

Table of Contents

Chapter 26.	Corrective Action Management Units and Temporary Units.....	355
§2601.	Corrective Action Management Units (CAMU)	355
§2603.	Temporary Units (TU).....	356
§2605.	Staging Piles	357
Chapter 27.	Land Treatment	359
§2701.	Applicability.....	359
§2703.	Design and Operating Requirements	359
§2705.	Treatment Program.....	359
§2707.	Treatment Demonstration.....	360
§2709.	Food-Chain Crops	361
§2711.	Unsaturated Zone Monitoring	361
§2713.	Recordkeeping	363
§2715.	Special Requirements for Ignitable or Reactive Waste	363
§2717.	Special Requirements for Incompatible Wastes	363
§2719.	Closure and Post-Closure Care.....	363
§2723.	Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026 and F027.....	364
Chapter 28.	Drip Pads	365
§2801.	Applicability.....	365
§2803.	Assessment of Existing Drip Pad Integrity	365
§2804.	Design and Installation of New Drip Pads.....	365
§2805.	Design and Operating Requirements	365
§2807.	Inspections	367
§2809.	Closure.....	368
Chapter 29.	Surface Impoundments	368
§2901.	Applicability.....	368
§2903.	Design and Operating Requirements	368
§2904.	Action Leakage Rate	371
§2905.	Exemption.....	371
§2906.	Response Actions	371
§2907.	Monitoring and Inspection	372

Table of Contents

§2909. Emergency Repairs; Contingency Plans	372
§2911. Closure and Post-Closure Care.....	373
§2913. Special Requirements for Ignitable or Reactive Waste	374
§2915. Special Requirements for Incompatible Wastes	374
§2917. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027	374
§2919. Air Emission Standards	374
Chapter 30. Hazardous Waste Burned in Boilers and Industrial Furnaces.....	374
§3001. Applicability.....	374
§3003. Management Prior to Burning.....	377
§3005. Permit Standards for Burners	377
§3007. Interim Status Standards for Burners	382
§3009. Standards to Control Organic Emissions	393
§3011. Standards to Control Particulate Matter	395
§3013. Standards to Control Metals Emissions	396
§3015. Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas (Cl ₂) Emissions	399
§3017. Small Quantity On-site Burner Exemption	400
§3019. Low Risk Waste Exemption.....	402
§3021. Waiver of DRE Trial Burn for Boilers	402
§3023. Standards for Direct Transfer	403
§3025. Regulation of Residues	404
Appendix A. Tier I and Tier II Feed Rate and Emissions Screening Limits For Metals	406
Appendix B. Tier I Feed Rate Screening Limits for Total Chlorine.....	406
Appendix C. Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride	406
Appendix D. Reference Air Concentrations.....	406
Appendix E. Risk Specific Doses (10 ⁻⁵)	406
Appendix F. Stack Plume Rise [Estimated Plume Rise (in Meters) Based on Stack Exit Flow Rate and Gas Temperature].....	406
Appendix G. Health-based Limits for Exclusion of Waste-derived Residues	406
Appendix H. Organic Compounds for Which Residues Must be Analyzed.....	406
Appendix I. Methods Manual for Compliance with the BIF Regulations.....	406
Appendix J. Reserved.....	407
Appendix K. Lead-bearing Materials That May Be Processed in Exempt Lead Smelters.....	407
Appendix L. Nickel or Chromium-bearing Materials That May Be Processed in Exempt Nickel-Chromium Recovery Furnaces.....	407
Appendix M. Mercury-Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units.....	407
Chapter 31. Incinerators	407
§3101. Purpose	407
§3103. General Requirements	407
§3105. Applicability.....	407
§3107. Waste Analysis	424
§3109. Principal Organic Hazardous Constituents (POHCs).....	424
§3111. Performance Standards	425

Table of Contents

§3113. Hazardous Waste Permits	425
§3115. Incinerator Permits for New or Modified Facilities	426
§3117. Operating Requirements	428
§3119. Monitoring and Inspections	429
§3121. Closure.....	429
Chapter 32. Miscellaneous Units	429
§3201. Applicability.....	429
§3203. Environmental Performance Standards	430
§3205. Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action	431
§3207. Closure and Post-Closure Care.....	431
Chapter 33. Ground Water Protection.....	431
§3301. Applicability.....	431
§3303. Required Programs	432
§3305. Ground Water Protection Standard	433
§3307. Hazardous Constituents	433
§3309. Concentration Limits	434
§3311. Point of Compliance	436
§3313. Compliance Period	436
§3315. General Ground Water Monitoring Requirements.....	436
§3317. Detection Monitoring Program.....	438
§3319. Compliance Monitoring Program.....	440
§3321. Corrective Action Program.....	441
§3322. Corrective Action	442
§3323. Monitoring Well Abandonment and Sealing of Bore Holes	442
§3325. Ground Water Monitoring List ¹	443
Chapter 35. Closure and Post-Closure	455
§3501. Applicability.....	455
§3503. Notification of Intention to Close a Facility.....	456
Subchapter A. Closure Requirements	456
§3505. Closure Procedures	456
§3507. Closure Performance Standards	456
§3509. Closure Financial Responsibility.....	457
§3511. Closure Plan; Amendment of Plan.....	457
§3513. Closure; Time Allowed for Closure	459
§3515. Disposal or Decontamination of Equipment, Structures and Soils	461
§3517. Certification of Closure	461
Subchapter B. Post-Closure Requirements	461
§3519. Post-Closure Procedures.....	461
§3521. Post-Closure Care and Use of Property.....	461
§3523. Post-Closure Plan, Amendment of Plan.....	462
§3525. Post-Closure Notices	463

Table of Contents

§3527. Certification of Completion of Post-Closure Care	464
Chapter 37. Financial Requirements	464
§3701. Applicability	464
§3703. Definitions of Terms as Used in This Chapter	464
Subchapter A. Closure Requirements	465
§3705. Cost Estimate for Closure	465
§3707. Financial Assurance for Closure	466
Subchapter B. Post-Closure Requirements	473
§3709. Cost Estimate for Post-Closure Care	473
§3711. Financial Assurance for Post-Closure Care	474
Subchapter C. Common Closure and Post-Closure Requirements	481
§3713. Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care	481
Subchapter D. Insurance Requirements	481
§3715. Liability Requirements	481
Subchapter E. Incapacity Regulations	486
§3717. Incapacity of Owners or Operators, Guarantors, or Financial Institutions	486
Subchapter F. Financial and Insurance Instruments	486
§3719. Wording of the Instruments	486
Chapter 38. Universal Wastes	511
Subchapter A. General	511
§3801. Scope and Applicability	511
§3803. Applicability—Batteries	512
§3805. Applicability—Pesticides	512
§3807. Applicability—Mercury Thermostats	513
§3809. Applicability—Lamps	513
§3811. Applicability—Antifreeze	513
§3813. Definitions	514
Subchapter B. Standards for Small Quantity Handlers of Universal Waste	515
§3815. Applicability	515
§3817. Prohibitions	515
§3819. Notification	515
§3821. Waste Management	515
§3823. Labeling/Marking	517
§3825. Accumulation Time Limits	517
§3827. Employee Training	518
§3829. Response to Releases	518
§3831. Off-Site Shipments	518
§3833. Tracking Universal Waste Shipments	518
§3835. Exports	519
Subchapter C. Standards for Large Quantity Handlers of Universal Waste	519
§3837. Applicability	519

Table of Contents

§3839. Prohibitions	519
§3841. Notification.....	519
§3843. Waste Management	519
§3845. Labeling/Marking	521
§3847. Accumulation Time Limits.....	522
§3849. Employee Training	522
§3851. Response to Releases.....	522
§3853. Off-Site Shipments	522
§3855. Tracking Universal Waste Shipments	523
§3857. Exports.....	523
Subchapter D. Standards for Universal Waste Transporters	524
§3859. Applicability.....	524
§3861. Prohibitions	524
§3863. Waste Management	524
§3865. Storage Time Limits	524
§3867. Response to Releases.....	524
§3869. Off-Site Shipments	524
§3871. Exports.....	524
Subchapter E. Standards for Destination Facilities.....	525
§3873. Applicability.....	525
§3875. Off-Site Shipments	525
§3877. Tracking Universal Waste Shipments	525
Subchapter F. Import Requirements	525
§3879. Imports.....	525
Subchapter G. Petitions to Include Other Wastes Under This Chapter.....	526
§3881. General	526
§3883. Factors for Petitions to Include Other Wastes Under This Chapter	526
Chapter 39. Reserved	526
Chapter 40. Used Oil.....	526
§4001. Definitions	526
Subchapter A. Materials Regulated as Used Oil	528
§4003. Applicability.....	528
§4005. Used Oil Specifications	529
§4007. Prohibitions	530
Subchapter B. Standards for Used Oil Generators.....	530
§4009. Applicability.....	530
§4011. Hazardous Waste Mixing	531
§4013. Used Oil Storage	531
§4015. On-site Burning in Space Heaters	531
§4017. Off-site Shipments	532
Subchapter C. Standards for Used Oil Collection Centers and Aggregation Points.....	532

Table of Contents

§4019. Do-it-yourselfer Used Oil Collection Centers	532
§4021. Used Oil Collection Centers	532
§4023. Used Oil Aggregation Points Owned by the Generator	532
Subchapter D. Standards for Used Oil Transporter and Transfer Facilities.....	533
§4025. Applicability.....	533
§4027. Restrictions on Transporters Who Are Not Also Processors or Re-refiners.....	533
§4029. Notification.....	534
§4031. Used Oil Transportation.....	534
§4033. Rebuttable Presumption for Used Oil.....	534
§4035. Used Oil Storage at Transfer Facilities	535
§4037. Tracking.....	536
§4039. Management of Residues	536
Subchapter E. Standards for Used Oil Processors and Re-Refiners	536
§4041. Applicability	536
§4043. Notification.....	537
§4045. General Facility Standards	537
§4047. Rebuttable Presumption for Used Oil.....	540
§4049. Used Oil Management	540
§4051. Analysis Plan.....	541
§4053. Tracking.....	542
§4055. Operating Record and Reporting.....	542
§4057. Off-site Shipments of Used Oil	542
§4059. Management of Residues	543
Subchapter F. Standards for Used Oil Burners Which Burn Off-specification Used Oil for Energy Recovery.....	543
§4061. Applicability	543
§4063. Restrictions on Burning	543
§4065. Notification.....	543
§4067. Rebuttable Presumption for Used Oil.....	544
§4069. Used Oil Storage	544
§4071. Tracking.....	545
§4073. Notices	545
§4075. Management of Residues	545
Subchapter G. Standards for Used Oil Fuel Marketers.....	546
§4077. Applicability.....	546
§4079. Prohibitions	546
§4081. On-specification Used Oil Fuel.....	546
§4083. Notification.....	546
§4085. Tracking.....	546
§4087. Notices	547
Subchapter H. Standards for Disposal of Used Oil and Use as a Dust Suppressant	547

Table of Contents

§4089. Applicability.....	547
§4091. Disposal.....	547
§4093. Use as a Dust Suppressant.....	547
Chapter 41. Recyclable Materials	547
§4101. Applicability.....	547
§4103. Notification.....	548
§4105. Requirements for Recyclable Material.....	548
§4107. Spills	549
§4109. Violations	550
Subchapter A. Special Requirements for Group I Recyclable Materials	550
§4111. Applicability.....	550
§4113. Generator, Transporter, and Notification Requirements	550
§4115. Owners and Operators of Facilities that Store or Recycle Recyclable Materials.....	550
Subchapter B. Special Requirements for Group II Recyclable Materials.....	550
§4117. Applicability.....	550
§4119. Storage	551
§4121. Manifest Forms and Shipping Documents	551
§4123. Manifest Document Flow.....	551
§4125. Procedures Governing the Generator's Portion of the Manifest System.....	552
§4127. Procedures Governing the Transporter's Portion of the Manifest System.....	552
§4129. Procedures Governing the Portion of the Manifest System for the Recycle Facility.....	553
§4131. Recordkeeping	553
§4133. Personnel Training.....	553
§4135. Contingency Plan.....	553
Subchapter C. Special Requirements for Group III Recyclable Materials	553
§4139. Recyclable Materials Used in a Manner Constituting Disposal.....	553
§4143. Recyclable Materials Utilized for Precious Metal Recovery.....	554
§4145. Spent Lead-Acid Batteries Being Reclaimed	554
Chapter 43. Interim Status	556
§4301. Purpose and Applicability	556
§4302. Operation during Interim Status	558
§4303. Changes During Interim Status	558
§4305. Termination of Interim Status	559
§4306. Imminent Hazard Action.....	560
Subchapter A. General Facility Standards	560
§4307. Applicability.....	560
§4309. Identification Number	560
§4311. Required Notices	560
§4313. General Waste Analysis	560
§4315. Security.....	561
§4317. General Inspection Requirements.....	562

Table of Contents

§4319. Personnel Training.....	562
§4320. Construction Quality Assurance Program.....	562
§4321. General Requirements for Ignitable, Reactive, or Incompatible Wastes	563
§4322. Location Standards	563
Subchapter B. Preparedness and Prevention.....	563
§4323. Applicability.....	563
§4325. Maintenance and Operation of Facility	564
§4327. Required Equipment	564
§4329. Testing and Maintenance of Equipment	564
§4331. Access to Communications or Alarm Systems	564
§4333. Required Aisle Space	564
§4335. Arrangements With Local Authorities	564
Subchapter C. Contingency Plan and Emergency Procedures.....	564
§4337. Applicability.....	564
§4339. Purpose and Implementation of Contingency Plan.....	564
§4341. Content of Contingency Plan.....	564
§4343. Copies of Contingency Plan.....	564
§4345. Amendment of Contingency Plan	564
§4347. Emergency Coordinator.....	565
§4349. Emergency Procedures	565
Subchapter D. Manifest System, Recordkeeping, and Reporting.....	565
§4351. Applicability.....	565
§4353. Use of the Manifest System.....	565
§4355. Manifest Discrepancies	565
§4357. Operating Record.....	565
§4359. Availability, Retention, and Disposition of Records	568
§4361. Annual Report	568
§4363. Unmanifested Waste Report.....	568
§4365. Additional Reports.....	568
Subchapter E. Groundwater Monitoring.....	568
§4367. Applicability.....	568
§4369. Groundwater Monitoring System.....	569
§4371. Sampling and Analysis	570
§4373. Preparation, Evaluation, and Response	571
§4375. Recordkeeping and Reporting	572
Subchapter F. Closure and Post-Closure	573
§4377. Applicability.....	573
§4379. Closure Performance Standard	573
§4381. Closure Plan; Amendment of Plan.....	573
§4383. Closure; Time Allowed for Closure	576
§4385. Disposal or Decontamination of Equipment, Structures and Soils	578

Table of Contents

§4387. Certification of Closure	578
§4389. Post-Closure Care and Use of Property.....	578
§4391. Post-Closure Plan; Amendment of Plan.....	579
§4393. Post-Closure Notices	581
§4395. Certification of Completion of Post-Closure Care	582
§4396. Post-Closure Requirements for Facilities that Obtain Enforceable Documents in Lieu of Post-Closure Permits	582
Subchapter G. Financial Requirements	582
§4397. Applicability.....	582
§4399. Definitions of Terms as Used in This Subpart	583
§4401. Cost Estimate for Closure.....	584
§4403. Financial Assurance for Closure	584
§4405. Cost Estimate for Post-Closure Care	590
§4407. Financial Assurance for Post-Closure Care.....	591
§4409. Use of a Mechanism for Financial Assurance of Both Closure and Post-closure Care	597
§4411. Liability Requirements	597
§4413. Incapacity of Owners or Operators, Guarantors, or Financial Institutions	602
§4415. Reserved	602
Subchapter H. Containers.....	602
§4417. Applicability.....	602
§4419. Condition of Containers	602
§4421. Compatibility of Waste with Containers	602
§4423. Management of Containers.....	602
§4425. Inspections	603
§4427. Special Requirements for Ignitable or Reactive Waste	603
§4429. Special Requirements for Incompatible Wastes	603
§4430. Air Emission Standards	603
Subchapter I. Tanks	603
§4431. Applicability.....	603
§4433. Assessment of Existing Tank System's Integrity	603
§4435. Design and Installation of New Tank Systems or Components.....	604
§4437. Containment and Detection of Releases	605
§4438. Special Requirements For Generators of Between 100 and 1,000 kg/month That Accumulate Hazardous Waste in Tanks	608
§4439. General Operating Requirements	609
§4440. Inspections	609
§4441. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems	610
§4442. Closure and Post-closure Care.....	611
§4443. Special Requirements for Ignitable or Reactive Wastes	611
§4444. Special Requirements for Incompatible Wastes	611
§4445. Waste Analysis and Trial Tests	611

Table of Contents

§4446. Air Emission Standards	611
Subchapter J. Surface Impoundments	611
§4447. Applicability	611
§4449. Action Leakage Rate	611
§4451. Response Actions	612
§4453. Waste Analysis and Trial Tests	612
§4455. Monitoring and Inspection	613
§4456. Air Emission Standards	613
§4457. Closure and Post-Closure	613
§4459. Special Requirements for Ignitable or Reactive Waste	614
§4461. Special Requirements for Incompatible Wastes	614
§4462. Design Requirements	614
Subchapter K. Waste Piles	615
§4463. Applicability	615
§4465. Protection from Wind	615
§4467. Waste Analysis	615
§4469. Containment	615
§4470. Monitoring and Inspection	616
§4471. Special Requirements for Ignitable or Reactive Waste	616
§4472. Response Actions	616
§4473. Special Requirements for Incompatible Wastes	617
§4474. Action Leakage Rates	617
§4475. Closure and Post-Closure Care	617
§4476. Design and Operating Requirements	617
Subchapter L. Land Treatment	618
§4477. Applicability	618
§4479. General Operating Requirements	618
§4481. Waste Analysis	618
§4483. Food-Chain Crops	618
§4485. Unsaturated Zone (Zone of Aeration) Monitoring	618
§4487. Recordkeeping	619
§4489. Closure and Post-Closure	619
§4491. Special Requirements for Ignitable or Reactive Waste	620
§4493. Special Requirements for Incompatible Wastes	620
Subchapter M. Landfills	620
§4495. Applicability	620
§4497. Action Leakage Rate	620
§4498. Response Actions	620
§4499. Surveying and Recordkeeping	621
§4501. Closure and Post-Closure	621
§4502. Monitoring and Inspection	622

