required for all applications filed on or after these fee regulations are published in the *Louisiana Register* as adopted.

B. The annual fees prescribed herein shall be effective for the state fiscal year in which these fee regulations are published in the *Louisiana Register* as adopted and each state fiscal year thereafter. Fees submitted to the department in accordance with previous fee regulations for the state fiscal year in which these fee regulations are published in the *Louisiana Register* as adopted shall be credited against the fees and due and payable under these fee regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 10:200 (March 1984), amended LR 11:533 (May 1985), LR 12:676 (October 1986).

## §5135. Transporter Fee

A. All transporters of hazardous waste with a facility in Louisiana shall pay a fee of $264 per year to the department. There will be only one fee regardless of the number of vehicles in the service of the transporter.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 14:622 (September 1988), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:686 (May 2003), LR 29:2050 (October 2003).

## §5137. Conditionally Exempt Small Quantity Generator Fee

A. Conditionally exempt small quantity generators (see LAC 33:V.108) shall pay a fee of $66 per year to the department.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 14:622 (September 1988), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:716 (May 2001), LR 29:687 (May 2003), LR 29:2050 (October 2003).

## §5139. Groundwater Protection Permit Review Fee

A. Permit Review Fee. This fee covers the cost of reviewing permits for geology, geotechnical design, and groundwater protection aspects.

| | |
|---|---|
| **Hazardous Waste Facilities (1 time)** | $6,600 each |
| Permit Modifications: | |
| Class 1 and 2 | $264 each |
| Class 3 | $990 each |
| **Solid Waste Facilities (1 time)** | $6,600 each |
| Permit Modifications: | |
| Major | $660 each |
| Minor | $264 each |

B. Oversight of Abandonment Procedures. This fee covers the cost of reviewing plans to plug and abandon all permitted groundwater monitoring systems (monitoring wells, piezometers, observations wells, and recovery wells) to ensure that they do not pose a potential threat to groundwater.

| | |
|---|---|
| Casing pulled | $132 each |
| Casing reamed out | $264 each |
| Casing left in place | $660 each |

C. Groundwater Monitoring Systems Installation Permit. This fee covers the cost of reviewing the geology and design of proposed groundwater monitoring systems to ensure compliance with department specifications for units subject to permitting under these regulations.

| | |
|---|---|
| Each Well | $660 |

D. Groundwater Monitoring Systems Inspection Fee (Annual). This fee covers the cost of inspecting monitoring systems for units subject to permitting under these regulations, to ensure that they are functioning properly and continue to maintain their integrity.

| | |
|---|---|
| Each Well | $330 |

AUTHORITY NOTE: Promulgated in accordance with 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Groundwater Division, LR 14:621 (September 1988), amended LR 16:685 (August 1990), amended by the Hazardous Waste Division,

LR 18:725 (July 1992), LR 18:1256 (November 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:687 (May 2003), LR 29:2050 (October 2003).

### §5141. Incinerator and Boiler/Industrial Furnace Inspection and Monitoring Fee

A. Trial Burn or Test Burn Observer Fee. This is a special fee charged at a daily rate to cover the cost to the department of providing and placing on site a regulatory observer team during incinerator trial burns, boiler/industrial furnace trial burns, or other types of test burns required by regulations or the administrative authority when an observer team is required by regulations, specified by permit conditions, or considered necessary to ensure that human health and the environment are adequately protected.

1. This fee will be $660 for each day of the test burn or trial burn.

2. This fee will be billed following completion of the trial burn or test burn and must be paid by the due date indicated on the invoice.

B. Annual Monitoring and Maintenance Fee for Incinerators, Boilers, Industrial Furnaces, and Commercial Recycling Furnaces. This is an annual fee applied to defray the cost of annually inspecting the required continuous monitors and recording devices for each incinerator, boiler, or industrial furnace to determine whether they are being properly maintained and calibrated. This fee will annually be a flat $1,320.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:1057 (December 1990), amended LR 18:1375 (December 1992), amended by the Office of Management and Finance, Fiscal Services Division, LR 22:18 (January 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2510 (November 2000), LR 29:687 (May 2003), LR 29:2050 (October 2003).