Table of Contents

§4503. Special Requirements for Ignitable or Reactive Waste	622
§4505. Special Requirements for Incompatible Wastes	622
§4507. Special Requirements for Liquid Waste	622
§4509. Special Requirements for Containers	623
§4511. Disposal of Small Containers of Hazardous Waste in Overpacked Drums (Lab Packs)	623
§4512. Design and Operating Requirements	624
Subchapter N. Incinerators	625
§4513. Applicability	625
§4515. Waste Analysis	625
§4517. General Operating Requirements	625
§4519. Monitoring and Inspections	625
§4521. Closure	626
§4522. Interim Status Incinerators Burning Particular Hazardous Wastes	626
Subchapter O. Thermal Treatment	626
§4523. Applicability	626
§4525. General Operating Requirements	626
§4527. Waste Analysis	626
§4529. Monitoring and Inspections	627
§4531. Closure	627
§4533. Open Burning; Waste Explosives	627
§4534. Interim Status Thermal Treatment Devices Burning Particular Hazardous Waste	627
Subchapter P. Chemical, Physical, and Biological Treatment	628
§4535. Applicability	628
§4537. General Operating Requirements	628
§4539. Waste Analysis and Trial Tests	628
§4541. Inspections	628
§4543. Closure	628
§4545. Special Requirements for Ignitable or Reactive Waste	629
§4547. Special Requirements for Incompatible Wastes	629
Subchapter Q. Air Emission Standards for Process Vents	629
§4549. Applicability	629
§4551. Definitions	629
§4553. Standards: Process Vents	629
§4555. Standards: Closed-Vent Systems and Control Devices	630
§4557. Test Methods and Procedures	630
§4559. Recordkeeping Requirements	630
Subchapter R. Air Emission Standards for Equipment Leaks	630
§4561. Applicability	630
§4563. Definitions	630
§4565. Standard: Pumps in Light Liquid Service	630
§4567. Standard: Compressors	630

Table of Contents

§4569. Standards: Pressure Relief Devices in Gas/Vapor Service.....	630
§4571. Standards: Sampling Connection Systems	631
§4573. Standards: Open-Ended Valves or Lines.....	631
§4575. Standards: Valves in Gas/Vapor Service or in Light Liquid Service	631
§4577. Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors	631
§4579. Standards: Delay of Repair.....	631
§4581. Standards: Closed-Vent Systems and Control Devices	631
§4583. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak	631
§4585. Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair	631
§4587. Test Methods and Procedures.....	631
§4589. Recordkeeping Requirements.....	631
Subchapter S. Drip Pads	631
§4591. Applicability.....	631
§4593. Assessment of Existing Drip Pad Integrity	631
§4595. Design and Installation of New Drip Pads	632
§4597. Design and Operating Requirements	632
§4599. Inspections	632
§4601. Closure.....	632
Subchapter T. Containment Buildings	632
§4701. Applicability.....	632
§4703. Design and Operating Standards	632
§4705. Closure and Post-Closure Care.....	634
Subchapter U. Hazardous Waste Munitions and Explosives Storage	635
§4707. Applicability.....	635
§4709. Design and Operating Standards	635
§4711. Closure and Post-Closure Care.....	636
Subchapter V. Air Emission Standards for Tanks, Surface Impoundments, and Containers	636
§4719. Applicability.....	636
§4721. Definitions	636
§4723. Schedule for Implementation of Air Emission Standards	636
§4725. Standards: General.....	637
§4727. Waste Determination Procedures	637
§4729. Standards: Tanks	645
§4731. Standards: Surface Impoundments.....	645
§4733. Standards: Containers	645
§4735. Standards: Closed-Vent Systems and Control Devices	645
§4737. Inspection and Monitoring Requirements	645
§4739. Recordkeeping Requirements.....	645
Chapter 49. Lists of Hazardous Wastes	645

Table of Contents

§4901. Category I Hazardous Wastes	645
§4903. Category II Hazardous Wastes	693
§4905. Exclusions for Wastewaters	695
§4907. Criteria for Listing Hazardous Waste	695
§4909. Comparable/Syngas Fuel Exclusion.....	696
Appendix A. Chemical Analysis Test Methods.....	706
Appendix B. Method 1311	706
Appendix C. Extraction Procedure (EP) Toxicity	706
Appendix D. Representative Sampling Methods	706
Appendix E. Wastes Excluded Under LA C 33:V.105.M	706
Chapter 51. Fee Schedules	709
§5101. Applicability.....	709
§5103. Scope and Purpose.....	710
§5105. Authority.....	710
§5107. Definitions	710
§5109. Application Fees	710
§5111. Calculation of Application Fees	710
§5113. Provision for Collection of Additional Fees Should Application Fees Paid be Less Than Program Costs.....	710
§5115. Provision of Funds Collected in Excess of Program Costs	711
§5117. Annual Monitoring and Maintenance Fees—Treaters, Storers, and/or Disposers	711
§5119. Calculation of Annual Maintenance Fees.....	711
§5120. Land Disposal Prohibition Petition Fees	712
§5121. Generators of Hazardous Waste	712
§5123. Registration Fees, HW-1	712
§5125. Annual Monitoring and Maintenance Fee	712
§5127. Payment	712
§5129. Late Payment Fee	712
§5131. Failure to Pay.....	713
§5133. Effective Date	713
§5135. Transporter Fee.....	713
§5136. Manifest Form Fee	713
§5137. Conditionally Exempt Small Quantity Generator Fee.....	713
§5139. Groundwater Protection Permit Review Fee	713
§5141. Incinerator and Boiler/Industrial Furnace Inspection and Monitoring Fee.....	714
§5143. Annual Landfill Inspection and Monitoring Fee.....	714
§5145. Annual Land Treatment Unsaturated Zone Monitoring Inspection Fee	714
Chapter 53. Military Munitions	714
§5301. Applicability.....	714
§5303. Definition of Military Munitions as a Solid Waste	715
§5305. Standards Applicable to the Transportation of Solid Waste Military Munitions	715

Table of Contents

§5307. Standards Applicable to Emergency Responses..... 716
§5309. Standards Applicable to the Storage of Solid Waste Military Munitions 716
§5311. Standards Applicable to the Treatment and Disposal of Waste Military Munitions 717

Chapter 26. Corrective Action Management Units and Temporary Units

§2601. Corrective Action Management Units (CAMU)

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 a facility as a corrective action management unit, as defined in LAC 33:V.109, under the requirements of this Section. A CAMU must be located within the contiguous property under the control of the owner/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. Designation of a Regulated Unit as a CAMU or Incorporation of Regulated Units into a CAMU

1. The administrative authority may designate a regulated unit (as defined in LAC 33:V.3301.A) as a CAMU or may incorporate a regulated unit into a CAMU, if:

a. the regulated unit is closed or closing, meaning it has begun the closure process under LAC 33:V.3513 or 4383; and

b. inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.

2. The LAC 33:V.Chapters 33, 35, 37, and the unit-specific requirements of Chapter 43 will continue to apply to that same 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; and

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.2601.

E. The administrative authority shall specify in the permit or order requirements for CAMUs to include the following:

1. the areal configuration of the CAMU;

2. requirements for remediation waste management to include the specification of applicable design, operation, and closure requirements;

3. requirements for groundwater monitoring 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; 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

a. closure of corrective action management units 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 shall include the following, as appropriate and as deemed necessary by the administrative authority for a given CAMU:

i. excavation, removal, treatment, or containment of wastes;

ii. capping of areas where wastes will remain after closure of the CAMU; and

iii. 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.2601.E, the administrative authority shall consider the following factors:

- i. CAMU characteristics;
- ii. volume of wastes which 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 which 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. post-closure requirements as necessary to protect human health and the environment, 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. 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.

H. The designation of a CAMU does not change the administrative authority'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 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).

§2603. 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.

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, registered 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).

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 Table 1 of LAC 33:V.Chapter 31 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 (five feet) from the initial soil surface; and

2. more than one meter (three 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 Table 1 of LAC 33:V.Chapter 31);

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, Permits Division 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).

§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 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, Permits Division 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, Permits Division 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, Permits Division 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, Permits Division 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, Permits Division 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).

§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

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:

A. the waste is immediately incorporated into the soil so that:

1. 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

2. LAC 33:V.1517 or 4321 for interim status facilities is complied with; or

B. 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, Permits

Division certification by an independent qualified soil scientist, in lieu of an independent registered 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 LAC 33:V.2719.A.8 and 2719.C 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 LAC 33:V.2719.D.3. The owner or operator may submit such a demonstration to the Office of Environmental Services, Permits Division 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).

§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 9, 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 registered 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 LAC 33:V.2803.B.

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, Permits Division 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, registered professional engineer.

C. Upon completion of all upgrades, repairs, and modifications, the owner or operator must submit to the Office of Environmental Services, Permits Division the as-built drawings for the drip pad together with a certification by an independent, qualified registered 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).

§2804. Design and Installation of New Drip Pads

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 or B:

A. All of the requirements of LAC 33:V.2805 (except LAC 33:V.2805.A.4 and B), 2807, and 2809 must be met.

B. 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 LAC 33:V.2805.A or C.

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 1×10^{-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 1×10^{-7} centimeters per second such that the entire surface where drippage occurs or may run across 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.A.4 and B), 2807, and 2809 instead of LAC 33:V.2805 (except LAC 33:V.2805.C), 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 registered 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 LAC 33:V.2805.C.

C. If an owner or operator elects to comply with all of the requirements of 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, 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 LAC 33:V.2805.A-G and the owner or operator must obtain a statement from an independent, qualified registered 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 by telephone at (225) 763-3908 during office hours; (225) 342-1234 after hours, weekends, and holidays; or by email utilizing the Incident Report Form and procedures found at www.deq.state.la.us/surveillance of the condition and, within 10 working days, provide written notice to the Office of Environmental Compliance, Surveillance Division with 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 the Office of Environmental Compliance, Surveillance Division 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 LAC 33:V.2805.N.1.d.

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).

§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, registered 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).

§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 which 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 three feet of clay with a permeability of 1×10^{-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, Permits Division 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 under *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 1×10^{-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 1×10^{-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 3×10^{-4} m²/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 extraction procedure toxicity characteristics in LAC 33:V.4903.E.

2. The monofill meets the requirements of either Subsection 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 one-quarter 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 (March 1995), LR 21:267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2482 (November 2000).

§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 one 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, Permits Division in writing of the exceedence within seven days of the determination;

2. submit a preliminary written assessment to the Office of Environmental Services, Permits Division 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, Permits Division the results of the analyses specified in LAC 33:V.2906.B.3-5, 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, Permits Division 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).

§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" is 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 by phone at (225) 763-3908 during office hours; (225) 342-1234 after hours, weekends, and holidays, or by e-mail utilizing the Incident Report Form and procedures found at www.deq.state.la.us/surveillance in 24 hours and in writing 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).

§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

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:

A. the waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:

1. 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

2. LAC 33:V.1517 is complied with; or for interim status facilities;

B. 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

C. 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 9, 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 LAC 33:V.3001.B-D and F. 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 Subsection B.2 of this Section, the standards of this Chapter no longer apply when an affected source demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR part 63, subpart EEE 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 subpart EEE of 40 CFR 63. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of LAC 33:V.Chapter 30 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. the closure requirements of LAC 33:V.3005.I and 3007.L;
- b. the standards for direct transfer of LAC 33:V.3023;
- c. the standards for regulation of residues of LAC 33:V.3025; and
- d. the applicable requirements of LAC 33:V.901, 905, 907, 909 and Chapters 15, 17 (Subchapters B and C), 33, 35, 37, and 43 (Subchapters A – G, R, and V) and 4301.A – C, G, I, 4306.

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.B.10-12, 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 Subsection 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 Subsection 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 under procedures specified by "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110, or alternative methods that meet or exceed the SW-846 method performance capabilities. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method; 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 Subsection 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 Subsection 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 Subsection D.1 or D.3 of this Section. The owner or operator must comply with the requirements of Subsection 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 Appendices K, L, and M of this Chapter, and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of Subsection D.1 of this Section, provided that:

i. a waste listed in 40 CFR 266, appendix IX, as adopted at Appendix I of this Chapter, must contain recoverable levels of lead, a waste listed in 40 CFR 266, appendix XII, as adopted and amended at Appendix L of this Chapter, must contain recoverable levels of nickel or chromium, a waste listed in 40 CFR 266, appendix XIII, as adopted and amended at Appendix M of this Chapter, must contain recoverable levels of mercury and contain 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 must 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 Subsection 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 Subsection D.1.b of this Section; records to document compliance with Subsection 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 Appendices K, L, and M of this Chapter, 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 Appendices D and E of this Chapter, 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 is burned for recovery of economically significant amounts of precious metal using procedures as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110, or alternative methods that meet or exceed the SW-846 method performance capabilities. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method; 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 NESHA, 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 Subsection D.2.a of this Section, or is listed in Appendix K of this Chapter.

[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), LR 22:821 (September 1996), LR 22:835 (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).

§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, 9, 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, 9, 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.905, 907, 909, and 1527;
- f. corrective action, LAC 33:V.3301.A, B, and D;
- 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.Chapter 31, Table 1, that may reasonably be expected to be in the waste. Such constituents must be identified and quantified at levels detectable by analytical procedures prescribed by "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110. Alternative methods that meet or exceed the method performance capabilities of SW-846 methods may be used. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method. The LAC 33:V.Chapter 31, Table 1 constituents excluded from this analysis must be identified and the basis for this 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 or 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, Permits Division 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 Cl₂ emission rate screening limits provided by LAC 33:V.3015 and the Tier III HCl and Cl₂ controls under LAC 33:V.3105.C, the permit will specify the following operating requirements:

i. maximum emission rate for HCl and for Cl₂ 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 Cl₂ 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 LAC 33:V.3305.E.5.b or c 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.3023.B 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 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/Cl₂, 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 keep in the operating record of the facility all information and data required by LAC 33:V.3005 until the facility closes or for not less than three years, whichever comes later.

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.

[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), LR 22:822 (September 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2483 (November 2000).

§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 Cl₂ 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 Cl₂:

- 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 Subsection B.2.a of this Section and the basis for the estimate and an estimate of the partitioning to HCl and Cl₂ 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 Appendix I of this Chapter;
 - 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 Subsection 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 Appendix I of this Chapter;
 - 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 Cl₂ (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 Cl₂, and the following information to support such determinations:

i. the estimated air pollution control system (APCS) removal efficiency for particulate matter, HCl, Cl₂, 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 Appendix I of this Chapter;

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, Cl₂, 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 Cl₂, 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 chlorine and chloride, 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 Subsection 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 Appendix I of this Chapter.

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 a 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, Permits Division 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 Cl₂;

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 Subsection 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 Appendix I of this Chapter, 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 Subsection 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 Subsection 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 chlorine feed rate screening limits under LAC 33:V.3015.B 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:
 - 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 LAC 33:V.3007.C.3, the owner or operator shall notify the Office of Environmental Services, Permits Division 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 Appendix I of this Chapter; 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/Cl₂, 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, Cl₂, 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 Cl₂ 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 a 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 Subsection 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 Appendix I of this Chapter, provided that the owner or operator submits a certification of compliance without using extensions of time provided by Subsection 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 Subsection 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 Appendix I of this Chapter; 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/Cl₂.

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, Permits Division 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 to the Office of Environmental Services, Permits Division 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 to the Office of Environmental Services,

Permits Division 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, Permits Division a revised certification of compliance under LAC 33:V.3007.C.4.

D. Periodic Recertifications. The owner or operator must conduct compliance testing and submit to the Office of Environmental Services, Permits Division a recertification of compliance under provisions of LAC 33:V.3007.C within three 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 LAC 33:V.3007.C.8.

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 Appendix I of this Chapter;

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 until closure of the boiler or industrial furnace unit.

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.

[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 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).

§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:

$$DRE = \left[1 - \frac{W_{out}}{W_{in}} \right] \times 100$$

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 Subsection 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 Subsection A.1 of this Section. In addition, the owner or operator of the boiler or industrial furnace must notify the Office of Environmental Services, Permits Division 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 seven 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 Appendix I of this Chapter.

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 Appendix I of this Chapter. CO and oxygen shall be continuously monitored in conformance with Subsection 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 seven 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 Dibenzop-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 Dibenzop-Dioxin and Dibenzofuran Congeners" in 40 CFR 266, appendix IX, as adopted and amended at Appendix I of this Chapter. 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 Appendix I of this Chapter, 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 Subsection 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 Appendix E of this Chapter, (2.2×10^{-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.

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 22:823 (September 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1741 (September 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2484 (November 2000).

§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 seven 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 Appendix I of this Chapter.

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:

$$P_c = P_m \times 14 / (E - Y)$$

where:

P_c = 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 seven 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.

AUTHORITY NOTE: Promulgated in accordance with R.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 22:823 (September 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 27:299 (March 2001), repromulgated LR 27:513 (April 2001).

§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 using analytical procedures specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110.

B. Tier I Feed Rate Screening Limits. Feed rate screening limits for metals are specified in 40 CFR 266, appendix I, as adopted at Appendix A of this Chapter, 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 Subsection 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 IAC 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 Appendix A of this Chapter. 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 Appendix A of this Chapter, 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 Appendix A of this Chapter, 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. 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 Appendix F of this Chapter, as a function of stack flow rate and stack gas exhaust temperature.

Tr = terrain rise within five 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 five 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, appendices IX or X, as adopted and amended at Appendices I or J of this Chapter.

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:

$$K=HVT$$

where:

K = a parameter accounting for relative influence of stack height and plume rise;

H = physical stack height (meters);

V = stack gas flow rate (m³/second); and

T = exhaust temperature (°K).

The stack with the lowest value of K is the worst-case stack.

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 one 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 one kilometer of the facility;

c. the device has a stack taller than 20 meters and is located within five 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 Appendix A of this Chapter, 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 Subsection 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 Appendix A of this Chapter.

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 Appendix A of this Chapter. 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 Appendix A of this Chapter, 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 Appendix A of this Chapter, 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 Appendices D and E of this Chapter, 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 Subsection 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:

$$\frac{n}{\sum_{i=1}^n} \frac{\text{Predicted Ambient Concentration}_{(i)}}{\text{Risk - Specific Dose}_{(i)}} \leq 1.0$$

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 Appendix A of this Chapter, 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 Appendices D and E of this Chapter, 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 Subsection 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 Appendix D of this Chapter, 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 Appendix E of this Chapter, 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 Appendix I of this Chapter, 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.

AUTHORITY NOTE: Promulgated in accordance with R.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 22:824 (September 1996), repromulgated LR 22:980 (October 1996), amended by the Office of Waste Services, Hazardous Waste Division, LR 24:1741 (September 1998).

§3015. Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas (Cl₂) Emissions

A. General. The owner or operator must comply with the hydrogen chloride (HCl) and chlorine (Cl₂) 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 Appendix B of this Chapter, 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 Cl₂ are specified in 40 CFR 266, appendix III, as adopted at Appendix C of this Chapter, 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 Cl₂ 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 Cl₂ 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 Cl₂ 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 Cl₂, 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 Appendix D of this Chapter, lists the reference air concentrations (RACs) for HCl (seven micrograms per cubic meter) and Cl₂ (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 Cl₂ 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 Cl₂.