### §5143. Annual Landfill Inspection and Monitoring Fee

A. An annual fee shall be charged for the inspection of the regulatory requirement for leak detection and leachate collection systems associated with hazardous waste landfills to determine operational status and degree of proper maintenance. For each landfill unit or cell with a separate leak detection and leachate collection system, the annual fee will be $132.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:1057 (December 1990), amended LR 18:725 (July 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:688 (May 2003), LR 29:2050 (October 2003).

### §5145. Annual Land Treatment Unsaturated Zone Monitoring Inspection Fee

A. Semiannual Zone of Incorporation (ZOI) Inspection Fee. This fee covers the cost of inspection and random sampling and laboratory analysis of the zone of incorporation.

| | |
|---|---|
| ZOI soil samples | $1,320 each acre |
| Soil-pore liquid monitors (Lysimeters) | $3,300 each monitor |

B. Annual Land Treatment Unit Report Review Fee. This fee covers the cost of reviewing the report required by final permits for land treatment. Included in the annual land treatment unit report are the results of the unsaturated zone monitoring. Included are the semiannual soil core sample analyses and the quarterly soil-pore liquid quality analyses from below the treatment zone. Also included are soil moisture tensiometer readings of the ZOI.

| | |
|---|---|
| Hazardous Waste Facilities | $1,320 each report |

C. Permit Review Fee. This fee covers the cost of reviewing permits for geology, geotechnical design, and hydrological separation requirements of these regulations.

| | |
|---|---|
| Initial Permit | $6,600 each |
| Permit Modifications: | |
| Class 1 | $264 each |
| Class 2 or 3 | $990 each |

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2014 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Hazardous Waste Division, LR 16:1057 (December 1990), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 29:688 (May 2003), LR 29:2050 (October 2003).

### §5147. Fee for NHEM Determination for Contaminated Environmental Media

A. A fee of $3,000 shall be submitted at the time a request for a review of contaminated environmental media for a NHEM determination is made in accordance with LAC 33:V.106.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq. and, in particular, 2186(A)(2).

HISTORICAL NOTE: Promulgated by the Office of the Secretary, Legal Affairs Division, LR 33:455 (March 2007).

## Chapter 53. Military Munitions

### §5301. Applicability

A. The regulations in this Chapter identify when military munitions become a solid waste and if these wastes are also hazardous under this Chapter or LAC 33:V.Chapter 1 and the management standards that apply to these wastes.

B. Unless otherwise specified in this Chapter, all applicable requirements in these regulations apply to waste military munitions.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1756 (September 1998).

## §5303. Definition of Military Munitions as a Solid Waste

A. A military munition is not a solid waste when:

1. used for its intended purpose, including:

a. use in training military personnel or explosives and munitions emergency response specialists (including training in proper destruction of unused propellant or other munitions);

b. use in research, development, testing, and evaluation of military munitions, weapons, or weapon systems; or

c. recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, "use for intended purpose" does not include the on-range disposal or burial of unexploded ordnance and contaminants when the burial is not a result of product use;

2. an unused munition, or component thereof, is being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subjected to materials recovery activities, unless such activities involve use constituting disposal as defined in LAC 33:V.109.*Solid Waste*, or burning for energy recovery as defined in LAC 33:V.109.*Solid Waste*.

B. An unused military munition is a solid waste when any of the following occurs:

1. the munition is abandoned by being disposed of, burned, detonated (except during intended use as specified in Subsection A of this Section), incinerated, or treated prior to disposal;

2. the munition is removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, or incinerated, or treated prior to disposal;

3. the munition is deteriorated or damaged (e.g., the integrity of the munition is compromised by cracks, leaks, or other damage) to the point that it cannot be put into serviceable condition and cannot reasonably be recycled or used for other purposes; or

4. the munition has been declared a solid waste by an authorized military official.

C. A used or fired military munition is a solid waste:

1. when transported off range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal, or treatment prior to disposal; or

2. if recovered, collected, and then disposed of by burial, or landfilling either on or off a range.