D. Averaging Periods. The HCl and Cl₂ 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

Appendix B of this Chapter, 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 Cl₂ provided by 40 CFR 266, appendix IV, as adopted and amended at Appendix D of this Chapter, 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 Cl₂ 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 Subsection 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 Subsection A.1 of this Section are implemented according to the following equation:

$$\sum_{i=1}^n \frac{\text{Actual Quantity Burned}_{(i)}}{\text{Allowable Quantity Burned}_{(i)}} \leq 1.0$$

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 Appendix D of this Chapter, the levels established in 40 CFR 266, appendix IV, as adopted and amended at Appendix D of this Chapter;

ii. for the carcinogenic compounds listed in 40 CFR 266, appendix V, as adopted at Appendix E of this Chapter, 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 Appendix E of this Chapter, cannot exceed 1.0; and

iii. for constituents not listed in 40 CFR 266, appendices IV or V, as adopted and amended at Appendices D and E of this Chapter, 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

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:

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. 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;

C. 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;

D. 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;

E. the boiler must be a watertube type boiler that does not feed fuel using a stoker or stoker type mechanism; and

F. 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:

1. Viscosity. The viscosity of the hazardous waste fuel as-fired shall not exceed 300 SSU;

2. 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;

3. 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;

4. 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.Subpart I, 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 2-1–2-6 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.B.

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.

AUTHORITY NOTE: Promulgated in accordance with R.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).

§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 adopted at Appendix H of this Chapter, that may be generated as products of incomplete combustion. Sampling and analyses shall be in conformance with procedures prescribed in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110. 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 Appendix I of this Chapter.

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 Appendix I of this Chapter;

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 Subsection 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 adopted and amended at Appendix G of this Chapter, or the level of detection (using analytical procedures prescribed in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110), whichever is higher. If a health-based limit for a constituent of concern is not listed in 40 CFR 266, appendix VII, as adopted and amended at Appendix G of this Chapter, then a limit of 0.002 micrograms per kilogram or the level of detection (using analytical procedures contained in SW-846 or other appropriate methods), 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 adopted and amended at Appendix G of this Chapter) are administratively stayed under the condition, for those constituents specified in Subsection 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.Chapter 22.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.Chapter 22.Table 2 for F039 nonwastewaters. In complying with the LAC 33:V.Chapter 22.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: 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.Chapter 22.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*; and]

b. Metal Constituents. The concentration of metals in an extract obtained using the Toxicity Characteristic Leaching Procedure of LAC 33:V.4903 must not exceed the levels specified in 40 CFR 266, appendix VII, as adopted and amended at Appendix G of this Chapter.

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).

Appendices

Appendix A. Tier I and Tier II Feed Rate and Emissions Screening Limits For Metals

A. 40 CFR 266, appendix I, July 1, 2000, is hereby incorporated by reference.

Appendix B. Tier I Feed Rate Screening Limits for Total Chlorine

A. 40 CFR 266, appendix II, July 1, 2000, 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, 2000, is hereby incorporated by reference.

Appendix D. Reference Air Concentrations

A. 40 CFR 266, appendix IV, July 1, 2000, 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 Appendix E of this Chapter, respectively.

Appendix E. Risk Specific Doses (10^{-5})

A. 40 CFR 266, appendix V, July 1, 2000, 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, 2000, is hereby incorporated by reference.

Appendix G. Health-based Limits for Exclusion of Waste-derived Residues

A. 40 CFR 266, appendix VII, July 1, 2000, 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 Chapter 22.Table 2, respectively.

Appendix H. Organic Compounds for Which Residues Must be Analyzed

A. 40 CFR 266, appendix VIII, July 1, 2000, is hereby incorporated by reference.

Appendix I. Methods Manual for Compliance with the BIF Regulations

A. 40 CFR 266, appendix IX, July 1, 2000, 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, Chapter 22.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.

4. Equation (7) of appendix A to 40 CFR 266, appendix IX shall be corrected to read:

$$s_t = \left(\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \right)^{1/2}$$

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. Reserved

Appendix K. Lead-bearing Materials That May Be Processed in Exempt Lead Smelters

A. 40 CFR 266, appendix XI, July 1, 2000, is hereby incorporated by reference.

Appendix L. Nickel or Chromium-bearing Materials That May Be Processed in Exempt Nickel-Chromium Recovery Furnaces

A. 40 CFR 266, appendix XII, July 1, 2000, is hereby incorporated by reference, except that the footnote should be deleted.

Appendix M. Mercury-Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units

A. 40 CFR 266, appendix XIII, July 1, 2000, is hereby incorporated by reference, except that in regulations incorporated thereby, 40 CFR 261, appendix VIII shall mean LAC 33:V.3105.Table 1.

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, Permits Division of the department.

[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).

§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 Subsection B.2 of this Section, the standards of this Subsection 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 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 subpart EEE of 40 CFR 63. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of LAC 33:V.901, 905, 907, and Chapters 15 - 21, 23 - 29, and 31-37 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.901, 905, 907, and Chapters 15, 17 (Subchapters B and C), 33, 35, and 37.

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 defined in LAC 33:V.4903; 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-Acetylaminofluarone	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-Propenamamide	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-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
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
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
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 ₃ AsO ₄	7778-39-4	P010
Arsenic pentoxide	Arsenic oxide As ₂ O ₅	1303-28-2	P011
Arsenic trioxide	Arsenic oxide As ₂ O 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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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
Benzeneearsonic 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			
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 ₂ CrO 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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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-octachloro-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)-alpha-hydroxy-, ethyl ester	510-15-6	U038
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7	U039
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	

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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
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
Daunomy cin	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
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	

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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
Dichloro methoxy 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
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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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-dimethyl S-[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
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-Dimethylphenethylamine	Benzenethanamine, 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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4	P039
Dithiobiuret	Thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH	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	U407
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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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
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-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 ₂ S	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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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,4,5,5a,5b,6-decachlorooctahydro-	143-50-0	U142
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]]-	303-34-1	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]carbonyloxy]-, methyl ester	16752-77-5	P066
Methoxychlor	Benzene, 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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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
2-Methylactonitrile	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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
Nicotine salts			P075
Nitric oxide	Nitric oxide NO	10102-43-9	P076
p-Nitroaniline	Benzenamine, 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
Nitrosamines, N.O.S. ¹	35576-91-1D		
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-methylurethane	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-Nitrosornicotine	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
Octamethylpyrophosphoramidate	Diphosphoramidate, octamethyl-	152-16-9	P085
Osmium tetroxide	Osmium oxide OsO ₄ , -(T-4)-	20816-12-0	P087
Oxamyl	Ethanimidothioic 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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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	Benzenediamine	25265-76-3	
Phenylmercury acetate	Mercury, (acetato-O) phenyl-	62-38-4	P092
Phenylthiourea	Thiourea, phenyl-	103-85-5	P093
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-trimethylpyrrolo [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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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			
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 dibutylidithiocarbamate	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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
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 ₂ O ₃	1314-32-5	P113
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-phenylenebis (imino-carbonothioyl)] bis -, dimethyl ester	23564-05-8	U409
Thiophenol	Benzenethiol	108-98-5	P014
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6	P116

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
Thiourea	Same	62-56-6	U219
Thiram	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S 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
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-, phosphate (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

Table 1. Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Hazardous Waste Number
Vanadium pentoxide	Vanadium oxide V ₂ O 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 ₃ P ₂ , when present at concentrations greater than 10%	1314-84-7	P122
Zinc phosphide	Zinc phosphide Zn ₃ P 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).

§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 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 wastes 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 LAC 33:V.3111.A.1. In addition, the owner or operator of the incinerator must notify the administrative authority of his intent to incinerate hazardous wastes F020, F021, F022, F023, F026 or F027.

3. An incinerator burning hazardous waste and producing stack emissions of more than 1.8 kilograms per hour (four 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 formula:

$$P_c = P_m \times \frac{14}{21 - Y}$$

a. Where P_c is the corrected concentration of particulate matter, P_m is the measured concentration of particulate matter, and Y is the measured concentration of oxygen in the stack gas, using the Orsat method for oxygen analysis of dry flue gas, presented in LAC 33:III.6009. 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.

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).

§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 Table 1 of this Chapter, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Table 1 of this Chapter 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 analytical techniques as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110, or other equivalent methods approved by the administrative authority;

d. an approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110, or other equivalent methods approved by the administrative authority;

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 Table 1 of this Chapter;

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.5, and to the appropriate units of state and local government, as set forth in LAC 33:V.717.A.2, 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 (O₂) 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 (four 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, Permits Division 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 Subsection 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, Permits Division 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, Permits Division a trial burn plan and perform a trial burn in accordance with LAC 33:V.529.B and Subsection B, B.1-11, and 13-16 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 Subsection 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 Subsection 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 demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (i.e., by conducting a comprehensive performance test and submitting a notification of compliance), the requirements of this Section do not apply. 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 and 311.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 10:496 (July 1984), LR 16:614 (July 1990), LR 18:1256 (November 1992), LR 22:828 (September 1996), LR 22:835 (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).

§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 log as required by LAC 33:V.1523.

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

§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.909, 1509, 1511.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. Ground Water 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 ground water 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 ground water 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 ground water 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 ground water 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. Ground Water 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 ground water 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 ground water protection standard in the facility permit when hazardous constituents have been detected (as defined in LAC 33:V.3303.A.1) in the ground water.

B. The ground water monitoring system shall consist of necessary wells, at least one hydraulically upgradient, to monitor ground water moving toward the facility, and all the necessary number of wells downgradient to monitor ground water 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 ground water monitoring system must be approved by the administrative authority.

C. The owner or operator of the facility shall develop and adhere to a ground water sampling and analysis plan, and shall immediately advise the department when significant changes in ground water 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 three feet of clay at 1×10^{-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 ground water protection standard of LAC 33:V.3305 applies. Hazardous constituents are constituents identified in Table 1 of LAC 33:V.Chapter 31 that have been detected in ground water 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 Table 1, LAC 33:V.Chapter 31 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 ground water 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 ground water and the direction of ground water flow;
 - d. the proximity and withdrawal rates of ground water users;
 - e. the current and future uses of ground water in the area;
 - f. the existing quality of ground water including other sources of contamination, and their cumulative impact on the ground water 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 ground water, and the direction of ground water 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 ground water 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 Ground Water 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 naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis(p-methoxyphenylethane)	0.01
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 ground water 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 ground water 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 ground water 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 Ground Water Monitoring Requirements

The owner or operator must comply with the following requirements for any ground water monitoring program developed to satisfy LAC 33:V.3317, 3319, or 3321:

A. The ground water monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths, to yield ground water samples from the uppermost aquifer that fulfill the following requirements.

1. The samples must represent the quality of ground water that has not been affected by leakage from a regulated unit. A determination of background 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 ground water 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 ground water monitoring systems are not required for each regulated unit, if provisions for sampling the ground water 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 ground water 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 ground water.

D. The ground water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground water 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 ground water monitoring program must include sampling and analytical methods that are appropriate for ground water sampling, and that accurately measure hazardous constituents in ground water samples.

F. The ground water monitoring program must include a determination of the ground water surface elevation each time ground water 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 ground water 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 ground water 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 ground water 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 ground water 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 ground water 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 ground water 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. Ground water 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 ground water monitoring program must ensure that the permittee maintains records from all required ground water monitoring wells and associated ground water 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).

§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 ground water. 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 ground water; and

4. the concentrations or values, and coefficients of variation of proposed monitoring parameters or constituents in the ground water background.

B. The owner or operator must install a ground water monitoring system at the compliance point as specified under LAC 33:V.3311. The ground water monitoring system must comply with LAC 33:V.3315.A.2, B, and C.

C. The owner or operator must conduct a ground water 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 ground water 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 LAC 33:V.3317.A in accordance with LAC 33:V.3315.G. A sequence of at least four samples from each well (background and compliance wells) must be collected at least semi-annually during detection monitoring.

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 ground water 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 ground water 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 ground water in all monitoring wells and determine whether constituents listed in LAC 33:V.3325.Table 4 are present, and if so, in what concentrations.

3. For any LAC 33:V.3325 compounds found in the analysis pursuant to LAC 33:V.3317.G.2, the owner or operator may resample within one month 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 LAC 33:V.3317.G.2, 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, Permits Division 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 ground water at each monitoring well at the compliance point;

b. any proposed changes to the ground water 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, Permits Division:

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 Table 1 of LAC 33:V.3309, 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 ground water. 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, Permits Division 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, Permits Division 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).

§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 ground water to determine whether regulated units are in compliance with the ground water protection standard under LAC 33:V.3305. The administrative authority will specify the ground water 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 ground water monitoring system at the compliance point as specified under LAC 33:V.3311. The ground water 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 ground water 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 ground water 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. A sequence of at least four samples from each well (background and compliance wells) must be collected at least semi-annually during the compliance period of the facility.

G. The owner or operator must analyze samples from all monitoring wells at the compliance point for all constituents listed in LAC 33:V.3325.Table 4 at least annually to determine whether additional hazardous constituents are present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in LAC 33:V.3317.F. If the owner or operator finds LAC 33:V.3325.Table 4 constituents in the groundwater that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month and repeat the LAC 33:V.3325.Table 4 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, Permits Division 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, Permits Division, 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.H.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, Permits Division 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, Permits Division which 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, Permits Division 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, Permits Division 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).

§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 Assessment, Remediation Services Division on the effectiveness of the corrective action program. The owner or operator must submit these reports semi-annually; 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, Permits Division 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).

§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. Ground Water Monitoring List ¹

Table 4 lists ground water monitoring constituents.

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-	8100	200
			8270	10
Acenaphthylene	208-96-8	Acenaphthylene	8100	200
			8270	10
Acetone	67-64-1	2-Propanone	8240	100
Acetophenone	98-86-2	Ethanone, 1-phenyl-	8270	10
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile	8015	100
2-Acetylamino-fluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-	8270	10
Acrolein	107-02-8	2-Propenal	8030	5
			8240	5
Acrylonitrile	107-13-1	2-Propenenitrile	8030	5
			8240	5
Aldrin	309-00-2	1,4:5,8-Dimethano-naphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8, 8a,-hexahydro (1α,4α, 4aβ,5β,8α,8aβ)	8080	0.05
			8270	10
Allyl chloride	107-05-1	1-Propene, 3-chloro-	8010	5
			8240	100
4-Amino-biphenyl	92-67-1	[1,1'-Biphenyl]-4-amine	8270	10
Aniline	62-53-3	Benzenamine	8270	10
Anthracene	120-12-7	Anthracene	8100	200
			8270	10
Antimony	(Total)	Antimony	6010	300
			7040	2,000
			7041	30
Aramite	140-57-8	Sulfurous acid,2-chloro-ethyl 2-[4-(1,1-di-methylethyl)phenoxy]-1-methyl-ethyl ester	8270	10
Arsenic	(Total)	Arsenic	6010	500
			7060	10
			7061	20

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Barium	(Total)	Barium	6010	20
			7080	1,000
Benzene	71-43-2	Benzene	8020	2
			8240	5
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene	8100	200
			8270	10
Benzo[b]-fluoranthene	205-99-2	Benz[e]acephen-anthry-lene	8100	200
			8270	10
Benzo[k]-fluoranthene	207-08-9	Benzo[k]fluoranthene	8100	200
			8270	10
Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene	8100	200
			8270	10
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene	8100	200
			8270	10
Benzyl alcohol	100-51-6	Benzenemethanol	8270	20
Beryllium	(Total)	Beryllium m	6010	3
			7090	50
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1α,2α,3β,4α,5β,6β)	8080	0.05
			8250	10
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1α,2β,3α,4β,5α,6β)-	8080	0.05
			8250	40
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1α,2α,3α,4β,5α,6β)-	8080	0.1
			8250	30
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5, 6-hexachloro-, (1α,2α,3β,4α,5α,6β)	8080	0.05
			8250	10
Bis(2-chloroethoxy) methane-	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	8270	10
Bis(2-chloroethyl) ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-	8270	10
Bis(2-chloro-1-methylethyl) ether; 2,2'-Dichlorodisopropyl ether	108-60-1	Propane, 2,2'-oxybis [1-chloro-	8010	100
			8270	10
Bis(2-ethyl-hexyl) phthalat	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	8060	20
			8270	10
Bromodichloro-methane	75-27-4	Methane, bromodichloro-	8010	1
			8240	5

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Bromoform;Tri-bromomethane	75-25-2	Methane, tribromo -	8010	2
			8240	5
4-Bromophenyl-phenyl ether	101-55-3	Benzene,1-bromo -4- phenoxy -	8270	10
Butyl benzyl phthalate;Benzyl butyl phthalate	85-68-7	1,2-Benzenedicarboxylic acid, butyl phenyl- methyl ester	8060	5
			8270	10
Cadmium	(Total)	Cadmium	6010	40
			7130	50
			7131	1
Carbon disulfide	75-15-0	Carbon disulfide	8240	5
Carbon tetrachloride	56-23-5	Methane, tetrachloro -	8010	1
			8240	5
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-	8080	0.1
			8250	10
p-Chloroaniline	106-47-8	Benzenamine, 4 chloro-	8270	20
Chlorobenzene	108-90-7	Benzene, chloro-	8010	2
			8020	2
Chloro- benzilate	510-15-6	Benzeneacetic acid, 4-chloro- α -(4-chloro- phenyl)- α -hydroxy -, ethyl ester	8270	10
p-Chloro - m-cresol	59-50-7	Phenol, 4-chloro-3- methyl-	8040	5
			8270	20
Chloroethane; Ethyl chloride	75-00-3	Ethane, chloro-	8010	5
			8240	10
Chloroform	67-66-3	Methane, trichloro-	8010	0.5
			8240	5
2-Chloro - naphthalene	91-58-7	Naphthalene, 2-chloro-	8120	10
			8270	10
2-Chlorophenol	95-57-8	Phenol, 2-chloro-	8040	5
			8270	10
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4- phenoxy -	8270	10
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro -	8010	50
			8240	5
Chromium	(Total)	Chromium	6010	70
			7190	500
			7191	10

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Chrysene	218-01-9	Chrysene	8100	200
			8270	10
Cobalt	(Total)	Cobalt	6010	70
			7200	500
			7201	10
Copper	(Total)	Copper	6010	60
			7210	200
m-Cresol	108-39-4	Phenol, 3-methyl-	8270	10
o-Cresol	95-48-7	Phenol, 2-methyl-	8270	10
p-Cresol	106-44-5	Phenol, 4-methyl-	8270	10
Cyanide	57-12-5	Cyanide	9010	40
2,4-D; 2,4-Di-chlorophenoxy -acetic acid	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	8150	10
4,4'-DDD	72-54-8	Benzene 1,1'-(2,2-dichloroethylidene) bis[4-chloro-	8080	0.1
			8270	10
4,4'-DDE	72-55-9	Benzene, 1,1'-(dichloro-ethenylidene) bis[4-chloro-	8080	0.05
			8270	10
4,4'-DDT	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro-	8080	0.1
			8270	10
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl)ester	8270	10
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene	8100	200
			8270	10
Dibenzofuran	132-64-9	Dibenzofuran	8270	10
Dibromochloro-methane; Chlorodibromomethane	124-48-1	Methane, dibromo - chloro -	8010	1
			8240	5
1,2-Dibromo - 3chloropropane; DBCP	96-12-8	Propane, 1,2-dibromo - 3-chloro-	8010	100
			8240	5
			8270	10
1,2-Dibromoethane; Ethylene dibromide	106-93-4	Ethane, 1,2-dibromo -	8010	10
			8240	5
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	8060	5
			8270	10

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
o-Dichlorobenzene	95-50-1	Benzene, 1,2-dichloro -	8010	2
			8020	5
			8120	10
			8270	10
m-Dichlorobenzene	541-73-1	Benzene, 1,3-dichloro -	8010	5
			8020	5
			8120	10
			8270	10
p-Dichlorobenzene	106-46-7	Benzene, 1,4-dichloro -	8010	2
			8020	5
			8120	15
			8270	10
3,3'-Dichloro-benzidine	91-94-1	[1,1'-Biphenyl]4,4'-diamine, 3,3'-dichloro-	8270	20
trans-1,4- Dichloro-2-butene	110-57-6	2-Butene,1,4- dichloro -, (E)-	8240	5
Dichlorodifluoro-methane	75-71-8	Methane, dichloro- difluoro-	8010	10
			8240	5
1,1-Dichloro-ethane	75-34-3	Ethane,1,1-dichloro-	8010	1
			8240	5
1,2-Dichloro-ethane; Ethylene dichloride	107-06-2	Ethane, 1,2-dichloro-	8010	0.5
			8240	5
1,1-Dichloro-ethylene; Vinylidene chloride	75-35-4	Ethene, 1,1-dichloro-	8010	1
			8240	5
trans-1,2-Dichloroethylene	156-60-5	Ethene,1,2-dichloro-(E)-	8010	1
			8240	5
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-	8040	5
			8270	10
2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-	8270	10
1,2-Dichloro-propane	78-87-5	Propane, 1,2- dichloro-	8010	0.5
			8240	5
cis-1,3- Dichloro-propene	10061-01-5	1-Propene, 1,3- dichloro-,(Z)-	8010	20
			8240	5
trans-1,3-Dichloropropene	10061-02-6	1-Propene, 1,3- dichloro-, (E)-	8010	5
			8240	5

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
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-, (1α,2β,2α,3β,6β,6α,7β,7α)-	8080 8270	0.05 10
Diethyl phthalate	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	8060 8270	5 10
O,O-Diethyl O-2-pyrazinyl phosphorothioate; Thionazin	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	8270	10
Dimethoate	60-51-5	Phosphorodithioic acid, O,O-dimethyls-[2-(methylamino)-2-oxoethyl] ester	8270	10
p-(Dimethyl-amino)azobenzene	60-11-7	Benzenamine, N,N-di-methyl-4-(phenylazo)-	8270	10
7,12-Dimethyl-benz[a] anthracene	57-97-6	Benz[a]anthracene, 7,12-dimethyl-	8270	10
3,3'-Dimethyl-benzidine	119-93-7	[1,1'-Biphenyl]-4,4'- diamine, 3,3'-dimethyl-	8270	10
alpha, alpha-Dimethyl-phenethylamine	122-09-8	Benzenethanamine, a,a-dimethyl-	8270	10
2,4-Dimethyl- phenol	105-67-9	Phenol, 2,4-dimethyl-	8040	5
Dimethyl phthalate	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	8060 8270	5 10
m-Dinitrobenzene	99-65-0	Benzene, 1,3-dinitro-	8270	10
4,6-Dinitro-o- cresol	534-52-1	Phenol, 2-methyl-4,6- dinitro-	8040 8270	150 50
2,4-Dinitrophenol	51-28-5	Phenol, 2,4-dinitro-	8040 8270	150 50
2,4-Dinitro- toluene	121-14-2	Benzene, 1-methyl-2, 4-dinitro-	8090 8270	0.2 10
2,6-Dinitro- toluene	606-20-2	Benzene, 2-methyl- 1,3-dinitro-	8090 8270	0.1 10
Dinoseb; DNBP; 2-sec-Butyl- 4,6-dinitrophenol	88-85-7	Phenol, 2-(1-methyl- propyl)-4,6-dinitro-	8150 8270	1 10
Di-n-octyl phthalate	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester	8060 8270	30 10
1,4-Dioxane	123-91-1	1,4-Dioxane	8015	150
Diphenylamine	122-39-4	Benzenamine, N-phenyl-	8270	10

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Disulfoton	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester	8140	2
			8270	10
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)-	8080	0.1
			8250	10
Endosulfan II	3213-65-9	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)-	8080	0.05
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	8080	0.5
			8270	10
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-, (1α,2β,2aβ,3α,6α,6aβ, 7β,7aα)-	8080	0.1
			8250	10
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*)-	8080	0.2
			8270	10
Ethylbenzene	100-41-4	Benzene, ethyl-	8020	2
			8240	5
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	8015	10
			8240	5
			8270	10
Ethyl methane-sulfonate	62-50-0	Methanesulfonic acid, ethyl ester	8270	10
Famphur	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl]-O,O-di-methyl ester	8270	10
Fluoranthene	206-44-0	Fluoranthene	8100	200
Fluorene	86-73-7	9H-Fluorene	8100	200
			8270	10
Heptachlor	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-hepta-chloro-3a,4,7,7a-tetrahydro-	8080	0.05
			8270	10

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
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)	8080	1
			8270	10
Hexachlorobenzene	118-74-1	Benzene, hexachloro-	8120	0.5
			8270	10
Hexachlorobutadiene	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	8120	5
			8270	10
Hexachloro-cyclopentadiene	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	8120	5
			8270	10
Hexachloroethane	67-72-1	Ethane, hexachloro-	8120	0.5
			8270	10
Hexachlorophene	70-30-4	Phenol,2,2'-methyl-enebis [3,4,6- tri-chloro-	8270	10
			8270	10
Hexachloropropene	1888-71-7	1-Propene,1,1,2,3,3,3-hexachloro	8270	10
2-Hexanone	591-78-6	2-Hexanone	8240	50
Indeno(1,2,3- cd) pyrene	193-39-5	Indeno[1,2,3-cd] pyrene	8100	200
			8270	10
Isobutyl alcohol	78-83-1	1-Propanol, 2-methyl-	8015	50
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) -	8270	10
Isophorone	78-59-1	2-Cyclohexen-1-one,3,5,5-trimethyl-	8090	60
			8270	10
Isosafrole	120-58-1	1,3-Benzodioxole,5-(1-propenyl)-	8270	10
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-	8270	10
Lead	(Total)	Lead	6010	40
			7420	1,000
			7421	10
Mercury	(Total)	Mercury	7470	2
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-	8015	5
			8240	5

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Methapyrilene	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	8270	10
Methoxychlor	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-methoxy -	8080 8270	2 10
Methyl bromide; Bromomethane	74-83-9	Methane, bromo -	8010 8240	20 10
Methyl chloride; Chloromethane	74-87-3	Methane, chloro -	8010 8240	1 10
3-Methyl-cholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	8270	10
Methylene bromide; Dibromomethane	74-95-3	Methane, dibromo-	8010 8240	15 5
Methylene chloride; Dichloromethane	75-09-2	Methane, dichloro-	8010 8240	5 5
Methyl ethyl ketone; MEK	78-93-3	2-Butanone	8015 8240	10 100
Methyl iodide; Iodomethane	74-88-4	Methane, iodo-	8010 8240	40 5
Methylmethacrylate	80-62-6	2-Propenoic acid, 2- methyl-, methyl ester	8015 8240	2 5
Methyl methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester	8270	10
2-Methyl-naphthalene	91-57-6	Naphthalene, 2-methyl-	8270	10
Methyl parathion; Parathion methyl	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl)ester	8140 8270	0.5 10
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl	8015 8240	5 50
Naphthalene	91-20-3	Naphthalene	8100 8270	200 10
1,4-Naphthoquinone	130-15-4	1,4-Naphthalene-dione	8270	10
1-Naphthylamine	134-32-7	1-Naphthalenamine	8270	10
2-Naphthylamine	91-59-8	2-Naphthalenamine	8270	10
Nickel	(Total)	Nickel	6010 7520	50 400
o-Nitroaniline	88-74-4	Benzenamine, 2-nitro-	8270	50
m-Nitroaniline	99-09-2	Benzenamine, 3-nitro-	8270	50
p-Nitroaniline	100-01-6	Benzenamine, 4-nitro-	8270	50

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Nitrobenzene	98-95-3	Benzene, nitro-	8090	40
			8270	10
o-Nitrophenol	88-75-5	Phenol, 2-nitro-	8040	5
			8270	10
p-Nitrophenol	100-02-7	Phenol, 4-nitro-	8040	10
4-Nitroquinoline, 1-oxide	56-57-5	Quinoline, 4-nitro-, 1-oxide	8270	10
N-Nitrosodi-n-butylamine	924-16-3	1-Butanamine, N-butyl-N-nitroso	8270	10
N-Nitrosodiethylamine	55-18-5	Ethanamine, N-ethyl- N-nitroso	8270	10
N-Nitrosodimethylamine	62-75-9	Methanamine, N- methyl-N-nitroso-	8270	10
N-Nitrosodiphenylamine	86-30-6	Benzenamine, N-nitroso-N-phenyl-	8270	10
N-Nitrosodipropylamine; Di-n-propyl-nitrosamine	621-64-7	1-Propanamine, N-nitroso-N-propyl-	8270	10
N-Nitrosomethylethylamine	10595-95-6	Ethanamine, N-methyl- N-nitroso-	8270	10
N-Nitrosomorpholine	59-89-2	Morpholine, 4-nitroso-	8270	10
N-Nitrosopiperidine	100-75-4	Piperidine, 1- nitroso-	8270	10
N-Nitrosopyrrolidine	930-55-2	Pyrrolidine, 1- nitroso-	8270	10
5-Nitro-o-toluidine	99-55-8	Benzenamine, 2-methyl-5-nitro-	8270	10
Parathion	56-38-2	Phosphorothioic acid, O,O-diethyl-O-(4-nitro-phenyl) ester	8270	10
Polychlorinated biphenyls; PCBs	See Note 7	1,1'-Biphenyl, chloro derivatives	8080	50
			8250	100
Polychlorinated dibenzo-p-dioxins; PCDDs	See Note 8	Dibenzo[b,e][1,4]dioxin, chloro derivatives	8280	0.01
Polychlorinated dibenzofurans; PCDFs	See Note 9	Dibenzofuran, chloro derivatives	8280	0.01
Pentachlorobenzene	608-93-5	Benzene, pentachloro-	8270	10
Pentachloroethane	76-01-7	Ethane, pentachloro-	8240	5
			8270	10
Pentachloronitrobenzene	82-68-8	Benzene, pentachloro- nitro-	8270	10
Pentachlorophenol	87-86-5	Phenol, pentachloro-	8040	5
			8270	50
Phenacetin	62-44-2	Acetamide, N-(4-ethoxyphenyl)	8270	10

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Phenanthrene	85-01-8	Phenanthrene	8100	200
			8270	10
Phenol	108-95-2	Phenol	8040	1
			8270	10
p-Phenylenediamine	106-50-3	1,4- Benzenediamine	8270	10
Phorate	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	8140	2
			8270	10
2-Picoline	109-06-8	Pyridine, 2-methyl-	8240	5
			8270	10
Pronamide	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-pro-pynyl)-	8270	10
Propionitrile; Ethyl cyanide	107-12-0	Propanenitrile	8015	60
			8240	5
Pyrene	129-00-0	Pyrene	8100	200
			8270	10
Pyridine	110-86-1	Pyridine	8240	5
			8270	10
Safrole	94-59-7	1,3-Benzodioxole, 5- (2-propenyl)-	8270	10
Selenium	(Total)	Selenium	6010	750
			7740	20
			7741	20
Silver	(Total)	Silver	6010	70
			7760	100
Silvex; 2,4,5-TP	93-72-1	Propanoic acid,2-(2,4, 5-trichlorophenoxy)-	8150	2
Styrene	100-42-5	Benzene, ethenyl-	8020	1
			8240	5
Sulfide	18496-25-8	Sulfide	9030	10,000
2,4,5-T; 2,4,5-, Trichlorophenoxy - acetic acid	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-	8150	2
2,3,7,8-TCDD; 2,3,7,8-Tetra - chlorodibenzo-p-dioxin	1746-01-6	Dibenzo[b,e][1,4]dioxin2,3,7,8-tetrachloro-	8280	0.005
1,2,4,5-Tetra - chlorobenzene	95-94-3	Benzene, 1,2,4,5-tetrachloro-	8270	10
1,1,1,2-Tetra - chloroethane	630-20-6	Ethane, 1,1,1,2- tetrachloro-	8010	5
			8240	5

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
1,1,2,2-Tetra-chloroethane	79-34-5	Ethane, 1,1,2,2- tetrachloro-	8010	0.5
			8240	5
Tetrachloro- ethylene; Perchloroethylene; Tetrachloroethene	127-18-4	Ethene, tetrachloro-	8010	0.5
			8240	5
2,3,4,6-Tetra-chlorophenol	58-90-2	Phenol, 2,3,4,6- tetrachloro-	8270	10
Tetraethyl dithio-pyrophosphate; Sulfotepp	3689-24-5	Thiodiphosphoric acid ((HO) ₂ P(S) ₂ O), tetraethyl ester	8270	10
Thallium	(Total)	Thallium	6010	400
			7840	1,000
			7841	10
Tin	(Total)	Tin	7870	8,000
Toluene	108-88-3	Benzene, methyl-	8020	2
			8240	5
o-Toluidine	95-53-4	Benzenamine, 2-methyl-	8270	10
Toxaphene	8001-35-2	Toxaphene	8080	2
			8250	10
1,2,4-Tri-chlorobenzene	120-82-1	Benzene,1,2,4-trichloro-	8270	10
1,1,1-Tri-chloroethane; Methylchloroform	71-55-6	Ethane, 1,1,1 -trichloro-	8240	5
1,1,2-Tri-chloroethane	79-00-5	Ethane,1,1,2-,trichloro-	8010	0.2
			8240	5
Trichloro- ethylene; Trichloroethene	79-01-6	Ethene, trichloro-	8010	1
			8240	5
Trichlorofluoro-methane	75-69-4	Methane,trichlorofluoro-	8010	10
			8240	5
2,4,5-Tri-chlorophenol	95-95-4	Phenol, 2,4,5-trichloro-	8270	10
2,4,6-Tri-chlorophenol	88-06-2	Phenol, 2,4,6-trichloro-	8040	5
			8270	10
1,2,3-Tri-chloropropane	96-18-4	Propane,1,2,3-tri-chloro-	8010	10
			8240	5
O,O,O-Triethyl phosphorothioate	126-68-1	Phosphorothioic acid, O,O,O-triethyl ester	8270	10
sym-Trinitro- benzene	99-35-4	Benzene, 1,3,5- trinitro	8270	10

Table 4. Ground Water Monitoring List ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Suggested methods ⁵	PQL (µg/L) ⁶
Vanadium	(Total)	Vanadium	6010	80
			7910	2,000
			7911	40
Vinyl acetate	108-05-4	Acetic acid, ethenyl ester	8240	5
Vinyl chloride	75-01-4	Ethene, chloro-	8010	2
			8240	10
Xylene (total)	1330-20-7	Benzene, dimethyl-	8020	5
			8240	5
Zinc	(Total)	Zinc	6010	20
			7950	50

¹ The regulatory requirements pertain only to the list of substances; the right-hand columns (Methods and PQL) are given for informational purposes only. See also footnotes 5 and 6.

² Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

³ Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

⁴ CAS index names are those used in the ninth Cumulative Index.

⁵ Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846, *Test Methods for Evaluating Solid Waste*, Third Edition. Analytical details can be found in SW-846 and in documentation on file at the agency. The packed column gas chromatography methods 8010, 8020, 8030, 8040, 8060, 8080, 8090, 8110, 8120, 8140, 8150, 8240, and 8250 were promulgated methods through Update IIB of SW-846 and, as of Update III, the agency has replaced these methods with "capillary column GC methods," as the suggested methods. Caution: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

⁶ Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. *Caution:* The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

⁷ 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). The PQL shown is an averaged value for PCB congeners.

⁸ This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins. The PQL shown is an average value for PCDD congeners.

⁹ This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans. The PQL shown is an average value for PCDF congeners.

AUTHORITY NOTE: Promulgated in accordance with R.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).

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, Permits Division 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).

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, Permits Division, 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).

§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 Subsection 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, ground water 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, Permits Division 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 to the Office of Environmental Services, Permits Division 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, Permits Division 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 which 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, Permits Division 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, Permits Division 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, Permits Division 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, Permits Division 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 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).

§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 9, 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, Permits Division 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).

§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.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2180 et 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 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, Permits Division, 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 registered professional 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 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, Permits Division, a survey plat indicating the location and

dimensions of landfills 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, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable Chapter 35 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 26:2487 (November 2000).

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 Subsection 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, Permits Division 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 LAC 33:V.3525 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, Permits Division 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, Permits Division 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 which 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, Permits Division 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, Permits Division, 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), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2487 (November 2000).

§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, Permits Division 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 Subsection 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).

§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, Permits Division, 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 registered professional 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), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2488 (November 2000).

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 LAC 33:V.3707.A-F, 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 which conforms to the requirements of this Subpart, and submitting an originally signed duplicate of the trust agreement to the Office of Management and Finance, Financial Services Division. 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 which 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:

$$\text{Next Payment} = \frac{CE - CV}{Y}$$

where:

CE = current closure cost estimate.

CV = current value of the trust fund.

Y = number of years remaining in the pay-in period.

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:

$$\text{Next Payment} = \frac{CE - CV}{Y}$$

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.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 Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division 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 which conforms to the requirements of this Paragraph and submitting the bond to the Office of Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, 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 which conforms to the requirements of this Subsection and submitting the bond to the Office of Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, 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 which conforms to the requirements of this Subsection and submitting the letter to the Office of Management and Finance, Financial Services Division. 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 which 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 Management and Finance, Financial Services Division, 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 which conforms to the requirements of this Paragraph and submitting a certificate of such insurance to the Office of Management and Finance, Financial Services Division. 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 dosing 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 Management and Finance, Financial Services Division, 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 Subsection 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 Subsection 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 Management and Finance, Financial Services Division:

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 LAC 33:V.3707.F.3 to the Office of Management and Finance, Financial Services Division 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.3707.F.3, the owner or operator must send updated information to the Office of Management and Finance, Financial Services Division within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in LAC 33:V.3707.F.3.

6. If the owner or operator no longer meets the requirements of LAC 33:V.3707.F.1, he must send notice to the Office of Management and Finance, Financial Services Division 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 registered 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).

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 which conforms to the requirements of this Paragraph and submitting an originally signed duplicate of the trust agreement to the Office of Management and Finance, Financial Services Division. 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 which 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

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 Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division 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 which conforms to the requirements of this Subsection and submitting the bond to the Office of Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, 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 Management and Finance, Financial Services Division. 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 which has been issued a standard permit may satisfy the requirements of this Section by obtaining a surety bond which conforms to the

requirements of this Subsection and by submitting the bond to the Office of Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, 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 Management and Finance, Financial Services Division. 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 which conforms to the requirements of this Paragraph and by submitting the letter to the Office of Management and Finance, Financial Services Division. 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 which 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 Management and Finance, Financial Services Division, 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 Management and Finance, Financial Services Division 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 which conforms to the requirements of this Paragraph and submitting a certificate of such insurance to the Office of Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, 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 14 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 Management and Finance, Financial Services Division:

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 LAC 33:V.3711.F.3 to the Office of Management and Finance, Financial Services Division 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 LAC 33:V.3711.F.3, the owner or operator must send updated information to the Office of Management and Finance, Financial Services Division within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in LAC 33:V.3711.F.3.