D. For purposes of RCRA Section 1004(27), a used or fired military munition is a solid waste and, therefore, is potentially subject to RCRA corrective action authorities under Sections 3004(u) and (v), and 3008(h) or imminent and substantial endangerment authorities under Section 7003, if the munition lands off-range and is not promptly rendered safe and/or retrieved. Any imminent and substantial threats associated with any remaining material must be addressed. If remedial action is infeasible, the operator of the range must maintain a record of the event for as long as any threat remains. The record must include the type of munition and its location (to the extent the location is known).

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1756 (September 1998).

## §5305. Standards Applicable to the Transportation of Solid Waste Military Munitions

A. Criteria for Hazardous Waste Regulation of Waste Non-Chemical Military Munitions in Transportation

1. Waste military munitions that are being transported and that exhibit a hazardous waste characteristic or are listed as hazardous waste under LAC 33:V.Chapter 49 are listed or identified as a hazardous waste (and thus are subject to regulation under LAC 33:V.Subpart 1) unless all the following conditions are met:

a. the waste military munitions are not chemical agents or chemical munitions;

b. the waste military munitions must be transported in accordance with the Department of Defense (DOD) shipping controls applicable to the transport of military munitions;

c. the waste military munitions must be transported from a military owned or operated installation to a military owned or operated treatment, storage, or disposal facility; and

d. the transporter of the waste must provide oral notice to the administrative authority within 24 hours from the time the transporter becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of Paragraph A.1 of this Section that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within five days from the time the transporter becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of Paragraph A.1 of this Section.

2. If any waste military munitions shipped under Paragraph A.1 of this Section are not received by the receiving facility within 45 days of the day the waste was shipped, the owner or operator of the receiving facility must report this non-receipt to the administrative authority within five days.

3. The exemption in Paragraph A.1 of this Section from regulation as hazardous waste shall apply only to the transportation of non-chemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to storage, treatment, or disposal.

4. The conditional exemption in Paragraph A.1 of this Section applies only so long as all of the conditions in Paragraph A.1 of this Section are met.

B. Reinstatement of Exemption. If any waste military munition loses its exemption under Paragraph A.1 of this Section, an application may be filed with the administrative authority for reinstatement of the exemption from hazardous waste transportation regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of Paragraph A.1 of this Section. If the administrative authority finds that reinstatement of the exemption is appropriate based on factors such as the transporter's provision of a satisfactory explanation of the circumstances of the violation or a demonstration that the violations are not likely to recur, the administrative authority may reinstate the exemption under Paragraph A.1 of this Section. If the administrative authority does not take action on the reinstatement application within 60 days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the administrative authority may terminate a conditional exemption reinstated by default in the preceding sentence if the administrative authority finds that reinstatement is inappropriate based on factors such as the transporter's failure to provide a satisfactory explanation of the circumstances of the violation or failure to demonstrate that the violations are not likely to recur. In reinstating the exemption under Paragraph A.1 of this Section, the administrative authority may specify additional conditions as are necessary to ensure and document proper transportation to protect human health and the environment.

C. Amendments to DOD Shipping Controls. The Department of Defense shipping controls applicable to the transport of military munitions referenced in Subparagraph A.1.b of this Section are Government Bill of Lading (GBL) (GSA Standard Form 1109), requisition-tracking form DD Form 1348, the Signature and Talley Record (DD Form 1907), Special Instructions for Motor Vehicle Drivers (DD Form 836), and the Motor Vehicle Inspection Report (DD Form 626) in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the Department of Defense shipping controls shall become effective for purposes of Paragraph A.1 of this Section on the date the Department of Defense publishes notice in the Federal Register that the shipping controls referenced in Subparagraph A.1.b of this Section have been amended.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1756 (September 1998).

## §5307. Standards Applicable to Emergency Responses

A. Explosives and munitions emergencies involving military munitions or explosives are subject to LAC 33:V.1101.H, 1301.G, 1501.7.a, and 4307, or alternatively to LAC 33:V.701.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1757 (September 1998).