6. If the owner or operator no longer meets the requirements of LAC 33:V.3711.F.1 of this Part, he must send notice to the Office of Management and Finance, Financial Services Division 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 registered 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).

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 Table 3 of LAC 33:V.Chapter 49), or any toxic waste listed because of toxicity or reactivity (see Table 4 of LAC 33:V.Chapter 49) 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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division 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

administrative authority. If requested by the Office of Management and Finance, Financial Services Division, 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 Management and Finance, Financial Services Division 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 LAC 33:V.3715.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.3715.A and 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 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 LAC 33:V.3715.B. An owner or operator must furnish to the Office of Management and Finance, Financial Services Division, 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. 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 registered 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 Management and Finance, Financial Services Division:

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 LAC 33:V.3715.F.3 to the Office of Management and Finance, Financial Services Division 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 LAC 33:V.3715.F.1, 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 Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division.

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 Management and Finance, Financial Services Division.

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 Management and Finance, Financial Services Division.

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).

Subchapter E. Incapacity Regulations

§3717. Incapacity of Owners or Operators, Guarantors, or Financial Institutions

A. An owner or operator must notify the Office of Management and Finance, Financial Services Division 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).

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.

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 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; 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

P.O. Box 82231

Baton Rouge, LA 70884-2231

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

Secretary

Louisiana Department of Environmental Quality

P.O. Box 82231

Baton Rouge, LA 70884-2231

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 assets: \$ _____

*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:

Secretary

Louisiana Department of Environmental Quality

P.O. Box 82231

Baton Rouge, LA 70884-2231

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 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 the 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 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 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.H 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 thirty 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

P.O. Box 82231

Baton Rouge, Louisiana 70884-2231

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 Subsection 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	Non-sudden Accidental
Occurrences	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 equalling 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 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 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 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 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).

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, thermostats as described in LAC 33:V.3807, lamps as described in LAC 33:V.3809, 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).

§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 Subsection A.1 of this Section, and unused pesticide products described in Subsection 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 Subsection 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 Subsection 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 Subsection 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 Thermostats

A. Thermostats Covered Under this Chapter. The requirements of this Chapter apply to persons managing thermostats, as described in LAC 33:V.3813, except those listed in Subsection B of this Section.

B. Thermostats Not Covered Under this Chapter. The requirements of this Chapter do not apply to persons managing the following thermostats:

1. thermostats that are not yet wastes under LAC 33:V.Chapter 49. Subsection C of this Section describes when thermostats become wastes; and

2. thermostats that are not hazardous waste. A thermostat is a hazardous waste if it exhibits one or more of the characteristics identified in LAC 33:V.4903.

C. Generation of Waste Thermostats

1. A used thermostat becomes a waste on the date it is discarded (i.e., sent for reclamation).

2. An unused thermostat 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 23:569 (May 1997).

§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).

§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

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.

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, thermostats, lamps, 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 5,000 kilograms or more total of universal waste is accumulated.

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 FFDCFA 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 FFDCFA 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, thermostats, lamps, 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. thermostats as described in LAC 33:V.3807;
4. lamps as described in LAC 33:V.3809; and
5. 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).

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; or

2. a container that does not meet the requirements of Subsection B.1 of this Section, provided that the unacceptable container is over packed in a container that

does meet the requirements of Subsection B.1 of this Section; or

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 Thermostats. A small quantity handler of universal waste must manage universal waste thermostats 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 thermostat 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 thermostat, 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 remove mercury-containing ampules from universal waste thermostats, provided the handler:

a. removes 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; and

3. a small quantity handler of universal waste who removes mercury-containing ampules from thermostats must 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 (e.g., remaining thermostat units) 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 must 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 must 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.

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 Antifreeze. A small quantity handler of universal waste must 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 must 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 Subsection E.1 of this Section, provided that the unacceptable container is overpacked in a container that

does meet the requirements of Subsection E.1 of this Section;

3. a tank that meets the requirements of 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).

§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 thermostats (e.g., each thermostat), or a container in which the thermostats are contained, must be labeled or marked clearly with any one of the following

phrases: "Universal Waste—Mercury Thermostat(s)," or "Waste Mercury Thermostat(s)," or "Used Mercury thermostat(s)."

5. each lamp or a container or package in which such lamps are contained must be labeled or marked clearly with one of the following phrases: "Universal Waste - Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)."

6. universal waste antifreeze, or a container in which the antifreeze is contained, must be labeled or marked clearly with any 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).

§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-transport 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, Surveillance Division 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).

§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 Subsection 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,

Permits Division, 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, thermostats, lamps, antifreeze); and
5. a statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time and the types of universal waste (e.g, batteries, pesticides, thermostats, lamps, antifreeze) the handler is accumulating above this quantity.

AUTHORITY NOTE: Promulgated in accordance with R.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).

§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; or

2. a container that does not meet the requirements of Subsection B.1 of this Section, provided that the unacceptable container is over packed in a container that does meet the requirements of Subsection B.1 of this Section; or

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 Thermostats. A large quantity handler of universal waste must manage universal waste

thermostats 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 thermostat 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 thermostat, 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 remove mercury-containing ampules from universal waste thermostats provided the handler:

a. removes 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; and

3. a large quantity handler of universal waste who removes mercury-containing ampules from thermostats must 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 (e.g., remaining thermostat units) 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 must 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.

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 Antifreeze. A large quantity handler of universal waste must 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 must 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 Subsection E.1 of this Section, provided that the unacceptable container is overpacked in a container that does meet the requirements of Subsection E.1 of this Section;

3. a tank that meets the requirements of LAC 33:V.Chapter 19, except for LAC 33:V.1915.C;

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).

§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 the 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 thermostats (e.g., each thermostat), or a container or tank in which the thermostats are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste—Mercury Thermostat(s);" or "Waste Mercury Thermostat(s);" or "Used Mercury Thermostat(s)."

5. each lamp or a container or package in which such lamps are contained must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)."

6. Universal waste antifreeze, or a container in which the antifreeze is contained, must be labeled or marked clearly with any 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).

§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-transportes 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 reshipping 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, Surveillance Division 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).

§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, thermostats, lamps, 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, thermostats, lamps, 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).

§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, 9, 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.4115.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).

§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, Surveillance Division 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).

§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, thermostats, lamps, 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).

Subchapter F. Import Requirements

§3879. Imports

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 Subsections A -C of this Section.

A. A universal waste transporter is subject to the universal waste transporter requirements of Subchapter D of this Chapter.

B. 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.

C. An owner or operator of a destination facility is subject to the destination facility requirements of Subchapter E of this Chapter.

D. Persons managing universal waste that is imported from an OECD country as specified in LAC 33:V.1113.I.1.a are subject to Subsections A -C 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

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, kerosine, 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 nonferrous 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:

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.

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).

Subchapter A. Materials Regulated as Used Oil

§4003. Applicability

This Section identifies those materials which 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 is 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 (for example, by using an analytical method from EPA Publication SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in LAC 33:V.3105.Table 1). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, Box 371954, Pittsburgh, PA 15250-7954, (202) 512-1800 (document number 955-001-00000-1).

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.C 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 exhibits one or more of

the hazardous waste characteristic identified in LAC 33:V.4903 and mixtures of used oil and hazardous waste that is listed in LAC 33:V.4901 solely because it exhibits 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.

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. 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.

AUTHORITY NOTE: Promulgated in accordance with R.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), LR 22:836 (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).

§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 in the specifications shown in

LAC 33:V.4005.Table 1. Once used oil that is to be burned for energy recovery has been shown not to exceed any specifications 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 Specification Level is Not Subject to this Chapter When Burned for Energy Recovery¹

Constituent/property level	Allowable
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

ENDNOTE: ¹The specification 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).

ENDNOTE: ²Used 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).

§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 9, 15, 17, 19, 21, 23, 25, 27-29, 31-33, 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-generators 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.A and B, 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

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.

A. **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 9, 15, 17, 19, 21, 23, 25, 27-29, 31-33, 35, 37, and 43.

B. **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).

C. **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."

D. **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

Generators may burn used oil in used oil-fired space heaters provided that:

A. the heater burns only used oil that the owner or operator generates or used oil received from household do-it-yourself used oil generators;

B. the heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

C. 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

Except as provided in LAC 33:V.4017.A-C, generators must ensure that their used oil is transported only by transporters who have obtained EPA identification numbers.

A. 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.

B. 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.

C. 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.A. 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.B. 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 totalling 55 gallons or less from the generator to a used oil collection center as specified in LAC 33:V.4017.A.

3. This Subchapter does not apply to generators who transport shipments of used oil totalling 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.B.

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, Permits Division 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, Permits Division of used oil activity.

D. Used oil transporters and transfer facilities must notify the Office of Environmental Services, Permits Division 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 (March 1995), LR 21:267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000).

§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 (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents, which are listed in LAC 33:V.3105.Table 1). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, Box 371954, Pittsburgh, PA 15250-7954. (202) 512-1800 (document number 955-001-00000-1).

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.C, 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).

§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 9, 15, 17, 19, 21, 23, 25, 27-29, 31-33, 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 (March 1995), LR 21:267 (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. 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 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 (March 1995), LR 21:267 (March 1995).

§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, Permits Division 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, Permits Division of used oil activity.

D. Used oil processors and re-refiners must notify the Office of Environmental Services, Permits Division 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 (March 1995), LR 21:267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000).

§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 real extent of any released materials. He may do this by observation, review of facility records of 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 containing 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 the Office of Environmental Compliance, Surveillance Division and appropriate local authorities that the facility is in compliance with LAC 33:V.4045.B.h.i and ii 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 the Office of Environmental Compliance, Surveillance Division. 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).

§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 (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents, which are listed in LAC 33:V.3105.Table 1). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, Box 371954, Pittsburgh, PA 15250-7954. (202) 512-1800 (document number 955-001-00000-1).

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).

§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 9, 15, 17, 19, 21, 23, 25, 27-29, 31-33, 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.4901.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.4901.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 (March 1995), LR 21:267 (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 Which 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, Permits Division 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 which burn off-specification used oil for energy recovery and have previously notified must renotify the Office of Environmental Services, Permits Division of this used oil activity.

D. A used oil burner must notify the Office of Environmental Services, Permits Division 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 (March 1995), LR 21:267 (March 1995), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2497 (November 2000).

§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/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 (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents, which are listed in LAC 33:V.3105.Table 1). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, Box 371954, Pittsburgh, PA 15250-7954. (202) 512-1800 (document number 955-001-00000-1).

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.C 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).

§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 9, 15, 17, 19, 21, 23, 25, 27-29, 31-33, 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 (March 1995), LR 21:267 (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 used oil fuel marketer may initiate a shipment of off-specification used oil only to a used oil burner who:

- A. has an EPA identification number; and
- B. 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, Permits Division 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, Permits Division of used oil activity.

D. A generator must notify the Office of Environmental Services, Permits Division 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).

§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 (March 1995), LR 21:267 (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 (March 1995), LR 21:267 (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 which 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 by telephone at (225) 763-3908 during office hours; (225) 342-1234 after hours, weekends, and holidays; or by e-mail utilizing the Incident Report Form and procedures found at www.deq.state.la.us/surveillance 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 recycle 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).

§4103. Notification

A. All operators of facilities which generate, transport, treat, store, or utilize or recycle a recyclable material that have not previously notified shall notify the department within 90 days of promulgation of these rules and regulations that they are engaged in activities involving a recyclable material as defined in LAC 33:V.109. For notification, the operator may obtain notification forms from the department.

AUTHORITY NOTE: Promulgated in accordance with R.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).

§4105. Requirements for Recyclable Material

Recyclable materials are subject to additional regulations as follows:

A. Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of Subchapter A (Group I) of this Chapter except for the materials listed in Subsections B and C of this Section. Hazardous wastes that are recycled will be known as "recyclable materials."

B. The following recyclable materials (Group II) are subject to the requirements of Subchapter B of this Chapter and all applicable provisions as provided in Subchapter B of this Chapter:

1. industrial ethyl alcohol that is reclaimed except that, unless otherwise provided in an international agreement:

a. a person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, must 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;

b. transporters transporting a shipment for export may not accept a shipment if he knows the shipment does not conform to the Louisiana State Acknowledgment of Consent, must ensure that a copy of the Louisiana State Acknowledgment of Consent accompanies the shipment and must ensure that it is delivered to the facility designated by the person initiating the shipment.

2. Reserved

3. Reserved

4. scrap metal that is not excluded under LAC 33:V.105.D.1.m;

5. Reserved

6. Reserved

7. Reserved

8. 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);

9. 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 so long as the resulting fuel meets the used oil specification under LAC 33:V.4005 of this Chapter and so long as no other hazardous wastes are used to produce the hazardous waste fuel;

10. 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, so long as the fuel meets the used oil fuel specification under LAC 33:V.4005;

11. 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, so long as the reclaimed oil meets the used oil fuel specification under LAC 33:V.4005.

C. The following recyclable materials (Group III) are only subject to the requirements of LAC 33:V.Chapter 41.Subchapter C, Chapter 30 and all applicable provisions as provided in LAC 33:V.Chapters 1, 3, 5, 7, 27, 31, and 43:

1. recyclable materials used in a manner constituting disposal;

2. hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under LAC 33:V.Chapters 31 or 43.Subchapter N;

3. recyclable materials from which precious metals are reclaimed;

4. spent lead-acid batteries that are being reclaimed; and

5. used oil that exhibits one or more of the characteristics of hazardous waste and is burned for energy recovery in boilers and industrial furnaces that are not regulated under LAC 33:V.Chapters 31 or 43.Subchapter N.

D. The recyclable materials listed in Subsection D.1 of this Section are subject to all requirements and provisions of Subsection D.2 of this Section:

1. Any hazardous waste-derived product produced by any commercial hazardous waste incineration facility that accepts hazardous waste or hazardous waste products for a fee, or any commercial recycling or resource recovery facility that recycles hazardous waste to produce aggregates and that accepts hazardous wastes or hazardous waste products for a fee, provided that such derived product is:

- a. inherently waste-like,
- b. accumulated speculatively,
- c. used as a fuel, or
- d. used in a manner constituting disposal.

2. Recycling facilities and other entities receiving, handling, shipping, or selling the derived product from the point of production to the ultimate use of the product shall maintain for a period of three years from the date of transaction such records as needed to furnish the following information to the department upon request:

a. the name and location of each entity receiving the hazardous waste-derived product. This is to include the names, business addresses, telephone numbers, and functions of all brokers, wholesalers, middlemen, interim purchasers, and all other parties involved in any and all transactions relating to the derived product from the point of production by the recycler to the product's ultimate use;

b. the date of each shipment, the physical state and description of the hazardous waste-derived product shipped, and the total quantity of the product shipped by units of weight. If the weight is unknown, the volume and estimated weight should be provided;

c. copies of analytical results;

d. all financial documents necessary to verify all transactions and/or transfers involving the derived product, including:

i. individual sales invoices to verify the sales price of each financial transaction;

ii. state or federal tax documents or other official receipts to verify total quarterly sales of the derived product by the recycler; and

iii. all other documents necessary to verify any type of financial transaction involving transfer of the product, including such arrangements as donations, tax credits, producer paying shipping charges, or producer paying another party to receive the product.

E. 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 which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy recovery, or reprocessed.

F. 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.

AUTHORITY NOTE: Promulgated in accordance with R.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).

§4107. Spills

A. Any spill of recyclable material which could possibly endanger human health or adversely affect the environment shall be reported to the department as provided in the "Notification Regulations and Procedures for Unauthorized Discharges and Spills." (See LAC 33:I.Chapter 39.)

B. If a spill occurs on the site of a generator or a reuse-recycle facility that handles recyclable materials and that spill could endanger the public health or affect the environment offsite, the department and the Department of Public Safety have the authority to enter the site and investigate the spill.

C. Owners of the spilled material are considered to be generators for the purposes of these regulations. In an emergency situation, all reporting and manifest requirements of these rules and regulations for generators may be

suspended. However, the owners of the material must submit a full report on the spill, including location of spill, type of material spilled, cause of spill, amount of spilled material, damages incurred, and how the spilled material was cleaned up, transported, and disposed of. This report shall be forwarded to the Office of Environmental Compliance, Surveillance Division no later than 20 days following the spill.

D. Whenever a spill of recyclable material occurs that requires immediate removal to protect human health or the environment, the transporter shall immediately notify the Office of Environmental Compliance by telephone at (225) 763-3908 during office hours; (225) 342-1234 after hours, weekends, and holidays; or by e-mail utilizing the Incident Report Form and procedures found at www.deq.state.la.us/surveillance as required by the "Notification Regulations and Procedures for Unauthorized Discharges and Spills." (See LAC 33:I.Chapter 39.)

E. The generator, transporter, reuse facility, recycle facility, or user shall clean up all of the spilled material or take such action as may be required pursuant to the Emergency Response System so that the spilled material 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 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).

§4109. Violations

A. No person shall accept any recyclable material unless it is delivered with a properly completed manifest as required by Subchapters A and C of this Chapter or under an Emergency Action Authorization pursuant to LAC 33:V.701.

B. No person shall dispose of a recyclable material except by bonafide use, reuse, recycling, or reclamation or by treatment, storage, or disposal as a hazardous waste in accordance with 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), LR 17:366 (April 1991).

Subchapter A. Special Requirements for Group I Recyclable Materials

§4111. Applicability

A. Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities except for the materials listed in LAC 33:V.4105.B and 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 11:988 (October 1985), amended LR 11:1139 (December 1985).

§4113. Generator, Transporter, and Notification Requirements

A. 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 LAC 33:V.4105.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 11:988 (October 1985), amended LR 11:1139 (December 1985).

§4115. Owners and Operators of Facilities that Store or Recycle Recyclable Materials

A. 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, 9, 11, 15, 19, 21, 22, 23, 29, 33, 35, 37, and Subchapters A-K of LAC 33:V.Chapter 43 and the notification requirements under LAC 33:V.105.A, except as provided in LAC 33:V.4105.A. (The recycling process itself is exempt from regulations, except as provided in LAC 33:V.4115.C.)

B. 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 LAC 33:V.4105.A:

1. notification requirements under LAC 33:V.105.A;
2. LAC 33:V.905 and 907 (dealing with the use of manifest and manifest discrepancies); and
3. LAC 33:V.4115.C.

C. 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 Subchapters Q-R of 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 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 15:378 (May 1989), LR 16:220 (March 1990), LR 17:658 (July 1991), LR 18:1256 (November 1992), LR 21:944 (September 1995), LR 22:21 (January 1996).

Subchapter B. Special Requirements for Group II Recyclable Materials

§4117. Applicability

The requirements of this Subchapter and all applicable provisions as provided in this Subchapter apply to industrial

ethyl alcohol that is reclaimed; sludges and by products exhibiting a characteristic of a hazardous waste which are reclaimed. The following wastes are exempt from regulations:

- A. scrap metal;
- B. 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;
- C. oil reclaimed from hazardous waste resulting from normal petroleum refining, production, and transportation practices, which oil is to be refined along with normal process streams at a petroleum refining facility;
- D. coke from the iron and steel industry that contains hazardous waste from the iron and steel production process;
- E. wastes described in LAC 33:V.4105.B.1-14 which are used or reused on-site or stored at the generator site prior to such use or reuse on-site are exempt from these regulations except that on-site storage shall be in an environmentally sound manner;
- F. used batteries (or used battery cells) returned to a battery manufacturer for regeneration except for storage requirements under LAC 33:V.4119;
- G. used oil that exhibits one or more of the characteristics of hazardous waste but is recycled in some manner other than being burned for energy recovery.

AUTHORITY NOTE: Promulgated in accordance with R.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 12:320 (May 1986), LR 13:237 (April 1987), LR 13:433 (August 1987), LR 20:1000 (September 1994).

§4119. Storage

A. Except waste exempt in LAC 33:V.4117 all storage of recyclable materials described in LAC 33:V.4117 shall be in containers or tanks meeting the applicable standards of LAC 33:V.2103, 2105, 2107, 2109.A, 2111, and 2113, LAC 33:V.1903.A-D, 1905, 1907, and 1909 where practical except as otherwise specified in Subchapters A and C of this Chapter. Used batteries or used battery cells returned for manufacturer regeneration may be stored on pallets provided such storage contains the contents of the batteries or battery cells and is protective of human health and the environment. When it is impractical to store a recyclable material in containers or tanks, or in the manner described for used batteries or used battery cells, alternate storage acceptable to the administrative authority shall be provided by the owner of the material. The storage of all recyclable materials described in LAC 33:V.4117 must be in a manner which will prevent any release of the materials or constituents that would endanger the public 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 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 13:237 (April 1987).

§4121. Manifest Forms and Shipping Documents

A. Manifest forms containing the information required by this Chapter shall be used for all off-site shipments, except by pipeline, of recyclable material described in LAC 33:V.4117. The manifest form must be obtained from the department.

B. Recyclable materials described in LAC 33:V.4117 may be collected and manifested on a trip ticket listing with the manifesting requirements fulfilled by the transporter. The listing shall show the identification of the transporter and reuse facility with a listing of the waste collected by identification, quantity, and source, on a form available from or approved by the administrative authority.

C. Failure to utilize a manifest form for shipments of recyclable materials shall be a violation 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 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 17:366 (April 1991), LR 18:1256 (November 1992).

§4123. Manifest Document Flow

A. The generator initiates the manifest by filling out his or her portion and providing the name, address, telephone number, and active EPA identification number of each transporter, and the name, address, telephone number, and active EPA identification number of the recycling facility that will receive the recyclable material. After the initial transporter signs and dates the manifest accepting the recyclable material, the generator retains one copy for his or her files, mails a copy to the administrative authority of the state where the waste was generated, and the original and remaining copies accompany the recyclable material shipment.

B. The transporter secures the signature of the operator of the facility that will receive the recyclable material upon delivery of the recyclable material. The transporter retains one copy for his or her files and gives the original and remaining copies to the facility operator.

C. The facility operator fills out his or her portion, retains a copy for his or her files, submits the original to the department no later than seven days thereafter, and sends all remaining copies to the generator and other appropriate parties no later than seven days after delivery of the recyclable material.

D. If a recycle facility refuses to accept a recyclable material for use, the facility operator must notify the Office of Environmental Services, Environmental Assistance Division immediately and provide the following information:

1. name of the person reporting the refusal and phone number for that person;
2. name and address of the transporter;
3. name and address of the generator;
4. name and address of the recycle facility operator;
5. date, time, and place of the refusal;
6. description of the incident; and
7. classification, name, and amount of recyclable material, to the extent available.

E. The signing of the manifest by the generator, transporter, or facility operator certifies that to the best of his knowledge his portion of the manifest is accurately and correctly filled out. The generator further certifies that the material is properly packaged, marked and labeled and is in the proper container for transportation.

F. The generator, transporter, and facility operator are required to report to the department any irregularities between the materials actually received and the materials described on the manifest, or any other irregularities, within five days.

G. For rail shipments, the generator may comply with the requirements of LAC 33:V.1107.D.4 and 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 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 17:366 (April 1991), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2498 (November 2000).

§4125. Procedures Governing the Generator's Portion of the Manifest System

A. Generators of recyclable material shall use a manifest form as required by LAC 33:V.4121.

B. In naming a recyclable material, a generator shall use the nomenclature for the material which otherwise would be required under these regulations if the material were subject to regulations under LAC 33:V.Chapter 11. Such description of the material shall be used on the material manifest and in all reports on the material required under this Chapter.

C. A single manifest may be used for multiple loads of recyclable material, provided that:

1. all loads of recyclable material are shipped on the same day from the same location by the same transporter to the same facility;
2. all loads are accompanied by a copy of the manifest and emergency information as required by LAC 33:V.4125;
3. the recyclable material in all loads has the same shipping description and hazard class;
4. the total quantity of each load is specified and is initialed by the generator and transporter; and

5. the operator of the transport vehicle for each load is listed on the manifest.

D. Generators must provide a Chem-Card or similar emergency card or a statement concerning the hazardous nature of the material and general guidelines for an emergency situation involving the recyclable material to accompany the manifest on shipments and loads.

E. In naming a recyclable material, a generator shall:

1. use the proper Department of Transportation (DOT) shipping name (identified in 49 CFR 172);

2. if the DOT proper shipping name is "NOT OTHERWISE SPECIFIED" (NOS), then the classification system of LAC 33:V.105.B shall be used after the DOT proper shipping name, "NOS".

F. If the recyclable material is to be transported out-of-state, the generator will be responsible for receiving the completed, signed manifest from the out-of-state facility.

G. Generators must obtain written confirmation of the acceptability of the type of recyclable material from the operator of the facility where the material will be used or stored prior to use, before shipping the recyclable 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 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 17:367 (April 1991).

§4127. Procedures Governing the Transporter's Portion of the Manifest System

A. Transporters will pick up and ship only those recyclable materials which are properly prepared for shipment, are accompanied by a properly completed manifest, and appear to be the recyclable material described on the manifest.

B. Transporters who pick up recyclable material from generators exempted by LAC 33:V.105.B are responsible for the generator manifest requirements of this Section. Transporters may use a single manifest for shipments containing recyclable material from several generators if all generators are listed; all recyclable materials are accurately described, the materials transported in the same shipment are compatible, and the material is labeled as required in this Section by transportation regulations for hazardous materials promulgated by the Louisiana Department of Public Safety.

C. If the facility rejects a shipment of recyclable material, the transporter shall return it to the generator, notify the Office of Environmental Services, Environmental Assistance Division of the action immediately, and give reasons to his best understanding why the material was rejected.

AUTHORITY NOTE: Promulgated in accordance with R.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).

§4129. Procedures Governing the Portion of the Manifest System for the Recycle Facility

A. The operator of a facility accepting out-of-state recyclable materials is responsible for all the requirements of this Section, including requiring the generator to initiate a manifest.

B. Only those recyclable materials which are properly manifested and properly shipped are to be accepted by the operator of the facility.

C. If the operator of the facility rejects any recyclable material he is to notify the Office of Environmental Services, Environmental Assistance Division immediately and give reasons for the rejection.

D. The operator of any facility that uses or stores a reusable material will assume all the responsibilities of a generator established by these regulations for any recyclable material transported from his facility to another facility, except for material rejected under LAC 33:V.4127.

AUTHORITY NOTE: Promulgated in accordance with R.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).

§4131. Recordkeeping

A. Generators, transporters, storers and recyclers that handle recyclable materials shall maintain the required manifests, annual reports and exception reports for a period of three years.

B. An annual report shall be submitted by generators, storers and recyclers of recyclable materials and recycle facilities. The reports shall be submitted by March 1 after the end of the calendar year and shall include:

1. materials handled;
2. quantities;
3. physical state; and
4. for the recyclers, the final utilization or disposition of the recyclable materials.

AUTHORITY NOTE: Promulgated in accordance with R.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 12:320 (May 1986), LR 17:367 (April 1991).

§4133. Personnel Training

A. All generators, storers and recyclers shall institute a personnel training program covering all portions of the facility that handle recyclable 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 11:988 (October 1985), amended LR 11:1139 (December 1985), LR 12:320 (May 1986).

§4135. Contingency Plan

A. Each generator, storer and recycler shall prepare a contingency plan, outlining steps to be taken in the case of spills, fires, releases and other emergency situations.

AUTHORITY NOTE: Promulgated in accordance with R.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 12:320 (May 1986).

Subchapter C. Special Requirements for Group III Recyclable Materials

§4139. Recyclable Materials Used in a Manner Constituting Disposal

A. Applicability

1. The regulations of this Section apply to recyclable materials that are applied to or placed on the land without being mixed with any other substance(s) or after being mixed or combined with any other substance(s). These materials will be referred to throughout this Section as "materials used in a manner that constitutes disposal."

2. Except for the requirements of LAC 33:V.4105.D, 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:

a. the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means;

b. such products meet the applicable treatment standards in LAC 33:V.Chapter 22.Subchapter B (or applicable prohibition levels in LAC 33:V.2209 or 2213, where no treatment standards have been established) for each recyclable material (i.e., hazardous waste constituent) that they contain; and

c. the product does not exhibit a characteristic of a hazardous waste as specified in LAC 33:V.4903.

3. Zinc-containing fertilizers using hazardous waste K061 that are produced for the general public's use are not presently subject to regulation.

4. Commercial fertilizers that are produced for the general public's use that contain recyclable materials also are not presently subject to regulation provided they meet these same treatment standards or prohibition levels for each recyclable material that they contain.

5. 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 A.2-4 of this Section and remain subject to regulation.

B. General Requirements

1. 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 LAC 33:V.105.A of these regulations, and the notification requirement under section 3010 of RCRA or 105.A.

2. 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, 9, 11, 15, 19, 21, 23, 29, 33, 35, 37; Subchapters A-L of Chapter 43; and the notification requirement under section 3010 of RCRA or 105.A.

3. 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, 9, 11, 15, 19, 21, 22, 23, 25, 27, 29, 31, 33, 35, 37; Subchapters A-M of Chapter 43; and the notification requirement under section 3010 of RCRA or 105.A. (These requirements do not apply to products which contain these recyclable materials under the provisions of LAC 33:V.4139.A.2.)

4. 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 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).

§4143. Recyclable Materials Utilized for Precious Metal Recovery

A. Applicability. The regulations of this Section apply 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 for Persons who Generate, Transport, or Store Recyclable Materials. Persons who generate, transport, or store recyclable materials that are regulated under this Section are subject to the following requirements:

1. notification requirements under LAC 33:V.105.A;
2. generators must manifest all loads in accordance with LAC 33:V.1107;
3. transporters must manifest all loads in accordance with LAC 33:V.1307 and 1309;
4. persons who store must manifest all loads in accordance with LAC 33:V.905 and 907;
5. generators are subject to the requirements of Subchapter B of this Chapter; and
6. precious metals exported to or imported 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. Precious metals exported to or imported from non-OECD countries for recovery are subject to the requirements of LAC 33:V.1113 and 1123.

C. Requirements for Persons who Store Recycled Materials. Persons who store recycled materials regulated under this Section must keep the following records to document that they are not accumulating these materials speculatively:

1. records showing 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 materials remaining at the end of the calendar year.

D. Recyclable materials that are regulated under LAC 33:V.4111 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).

§4145. Spent Lead-Acid Batteries Being Reclaimed

A. Applicability. Are spent lead-acid batteries exempt from hazardous waste management requirements? 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, 31, Table 1, and 49, and LAC 33:V.1103, and the notification requirements at section 3010 of RCRA.	are subject to LAC 33:V. Chapters 1, 31, Table 1, and 49 and LAC 33:V.1103.
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, 31, Table 1, and 49, and LAC 33:V.1103, and the notification requirements at section 3010 of RCRA.	are subject to LAC 33:V. Chapter 1, 31, Table 1, and 49 and LAC 33:V.1103 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, 31, Table 1, and 49, and LAC 33:V.1103, and the notification requirements at section 3010 of RCRA.	are subject to LAC 33:V. Chapters 1, 31, Table 1, and 49 and LAC 33:V.1103 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. Chapters 31, Table 1 and 49 and LAC 33:V.1103 and applicable provisions under LAC 33:V. Chapter 22.
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, 31, Table 1, and 49 and LAC 33:V.1103, and the notification requirements at section 3010 of RCRA.	are subject to LAC 33:V. Chapters 31, Table 1 and 49 and LAC 33:V.1103 and applicable provisions under LAC 33:V. Chapter 22.

B. Requirements. If I store spent lead-acid batteries before I reclaim them, but not through regeneration, which requirements apply? The requirements of this Subsection 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;
 - b. all applicable provisions in LAC 33:V.4301 - 4306;
 - c. all applicable provisions in LAC 33:V. Chapter 43, Subchapter A, except LAC 33:V.4313 (waste analysis);

d. all applicable provisions in LAC 33:V. Chapter 43, Subchapters B and C;

e. all applicable provisions in LAC 33:V. Chapter 43, Subchapter D, except LAC 33:V.4353 and 4355 (dealing with the use of the manifest and manifest discrepancies);

f. all applicable provisions in LAC 33:V. Chapter 43, Subchapters E - K; and

g. 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;

b. all applicable provisions in LAC 33:V.1501;

c. all applicable provisions in LAC 33:V.1503, 1504, 1507, 1509, 1515, and 1517;

d. all applicable provisions in LAC 33:V.1511 and 1513;

e. all applicable provisions in LAC 33:V.Chapter 9, but not LAC 33:V.905 or 907 (dealing with the use of the manifest and manifest discrepancies);

f. all applicable provisions in LAC 33:V.1505, and Chapters 19, 21, 23, 29, 33, 35, and 37; and

g. all applicable provisions in LAC 33:V.Chapters 3, 5, and 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 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).

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, Permits Division 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 Subsection C.1 and 2 of this Section is subject to the requirements of LAC 33:V.Chapters 9, 11, 15 - 21, 23 - 29, and 31 - 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.B, C, and E (except to the extent they are referred to in LAC 33:V.Chapter 40 or LAC 33:V.4139, 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.Chapter 22.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 Subsection 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 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.Chapter 43.Subchapters C and D;

c. any person who is covered by Subsection C10.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. thermostats 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;

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), 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), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2498 (November 2000), LR 27:713 (May 2001).

§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 change 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 if the new owner or operator submits a revised Part I permit application no later than 90 days prior to the scheduled change. When a transfer of operational control of a facility occurs, the old owner or operator shall comply with the requirements of LAC 33:V.Chapter 43.Subchapter G (Financial Requirements), until the new owner or operator has demonstrated to the administrative authority that he is complying with the requirements of LAC 33:V.Chapter 43.Subchapter G. The new owner or operator must demonstrate compliance with LAC 33:V.Chapter 43.Subchapter G, requirements within six months of the date of the change in ownership or operational control of the facility. Upon demonstration to the administrative authority by the new owner or operator of compliance with LAC 33:V.Chapter 43.Subchapter G, the administrative authority shall notify the old owner or operator in writing that he or she no longer needs to comply with LAC 33:V.Chapter 43.Subchapter G, as of the date of demonstration. All other interim status duties are transferred effective immediately upon the date of the change in ownership or operational control of the facility.

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 25:4848 (March 1999).

§4305. Termination of Interim Status

Interim status terminates when:

A. For owners or operators of each land disposal facility which achieved interim status prior to November 8, 1984, on November 8, 1985, unless:

1. the owner or operator submits a Part II application for a permit for such facility prior to that date; and

2. the owner or operator certifies that such facility is in compliance with all applicable groundwater monitoring and financial responsibility requirements.

B. 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:

1. 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

2. certifies that such facility is in compliance with all applicable ground-water monitoring and financial responsibility requirements.

C. 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.

D. For owners or operators of any facility (other than 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.

E. 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.

F. One of the following occurs:

1. 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

2. 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.4901.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 LAC 33:V.4320 must submit to the Office of Environmental Services, Permits Division 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).

§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.

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

§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 Quality, 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

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—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;

D. the list of emergency coordinators changes; or

E. 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.

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

§4353. Use of the Manifest System

A. Interim status facilities must comply with LAC 33:V.Chapter 9.

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

§4355. Manifest Discrepancies

A. Interim status facilities must comply with LAC 33:V.Chapter 9.

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

§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 until closure of the facility. These records shall include the following information:

1. a description by its common name and the EPA hazardous waste number(s) (LAC 33:V.Chapter 49) that apply to the waste and the quantity of each hazardous waste received. The waste description also 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.

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 specific manifest document numbers, if the waste was accompanied by a manifest;

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

Units 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

Table 1. Units For Reporting	
Units of Measure	Code ¹
Hectare-meter	F
Btu's per Hour	I
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)
Chemical Treatment
T19 Absorption mound
T20 Absorption field
T21 Chemical fixation
T22 Chemical oxidation
T23 Chemical precipitation
T24 Chemical reduction
T25 Chlorination
T26 Chlorinolysis

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods
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

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods
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 Tricking 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

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods
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. 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.10;

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 when required by LAC 33:V.Chapter 43.Subchapter E, 4320, 4367, 4375, 4433, 4437, 4440, 4449, 4451, 4455, 4470, 4472, 4474, 4483, 4485, 4489.D.1, 4497-4502, 4519, 4529, 4557, 4559, 4587, 4589, and 4725 - 4739;

[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;

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 a certification under LAC 33:V.2235, and the applicable notice required of a generator under LAC 33:V.2245;

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.

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

§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.909.

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

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:

A. releases, fires, and explosions as specified in LAC 33:V.1513.F.10;

B. groundwater contamination and monitoring data as specified in LAC 33:V.4373 and 4375;

C. facility closure as specified in LAC 33:V.4387; and

D. 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).

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. submit to the Office of Environmental Assessment, Remediation Services Division a specific plan, certified by a qualified geologist or geotechnical engineer, which satisfies

the requirements of LAC 33:V.4373.G, for an alternate groundwater monitoring system;

2. initiate the determinations specified in LAC 33:V.4373.H;

3. prepare and submit a written report in accordance with LAC 33:V.4373.I;

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.B 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).

§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 Ground Water 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

Parameter	Maximum Level (mg/l unless otherwise stated)
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.Chapter 33.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 under LAC 33:V.4373.E, the owner or operator must develop and submit to the Office of Environmental Assessment, Remediation Services Division a specific plan, based on the outline required under LAC 33:V.4373.A and certified by a qualified geologist or geotechnical engineer, for a groundwater quality assessment program at 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 under LAC 33:V.4373.H as soon as technically feasible, and, within 15 days after that determination, submit to the Office of Environmental Assessment, Remediation Services Division a written report containing an assessment of the groundwater quality.

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 Assessment, Remediation Services Division 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 Assessment, Remediation Services Division 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).

§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 Assessment, Remediation Services Division:

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 Assessment, Remediation Services Division 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).

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 administrator 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.1 - 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 25:484 (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, and 4543.

B. As a means of satisfying the closure requirements of Subsection 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).

§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 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; 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, Permits Division 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, Permits Division 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 which 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 owner or operator 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 LAC 33:V.4381.D.4.