## §5309. Standards Applicable to the Storage of Solid Waste Military Munitions

A. Criteria for Hazardous Waste Regulation of Waste Non-Chemical Military Munitions in Storage

1. Waste military munitions in storage that exhibit a hazardous waste characteristic or are listed as hazardous waste under LAC 33:V.Chapter 49 are listed or identified as a hazardous waste (and thus are subject to regulation under LAC 33:V.Subpart 1), unless all the following conditions are met:

a. the waste military munitions are not chemical agents or chemical munitions;

b. the waste military munitions must be subject to the jurisdiction of the Department of Defense Explosives Safety Board (DDESB);

c. the waste military munitions must be stored in accordance with the DDESB storage standards applicable to waste military munitions;

d. within 90 days of when a storage unit is first used to store waste military munitions, whichever is later, the owner or operator must notify the Office of Environmental Services of the location of any waste storage unit used to store waste military munitions for which the conditional exemption in Paragraph A.1 of this Section is claimed;

e. the owner or operator must provide prompt notice to the Office of Environmental Compliance in the manner provided in LAC 33:I.3923 within 24 hours from the time the owner or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of Paragraph A.1 of this Section that may endanger health or the environment. In addition, a written submission, using the procedures provided in LAC 33:I.3925, describing the circumstances shall be provided within five days from the time the owner or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of Paragraph A.1 of this Section;

f. the owner or operator must inventory the waste military munitions at least annually, must inspect the waste military munitions at least quarterly for compliance with the conditions of Paragraph A.1 of this Section, and must maintain records of the findings of these inventories and inspections for at least three years; and

g. access to the stored waste military munitions must be limited to appropriately trained and authorized personnel.

2. The conditional exemption in Paragraph A.1 of this Section from regulation as hazardous waste shall apply only to the storage of non-chemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to transportation, treatment or disposal.

3. The conditional exemption in Paragraph A.1 of this Section applies only so long as all of the conditions in Paragraph A.1 of this Section are met.

B. Notice of Termination of Waste Storage. The owner or operator must notify the Office of Environmental Services when a storage unit identified in Subparagraph A.1.d of this Section will no longer be used to store waste military munitions.

C. Reinstatement of Conditional Exemption. If any waste military munition loses its conditional exemption under Paragraph A.1 of this Section, an application may be filed with the administrative authority for reinstatement of the conditional exemption from hazardous waste storage regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of Paragraph A.1 of this Section. If the administrative authority finds that reinstatement of the conditional exemption is appropriate based on factors such as the owner's or operator's provision of a satisfactory explanation of the circumstances of the violation or a demonstration that the violations are not likely to recur, the administrative authority may reinstate the conditional exemption under Paragraph A.1 of this Section. If the administrative authority does not take action on the reinstatement application within 60 days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the administrative authority may terminate a conditional exemption reinstated by default in the preceding sentence if he/she finds that reinstatement is inappropriate based on factors such as the owner's or operator's failure to provide a satisfactory explanation of the circumstances of the violation or failure to demonstrate that the violations are not likely to recur. In reinstating the conditional exemption under Paragraph A.1 of this Section, the administrative authority may specify additional conditions as are necessary to ensure and document proper storage to protect human health and the environment.

D. Waste Chemical Munitions

1. Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under LAC 33:V.Chapter 49 are listed or identified as a hazardous waste and shall be subject to the applicable regulatory requirements of RCRA Subtitle C.

2. Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under LAC 33:V.Chapter 49 are not subject to the storage prohibition in RCRA Section 3004(j), codified at LAC 33:V.2205.

E. Amendments to DDESB Storage Standards. The DDESB storage standards applicable to waste military munitions, referenced in Subparagraph A.1.c of this Section, are DOD 6055.9-STD (*DOD Ammunition and Explosive Safety Standards*), in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the DDESB storage standards shall become effective for purposes of Paragraph A.1 of this Section on the date the Department of Defense publishes notice in the Federal Register that the DDESB standards referenced in Paragraph A.1 of this Section have been amended.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1757 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2510 (November 2000), LR 30:1675 (August 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2484 (October 2005), LR 33:2136 (October 2007).

## §5311. Standards Applicable to the Treatment and Disposal of Waste Military Munitions

A. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in LAC 33:V.Subpart 1.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Waste Services, Hazardous Waste Division, LR 24:1758 (September 1998).