4. The administrative authority may request modifications to the plan under the conditions described in LAC 33:V.4381.C.1. 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, Permits Division, 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 LAC 33:V.4381.D.4.

D. Notification of Partial Closure and Final Closure

1. The owner or operator must submit the closure plan to the Office of Environmental Services, Permits Division 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 he expects 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, Permits Division 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).

§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, 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 Assessment, Remediation Services Division 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).

§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, Permits Division, 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 registered professional 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 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, Permits Division, 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, which 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.Chapters 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).

§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 Subsection 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, Permits Division 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, Permits Division 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, Permits Division 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 which 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 LAC 33:V.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 LAC 33:V.4391.F.

4. The administrative authority may request modifications to the plan under the conditions described in LAC 33:V.4391.D.1. 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 LAC 33:V.4391.F. 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, Permits Division 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, Permits Division 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).

§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, Permits Division, 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 LAC 33:V.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, Permits Division; 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:

a. the removal of the notation on the deed to the facility property or other instrument normally examined during title search, or

b. the addition of a notation to the deed or other 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).

§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, Permits Division, 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 registered professional 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.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).

§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 Subsection 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 Subsection 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 Subsection 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 4409 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).

§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.4381—4395 and applicable closure requirements in LAC 33:V.2117, 1911, 4457, 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).

§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 LAC 33:V.4403.A-E.

A. Closure Trust Fund

1. An owner or operator may satisfy the requirements of LAC 33:V.4403 by establishing a closure trust fund which conforms to the requirements of this Paragraph, and submitting an originally signed duplicate of the trust agreement to the Office of Management and Finance, Financial Services Division. 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.

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:

$$\text{Next Payment} = \frac{CE - CV}{Y}$$

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 Management and Finance, Financial Services Division 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 LAC 33:V.4403 for all or part of the trust fund, he may submit a written request to the Office of Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division. 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 LAC 33:V.4403 by obtaining a surety bond which conforms to the requirements of this Paragraph and submitting the bond to the Office of Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, or obtain other financial assurance as specified in LAC 33:V.4403 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 Management and Finance, Financial Services Division. 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 LAC 33:V.4403 by obtaining an irrevocable standby letter of credit which conforms to the requirements of this Paragraph and submitting the letter to the Office of Management and Finance, Financial Services Division. The issuing institution must be an entity which 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 Management and Finance, Financial Services Division, or obtain other financial assurance as specified in LAC 33:V.4403 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 LAC 33:V.4403, 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 Management and Finance, Financial Services Division 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 LAC 33:V.4403 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 LAC 33:V.4403 by obtaining closure insurance which 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 Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division 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 LAC 33:V.4403.D.10. Failure to pay the premium, without substitution of alternate financial assurance as specified in LAC 33:V.4403, 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 Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, or obtain other financial assurance as specified in LAC 33:V.4403 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 Subsection 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 Subsection 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 Management and Finance, Financial Services Division:

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 LAC 33:V.4403.E.3, the owner or operator must send updated information to the Office of Management and Finance, Financial Services Division within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in LAC 33:V.4403.E.3.

6. If the owner or operator no longer meets the requirements of LAC 33:V.4403.E.1, he must send notice to the Office of Management and Finance, Financial Services Division of intent to establish alternate financial assurance as specified in LAC 33:V.4403. 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 LAC 33:V.4403 to meet the requirements of LAC 33:V.4403 for more than one facility. Evidence of financial assurance submitted to the Office of

Management and Finance, Financial Services Division 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 LAC 33:V.4403. Within 60 days after receiving certifications from the owner or operator and an independent registered 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 LAC 33:V.4403 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).

§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 LAC 33:V.4407.A by establishing a post-closure trust fund which conforms to the requirements of this Paragraph and submitting an originally signed duplicate of the trust agreement to the Office of Management and Finance, Financial Services Division. 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.

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 into 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:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{Y}$$

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 Management and Finance, Financial Services Division 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 LAC 33:V.4407 for all or part of the trust fund, he may submit a written request to the Office of Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division. 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 LAC 33:V.4407.B by obtaining a surety bond which conforms to the requirements of this Paragraph and submitting the bond to the Office of Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, or obtain other financial assurance as specified in LAC 33:V.4407.B 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 Management and Finance, Financial Services Division. 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 LAC 33:V.4407.C by obtaining an irrevocable standby letter of credit which conforms to the requirements of this Paragraph and by submitting the letter to the Office of Management and Finance, Financial Services Division. The issuing institution must be an entity which 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 Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division, or obtain other financial assurance as specified in LAC 33:V.4407 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 LAC 33:V.4407 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 Management and Finance, Financial Services Division 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 LAC 33:V.4407 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 LAC 33:V.4407.D by obtaining post-closure insurance which conforms to the requirements of this Paragraph and submitting a certificate of such insurance to the Office of Management and Finance, Financial Services Division. 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 LAC 33:V.4407. 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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division, or obtain other financial assurance as specified in LAC 33:V.4407 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 Subsection 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 Subsection 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 Management and Finance, Financial Services Division:

- 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 LAC 33:V.4407.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 owner's or operator's chief financial officer must send, by the effective date of these regulations, a letter to the Office of Management and Finance, Financial Services Division. 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 LAC 33:V.4407.E.3, the owner or operator must send updated information to the Office of Management and Finance, Financial Services Division within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in LAC 33:V.4407.E.3.

6. If the owner or operator no longer meets the requirements of LAC 33:V.4407.E.1, he must send notice to the Office of Management and Finance, Financial Services Division of intent to establish alternate financial assurance as specified in LAC 33:V.4407. 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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division 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 LAC 33:V.4407. Within 60 days after receiving certifications from the owner or operator and an independent registered 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).

§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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division. 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 Management and Finance, Financial Services Division 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 registered 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 Management and Finance, Financial Services Division.

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 LAC 33:V.4411.F.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 for the owner or operator must send a letter to the Office of Management and Finance, Financial Services Division. 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 LAC 33:V.4411.F.3, the owner or operator must send updated information to the Office of Management and Finance, Financial Services Division within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in LAC 33:V.4411.F.3.

6. If the owner or operator no longer meets the requirements of LAC 33:V.4411.F.1, 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 LAC 33:V.4411. Evidence of liability coverage must be submitted to the Office of Management and Finance, Financial Services Division 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 Management and Finance, Financial Services Division.

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 Management and Finance, Financial Services Division.

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 Management and Finance, Financial Services Division.

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).

§4413. Incapacity of Owners or Operators, Guarantors, or Financial Institutions

A. An owner or operator must notify the Office of Management and Finance, Financial Services Division 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).

§4415. Reserved

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 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at 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).

§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 is unfit for use. Except as provided in LAC 33:V.4433.C, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified, registered 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 above, or an internal inspection and/or other tank integrity examination certified by an independent, qualified, registered 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).

§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, registered 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.

- 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, registered 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).

§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 LAC 33:V.4437.F and G):

1. for all new tank systems or components, prior to their being put into service;
2. for all existing tanks used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two years after November 20, 1988;
3. for those existing tank systems of known and documentable age, within two years after November 20, 1988, or when the tank systems have reached 15 years of age, whichever comes later;
4. for those existing tank systems for which the age cannot be documented, within eight years of November 20, 1988; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of November 20, 1988, whichever comes later; and
5. for tank systems that store or treat materials that become hazardous wastes subsequent to November 20, 1988, within the time intervals required in LAC 33:V.4437.A.1-4, except that the date that a material becomes a hazardous waste must be used in place of November 20, 1988.

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 LAC 33:V.4437.B, 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 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 LAC 33:V.4437.B-D, 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 definition of ignitable waste under LAC 33:V.Chapter 49, or

ii. meets the definition of reactive waste under LAC 33:V.Chapter 49 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 LAC 33:V.4437.B and C, 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 LAC 33:V.4437.G.1, 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; and

iii. if contaminated soil cannot be removed or decontaminated in accordance with LAC 33:V.4437.G.3.b, 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 LAC 33:V.4437.G.1, 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 LAC 33:V.4437.A-F 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, Permits Division 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 LAC 33:V.4437.G 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 LAC 33:V.4437.A; 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, Permits Division 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 LAC 33:V.4437.G.1 or 2.

3. The demonstration for a variance must be completed and submitted to the Office of Environmental Services, Permits Division 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 LAC 33:V.4437.H.4 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 LAC 33:V.4437.I.1, or an internal inspection or other tank integrity examination by an independent, qualified, registered 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 LAC 33:V.4437.I.1-3.

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 LAC 33:V.4437.I.1-3, 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).

§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. Generators of between 100 and 1,000 kg/month accumulating 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 Subsection 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 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.]

E. 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 - 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).

F. 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).

§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 dismount couplings);

2. overflow 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).

§4440. Inspections

A. The owner or operator must inspect, where present, at least once each operating day:

1. overflow/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;

3. data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

4. the construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structure (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

B. 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).

C. The owner or operator must document in the operating record of the facility an inspection of those items in LAC 33:V.4440.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 LR 13:651 (November 1987), LR 18:723 (July 1992).

§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 LAC 33:V.4441.E, 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, registered 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 submitted to the administrative authority within seven days after returning the tank system to use.

[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).

§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, Permits Division 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 one 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).

§4451. Response Actions

A. The owner or operator of surface impoundment units subject to LAC 33:V.4462.A must submit a response action plan to the Office of Environmental Services, Permits Division when submitting the proposed action leakage rate under LAC 33:V.4449. 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.4451.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 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.4451.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.4451.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 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).

§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" is 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:V.4905.A.4. 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 Subsection 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 Subsection 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.4455.B and comply with all other applicable leak detection system requirements of LAC 33:V.4455.B and Chapter 43;

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).

§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 definition of ignitable or reactive waste under LAC 33:V.4903.A or 4903.C 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).

§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 on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system between such 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. "Construction commences" is as defined in LAC 33:V.109 under *Existing Facilities*.

B. The owner or operator of each unit referred to in LAC 33:V.4462.A must notify the Office of Environmental Services, Permits Division 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 one-quarter 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).

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

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:

A. the pile must be placed on an impermeable base that is compatible with the waste under the conditions of treatment or storage;

B. 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;

C. 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

D. 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

E. 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 submit a response action plan to the Office of Environmental Services, Permits Division when submitting the proposed action leakage rate under LAC 33:V.4474. 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.4472.B.

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).

§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, Permits Division 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 one 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).

§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 under *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

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:

A. determine the concentration in the waste of any substances which equal or exceed the maximum concentrations listed in Table 5 of LAC 33:V.4903, that cause the waste to exhibit the Toxicity Characteristic;

B. 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 LAC 33:V.4485.A.1.

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 Subsection 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 and B, 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 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).

§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, Permits Division certification both by the owner or operator and by an independent qualified soil scientist in lieu of an independent registered 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).

§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 surface impoundment 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 one 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).

§4498. Response Actions

A. The owner or operator of landfill units subject to LAC 33:V.4512.A must submit a response action plan to the administrative authority when submitting the proposed action leakage rate under LAC 33:V.4497. 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.4498.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 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).

§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 of pollutant migration from the facility via groundwater, surface water, and air;
2. control of surface water infiltration, including prevention of pooling; and
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).

§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" is 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. Bulk or noncontainerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985 only if:

1. the landfill has a liner and leachate collection and removal system that meets the requirements of LAC 33:V.2503.A; or

2. before disposal, the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically (e.g., by mixing with a sorbent solid), so that free liquids are no longer present.

B. Effective May 8, 1985, 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.

C. 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.

D. To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110.

E. The date for compliance with LAC 33:V.4507.A is November 19, 1981. The date for compliance with LAC 33:V.4507.C is March 22, 1982.

F. Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in LAC 33:V.4507.F.1; materials that pass one of the tests in LAC 33:V.4507.F.2; or materials that are determined by EPA to be nonbiodegradable through the petition process in LAC 33:V.105.

1. 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, polysobutylene, 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: [CO₂ Evolution (Modified Sturm Test)].

G Effective November 8, 1985, 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 or operator's landfill will not present a risk of contamination of any underground source of drinking water (as that term is defined in 40 CFR 144.3).

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), 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).

§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)

Lab packs may be placed in a landfill if the following requirements are met.

A. 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.

B. 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.

C. 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.

D. Incompatible wastes, as defined in LAC 33:V.109, must not be placed in the same outside container;

E. 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 LAC 33:V.4511.A, B, C, D and F. Cyanide- and sulfide-bearing reactive waste may be packed in accordance with LAC 33:V.4511.A, B, C, D, and F without first being treated or rendered nonreactive.

F. 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 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 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 on which construction commences after January 29, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill 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.4512.D, E, or F. "Construction commences" is as defined in LAC 33:V.109 under *Existing Facilities*.

B. The owner or operator of each unit referred to in LAC 33:V.4512.A must notify the Office of Environmental Services, Permits Division 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 LAC 33:V.4512.A may be waived by the administrative authority for any monofill, if it meets the requirements specified in LAC 33:V.4512.D.1 and 2.

1. The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such waste does not contain constituents which would render the wastes hazardous for reasons other than the toxicity characteristics in LAC 33:V.105, 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 one-quarter 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).

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 Subsection B.2 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 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 subpart EEE of 40 CFR 63.

2. The following requirements continue to apply even where the owner or operator has demonstrated compliance with the MACT requirements of 40 CFR 63, subpart EEE, LAC 33:V.4521(closure), and the applicable requirements of LAC 33:V.4301.A- C, G, I, 4306, and Chapter 43 (Subchapters A – G, R, and V).

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).

§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

The owner or operator must conduct, as a minimum, the following monitoring and inspections when incinerating hazardous waste:

A. 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

B. 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, Permits Division containing applicable information in LAC 33:V.529 and LAC 33:V.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).

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

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:

- A. heating value of the waste;
- B. halogen content and sulfur content in the waste; and
- C. 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

The owner or operator must conduct, as a minimum, the following monitoring and inspections when thermally treating hazardous waste:

A. 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;

B. 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

C. 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, Permits Division containing the applicable information in LAC 33:V.529 and LAC 33:V.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).

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

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:

A. 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

B. 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

Ignitable or reactive waste must not be placed in a treatment process or equipment unless:

A. 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 definition of ignitable or reactive waste under LAC 33:V.4903.A and C, and 4321 is complied with; or

B. 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).

§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 is identified, as required in LAC 33:V.4589.

[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).

§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. These provisions will become effective on February 18, 1993, although the owner or operator may notify the administrative authority or EPA of his intent to be bound by this Subchapter or its federal equivalent at an earlier time. 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 permit 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).

§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 1×10^{-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 3×10^{-5} m²/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.D.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 certification by a qualified registered professional engineer that the containment building design meets the requirements of LAC 33:V.4703.A-C. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (in on-site files for those 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. 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, must 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 Assessment, Environmental Technology Division 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 Assessment, Environmental Technology Division 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).

§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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection 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).

§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 Subsection 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 Subsection A.3 of this Section or by knowledge as specified in Subsection 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 an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A, or in Method 25D in 40 CFR part 60, appendix A.

iv. Sufficient information, as specified in the site sampling plan required under Subsection 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 one or more of the methods listed in Subsection A.3.c.i-ix of this Section, including appropriate quality assurance and quality control (QA/QC) checks and use of target compounds for calibration. If Method 25D in 40 CFR part 60, appendix A is not used, then one or more methods should be chosen that are appropriate to ensure that the waste determination 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 1.8×10^{-6} atmospheres/gram-mole/m³) at 25°C. Each of the analytical methods listed in Subsection A.3.c.ii - vii of this Section has an associated list of approved chemical compounds for which the department considers the method appropriate for measurement. If an owner or operator uses Method 624, 625, 1624, or 1625 in 40 CFR part 136, appendix A to analyze one or more compounds that are not on that method's published list, the Alternative Test Procedure contained in 40 CFR 136.4 and 136.5 must be followed. If an owner or operator uses EPA Method 8260 or 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A, to analyze one or more compounds that are not on that method's published list, the procedures in Subsection A.3.c.viii of this Section must be followed. At the owner's or operator's discretion, the owner or operator may adjust test data measured by a method other than Method 25D to the corresponding average VO concentration value which 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 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° Celsius 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:

- i. Method 25D in 40 CFR part 60, appendix A;
- ii. Method 624 in 40 CFR part 136, appendix A;
- iii. Method 625 in 40 CFR part 136, appendix A. Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in Table 7 of the method;
- iv. Method 1624 in 40 CFR part 136, appendix A;
- v. Method 1625 in 40 CFR part 136, appendix A;
- vi. Method 8260 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A. Maintain a formal quality assurance program consistent with the requirements of Method 8260. The quality assurance program shall include the following elements:
 - (a). documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps; and
 - (b). measurement of the overall accuracy and precision of the specific procedures;
- vii. Method 8270 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A. Maintain a formal quality assurance program consistent with the requirements of Method 8270. The quality assurance program shall include the following elements:
 - (a). documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps; and
 - (b). measurement of the overall accuracy and precision of the specific procedures;
- viii. any other 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. As an alternative, other EPA standard methods may be validated by the procedure specified in Subsection A.3.c.ix of this Section; and
- ix. 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 (\bar{C}) on a mass-weighted basis shall be calculated by using the results for all waste determinations conducted in accordance with Subsection A.3.b and c of this Section and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

where:

\bar{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 Subsection A.3.c of this Section (i.e., the average of the four or more samples specified in Subsection A.3.b.ii of this Section), ppmw.

ii. For the purpose of determining C_i , for individual waste samples analyzed in accordance with Subsection 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 1.8×10^6 atmospheres/gram-mole/m³) at 25°C.

e. Provided that the test method is appropriate for the waste as required under Subsection 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 Subsection 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 Subsection 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 Subsection 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 an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A, or in Method 25D in 40 CFR part 60, appendix A.

iv. Sufficient information, as specified in the *site sampling plan* required under Subsection 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 one or more of the methods listed in Subsection B.3.c.i-ix of this Section, including appropriate quality assurance and quality control (QA/QC) checks and use of target compounds for calibration. 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, 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. If Method 25D in 40 CFR part 60, appendix A is not used, then one or more methods should be chosen that are appropriate to ensure that the waste determination 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 1.8×10^{-6} atmospheres/gram-mole/m³] at 25°C. Each of the analytical methods listed in Subsection B.3.c.ii - vii of this Section has an associated list of approved chemical compounds for which the department considers the method appropriate for measurement. If an owner or operator uses Method 624, 625, 1624, or 1625 in 40 CFR part 136, appendix A to analyze one or more compounds that are not on that method's published list, the Alternative Test Procedure contained in 40 CFR 136.4 and 136.5 must be followed. If an owner or operator uses Method 8260 or 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A, to analyze one or more compounds that are not on that method's published list, the procedures in Subsection B.3.c.viii of this Section must be followed. At the owner's or

operator's discretion, the owner or operator may adjust test data measured by a method other than Method 25D to the corresponding average VO concentration value which 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 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° Celsius 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:

- i. Method 25D in 40 CFR part 60, appendix A;
- ii. Method 624 in 40 CFR part 136, appendix A;
- iii. Method 625 in 40 CFR part 136, appendix A.

Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in Table 7 of the method;

- iv. Method 1624 in 40 CFR part 136, appendix A;
- v. Method 1625 in 40 CFR part 136, appendix A;
- vi. Method 8260 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A.

Maintain a formal quality assurance program consistent with the requirements of Method 8260. The quality assurance program shall include the following elements:

(a). documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps; and

(b). measurement of the overall accuracy and precision of the specific procedures;

vii. Method 8270 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A. Maintain a formal quality assurance program consistent with the requirements of Method 8270. The quality assurance program shall include the following elements:

(a). documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps;

(b). measurement of the overall accuracy and precision of the specific procedures;

viii. any other 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. As an alternative, other EPA standard methods may be validated by the procedure specified in Subsection B.3.c.ix of this Section;

ix. 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 (\bar{C}) on a mass-weighted basis shall be calculated by using the results for all waste determinations conducted in accordance with Subsection B.3.b and c of this Section and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

where:

\bar{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 Subsection B.3.c of this Section (i.e., the average of the four or more samples specified in Subsection B.3.b.ii of this Section), ppmw.

e. Provided that the test method is appropriate for the waste as required under Subsection 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 Subsection 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 Subsection 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:

$$C_t = \frac{\sum_{x=1}^m (Q_x \times \bar{C}_x) + \sum_{y=1}^n (Q_y \times 500 \text{ ppmw})}{\sum_{x=1}^m Q_x + \sum_{y=1}^n Q_y}$$

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.

\bar{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 Subsection 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 (\bar{C}_b) during the run shall be determined in accordance with the requirements of Subsection A.3 of this Section. The average VO concentration at the point of waste treatment of each waste stream exiting the process (\bar{C}_a) during the run shall be determined in accordance with the requirements of Subsection 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 Subsection B.5.c of this Section and the following equations:

$$E_b = \frac{1}{10^6} \sum_{j=1}^m (Q_{bj} \times \bar{C}_{bj})$$

$$E_a = \frac{1}{10^6} \sum_{j=1}^m (Q_{aj} \times \bar{C}_{aj})$$

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.

\bar{C}_a = average VO concentration of hazardous waste exiting process during run "j" as determined in accordance with the requirements of Subsection B.3 of this Section, ppmw.

\bar{C}_b = average VO concentration of hazardous waste entering process during run "j" as determined in accordance with the requirements of Subsection 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 Subsection B.5.d of this Section and the following equation:

$$R = \frac{E_b}{E_b - E_a} \times 100\%$$

where:

R = organic reduction efficiency, percent.

E_b = waste volatile organic mass flow entering process as determined in accordance with the requirements of Subsection 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 Subsection 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 Subsection 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:

$$RMR = \sum_{y=1}^n \left[V_y \times k_y \times \frac{(\bar{C}_y - 500 \text{ ppmw})}{10^6} \right]$$

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, m³/hr.

k_y = density of hazardous waste stream "y," kg/m³.

\bar{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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection B.5.d of this Section, kg/hr.

F_{bio} = fraction of organic biodegraded as determined in accordance with the requirements of Subsection 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 Subsection C.3 of this Section or knowledge of the waste as specified by Subsection 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 an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, incorporated by reference in LAC 33:V.110.A, or 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 Subsection 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).

§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

§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.

[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 which are ignitable, corrosive, reactive, or toxic (LAC 33:V.4903).]

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-trifluoroethane, 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: (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.
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.

Table 1. Hazardous Wastes from Nonspecific Sources

Industry and EPA Hazardous Waste Number	Hazard Code	Hazardous Waste
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.
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.
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.

Table 1. Hazardous Wastes from Nonspecific Sources

Industry and EPA Hazardous Waste Number	Hazard Code	Hazardous Waste
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.)
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.1.1, if those residuals are to be disposed of.

Table 1. Hazardous Wastes from Nonspecific Sources

Industry and EPA Hazardous Waste Number	Hazard Code	Hazardous Waste
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 containing ignitable and 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.

ii. high-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity, and

(a). the unit employs a minimum of six hp per million gallons of treatment volume; and either

(b). the hydraulic retention time of the unit is no longer than five days; or

(c). 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.

iii. 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 defined in this Subparagraph; 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.

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 Subsection 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 in accordance with Method 8290, as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110;

(ii). "Not detected" means at or below the lower method calibration limit (MCL) in Method 8290, as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110;

(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.

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.
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.
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.
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.
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.

Table 2. Hazardous Wastes from Specific Sources

Industry and EPA Hazardous Waste Number	Hazard Code	Hazardous Waste
K030	(T)	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.
K083	(T)	Distillation bottoms from aniline production.
K103	(T)	Process residues from aniline extraction from the production of aniline.
K104	(T)	Combined wastewater streams generated from nitrobenzene/aniline production.
K085	(T)	Distillation or fractionation column bottoms from the production of chlorobenzenes.
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.
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.

ENVIRONMENTAL QUALITY

Table 2. Hazardous Wastes from Specific Sources

Industry and EPA Hazardous Waste Number	Hazard Code	Hazardous Waste
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.)
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.
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.
K097	(T)	Vacuum stripper discharge from the chlordane chlorinator 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.
K098	(T)	Untreated process wastewater 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.

Table 2. Hazardous Wastes from Specific Sources

Industry and EPA Hazardous Waste Number	Hazard Code	Hazardous Waste
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.
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.
Secondary lead		
K069	(T)	Emission control dust/s ludge 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 <i>Federal Register</i> .)

Table 2. Hazardous Wastes from Specific Sources

Industry and EPA Hazardous Waste Number	Hazard Code	Hazardous Waste
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.

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 LAC 33:V.4901.D.1-4 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.

[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 only is listed for acute toxicity.]

Table 3. Acute Hazardous Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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 ₃ AsO ₄
P012	1327-53-3	Arsenic oxide As ₂ O ₃
P011	1303-28-2	Arsenic oxide As ₂ O 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
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

Table 3. Acute Hazardous Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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-(methyl-thio)-, 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)Cl
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 phosphor-othioate
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)-

ENVIRONMENTAL QUALITY

Table 3. Acute Hazardous Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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-, (1alpha,2beta,2alpha, 3beta,6beta,6alpha,7beta, 7alpha)-
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-, (1alpha,2beta,2alpha, 3alpha,6alpha,6beta,7beta, 7alpha)-, 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	Diphosphoramidate, 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
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

Table 3. Acute Hazardous Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
P060	465-73-6	Isodrin
P192	119-38-0	Isolan
P202	64-00-6	Ethanimidothioc acid, 2-(dimethylamino)-N-[[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester
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)-cabonyl]oxy]pehnyl]-monohydrochloride
P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[[(methylamino)cabonyl]oxy]pehnyl]-
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-Methylactonitrile
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

ENVIRONMENTAL QUALITY

Table 3. Acute Hazardous Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramidate
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
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-(methylsulfonyl)-, O-[(methylamino)carbonyl] oxime

Table 3. Acute Hazardous Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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-ol
P008	504-24-5	4-Pyridinamine
P075	¹ 54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidiny)-, (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	Tetraethyllead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl ₂ O 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 ₂ N)C(S)] ₂ NH
P014	108-98-5	Thiophenol

Table 3. Acute Hazardous Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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 ₂ O 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 ₃ P ₂ , when present at concentrations greater than 10 percent (R,T)
P205	137-30-4	Ziram

¹CAS Number given for parent compound only.

F. Commercial chemical products or manufacturing chemical intermediates or off-specification commercial chemical products referred to in LAC 33:V.4901.D.1-4 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.

[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.]

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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	94-75-7	Acetic acid, (2,4-dichloro- phenoxy)-, salts and esters
U112	141-78-6	Acetic acid, ethyl ester (I)
U144	301-04-02	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)-
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,8balph)]-
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
U016	225-51-4	3,4-Benzacridine
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-

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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-
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-

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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[<i>rst</i>]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[<i>a</i>]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-benzimidazo[2-yl, methyl ester

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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-ethanediybis-,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
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 ₂ CrO 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)

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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
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-

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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)
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-

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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 ₂ S
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)

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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
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	2-Naphthalenamine,N,N'-bis (2-chloroethyl)-
U167	134-32-7	1-Naphthalenamine

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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	924-16-13	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-

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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-
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-methoxy-(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

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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	56-04-24	(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	181-07-2	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)
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

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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 ₂ N)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
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 10 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)-
U407	14324-55-1	Zinc, bis(diethylcarbamo-dithioato-S,S')-

Table 4. Toxic Wastes

EPA Hazardous Waste Number	Chemical Abstract Number	Hazardous Waste
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.		

G Constituents that Serve as a Basis for Listing Hazardous Waste. Table 6 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

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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

ENVIRONMENTAL QUALITY

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

tetra-, and pentachlorodibenzofurans Tri- and tetrachlorophenols and their chlorophenoxy derivative acids ester 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-tetra-chloroethane 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

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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
Dichlorobenzene
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

ENVIRONMENTAL QUALITY

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

<p>tetra-, penta-, and hexachlorodibenzofurans tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids esters ethers amine and other salts</p>
EPA Hazardous Waste Number F028
<p>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</p>
EPA Hazardous Waste Number F032
<p>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</p>
EPA Hazardous Waste Number F034
<p>Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium</p>
EPA Hazardous Waste Number F035
<p>Arsenic, chromium, lead</p>
EPA Hazardous Waste Number F037
<p>Benzene, benzo(a)pyrene, chrysene, lead, chromium</p>
EPA Hazardous Waste Number F038
<p>Benzene, benzo(a)pyrene chrysene, lead, chromium</p>
EPA Hazardous Waste Number F039
<p>All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under LAC 33:V.2247.Table 2</p>
EPA Hazardous Waste Number K001
<p>Pentachlorophenol phenol 2-chlorophenol p-chloro-, -cresol 2,4-dimethylphenyl</p>

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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

ENVIRONMENTAL QUALITY

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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, benzotrithloride
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) ethers], 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

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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
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

ENVIRONMENTAL QUALITY

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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
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

ENVIRONMENTAL QUALITY

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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
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 benzo(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

ENVIRONMENTAL QUALITY

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

<p>1,4-dichlorobenzene hexachlorobenzene pentachlorobenzene 1,2,4,5-tetrachlorobenzene toluene</p>
EPA Hazardous Waste Number K150
<p>Carbon tetrachloride chloroform chloromethane 1,4-dichlorobenzene hexachlorobenzene pentachlorobenzene 1,2,4,5-tetrachlorobenzene 1,1,2,2-tetrachloroethane tetrachloroethylene 1,2,4-trichlorobenzene</p>
EPA Hazardous Waste Number K151
<p>Benzene carbon tetrachloride chloroform hexachlorobenzene pentachlorobenzene toluene 1,2,4,5-tetrachlorobenzene</p>
EPA Hazardous Waste Number K156
<p>benomyl carbaryl carbendazim carbofuran carbosulfan formaldehyde methylene chloride triethylamine</p>
EPA Hazardous Waste Number K157
<p>Carbon tetrachloride formaldehyde methyl chloride methylene chloride pyridine</p>

Table 6.
Table of Constituents that Serve as a Basis for Listing Hazardous Waste

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, benzo (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

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 12:320 (May 1986), LR 13:84 (February 1987), LR 13:433 (August 1987), LR 14:426 (July 1988), LR 14:790 (November 1988), LR 15:182 (March 1989), LR 16:47 (January 1990), 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 (September 1996), LR 22:840 (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:715 (May 2001).

§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 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 at LAC 33:V.110, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78, as incorporated by reference at LAC 33:V.110, or as determined by an equivalent test method approved by the administrative authority under procedures set forth in LAC 33:V.105.H and I.

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 as defined in LDPS Regulation LAC 33:V.Subpart 2.Chapter 101 and as determined by the test methods described in that regulation or equivalent test methods LAC 33:V.105.I.

4. It is an oxidizer as defined in LDPS Regulations LAC 33:V.Subpart 2.Chapter 101.

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 two or greater than or equal to 12.5, as determined by a pH meter using Method 9040 described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at 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 the test method specified in National Association of Corrosion

Engineers (NACE) Standard TM-01-69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at 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 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 Subsection E.2.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 that corresponds to the toxic contaminant causing it to be hazardous.

ENVIRONMENTAL QUALITY

Table 5. Maximum Concentrations of Contaminants for the Toxicity Characteristic

EPA HW Number¹	Contaminant	CAS Number²	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
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

Table 5. Maximum Concentrations of Contaminants for the Toxicity Characteristic

EPA HW Number ¹	Contaminant	CAS Number ²	Regulatory Level (mg/L)
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).

§4905. Exclusions for Wastewaters

Editor's Note: The text in §4905 has been moved to LAC 33:V.109.Hazardous Waste.2.d.

§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 one ppmv of total halogen;
3. contain less than 300 ppmv of total nitrogen other than diatomic nitrogen (N₂);
4. contain less than 200 ppmv of hydrogen sulfide; and
5. contain less than one ppmv of each hazardous constituent in the target list of LAC 33:V.Chapter 31.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	

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)
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-1-ol]	107-19-7	Nondetect		30	
Safrole	94-59-7	Nondetect		2400	
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-Methylactonitrile [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

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)
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
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

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)
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
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

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)
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 [Trichloromonofluoromethane]	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:

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 Subsections D.3 or 4 of this Section) is excluded from the definition of solid waste provided in Subsection 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 Subsection 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 Subsection 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 Subsections B or C and 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.

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 Subsection B.1.a and B.2 of this Section;

b. be blended at a facility that is subject to the applicable requirements of LAC 33:V.Chapters 9, 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 Subsection 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 Subsection 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 9, 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 Subsection 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 9, 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 Subsection 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 Subsections B.1.a or 2 or C of this Section.

7. Waste Analysis Plans. The generator of a comparable/syngas fuel shall develop and follow a written waste analysis plan which describes the procedures for sampling and analysis of the hazardous waste to be excluded. The waste analysis plan shall be developed in accordance with the applicable sections of the "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, incorporated by reference in LAC 33:V.110. 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 Subsection 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 Subsection 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.Chapter 31.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 Subsection 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 Subsection D.8.a of this Section and must test to determine that all of the constituent specifications of Subsections B.2 and 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 Subsection 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 Subsection D.8.a of this Section;

e. the results of all analyses and all detection limits achieved as required under Subsection D.8 of this Section;

f. if the excluded waste was generated through treatment or blending, documentation as required under Subsection 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 Subsection 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 Subsection 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 Subsection D.8 of this Section ; and

v. a one-time certification by the burner as required under Subsection 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 Subsection 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.Chapter 49.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).

Appendices

Appendix A. Chemical Analysis Test Methods

Note: Appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two, "Choosing the Correct Procedure," found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846, for additional guidance on which of the approved methods should be employed for a specific sample analysis situation.

Appendix B. Method 1311

Toxicity Characteristic Leaching Procedure (TCLP)

Note: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at LAC 33:V.110.

Appendix C. Extraction Procedure (EP) Toxicity

Test Method and Structural Integrity Test

(Method 1310)

Note: The EP (Method 1310) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference at 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.

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);

Containerized liquid wastes—"COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,"¹ U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460. (Copies may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268)

Liquid waste in pits, ponds, lagoons, and similar reservoirs—"Pond Sampler" described in "Test Methods for

the Evaluation of Solid Waste, Physical/Chemical Methods."¹ This manual also contains additional information on application of these protocols.

ENDNOTE:¹These methods are also 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

Table E1 - Wastes Excluded	
Facility	Address
DuPont Dow Elastomers L.L.C.	LaPlace, LA
Waste Description	
<p>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:</p>	
<p>(1) - Testing: 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.</p>	
<p>(1)(A) - Inorganic Testing: 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.</p>	
<p>(1)(B) - Subsequent Inorganic Testing: 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.</p>	
<p>(1)(C) - Organic Testing: 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.</p>	

Table E1 - Wastes Excluded	
Facility	Address
DuPont Dow Elastomers L.L.C.	LaPlace, LA
Waste Description	
<p>(1)(D) - Dioxins and Furans Testing: 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.</p>	
<p>(2) - Waste Handling: 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.</p>	
<p>(3) - Delisting Levels: 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):</p>	
<p>(3)(A) - Inorganic Constituents: Chromium - 2.0; Nickel - 2.0; Zinc - 200.</p>	
<p>(3)(B) - Organic Constituents: Acetone - 80; Chlorobenzene - 2.0; Chloroform - 0.2; Chloroprene - 14; Ethylbenzene - 14; Methylene Chloride - 0.1; Styrene - 2.0; Toluene - 20; Xylenes - 200.</p>	
<p>(3)(C) - Dioxins and Furans The 15 congeners listed in Section 1.1 of EPA Publication Number SW-846 Method 8290 - Monitor only.</p>	

Table E1 - Wastes Excluded	
Facility	Address
DuPont Dow Elastomers L.L.C.	LaPlace, LA
Waste Description	
<p>(4) - Changes in Operating Conditions or Feed Streams: 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 their 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 - Ground Water 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.</p>	
<p>(5) - Data Submittal: DuPont Dow must notify the department in writing at least two weeks prior to initiating condition (1)(A). All data obtained to fulfill condition (1) must be submitted to the Assistant Secretary of the Office of Environmental Services, LDEQ, 7290 Bluebonnet Blvd, Baton Rouge, LA 70810, within 60 days after each sampling event. Records of operating conditions and analytical data from condition (1) must be compiled, summarized, and maintained on site for a minimum of three years. These records and data must be furnished upon request by the department and made available for inspection. 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. 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:</p>	
<p>"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."</p>	

Table E1 - Wastes Excluded	
Facility	Address
Marathon Oil Co.	Garyville, LA
Waste Description	
<p>Residual solids 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:</p>	
<p>(1) - Testing:</p> <p>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.</p>	
<p>(1)(A) - Initial Verification Testing:</p> <p>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.</p>	
<p>(1)(B) - Subsequent Verification Testing:</p> <p>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.</p>	

Table E1 - Wastes Excluded	
Facility	Address
Marathon Oil Co.	Garyville, LA
Waste Description	
<p>(1)(C) - Termination of Monthly Organic Testing:</p> <p>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).</p>	
<p>(1)(D) - Termination of Monthly Inorganic Testing:</p> <p>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).</p>	
<p>(2) - Waste Holding and Handling:</p> <p>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.</p>	
<p>(3) - Delisting Levels:</p> <p>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):</p>	
<p>(3)(A) - Inorganic Constituents:</p> <p>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 - 1.8; Silver - 7.2; Vanadium - 7.2.</p>	

Table E1 - Wastes Excluded	
Facility	Address
Marathon Oil Co.	Garyville, LA
Waste Description	
<p>(3)(B) - Organic Constituents: Acenaphthene - 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.</p>	
<p>(4) - Changes in Operating Conditions: 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).</p>	
<p>(4)(A) - Processing Equipment: 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).</p>	
<p>(4)(B) - Batch Processing: 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.</p>	

Table E1 - Wastes Excluded	
Facility	Address
Marathon Oil Co.	Garyville, LA
Waste Description	
<p>(5) - Data Submittal: Marathon must notify the department in writing at least two weeks prior to initiating condition (1)(A). The data obtained during condition (1)(A) must be submitted to the Office of Environmental Services, Permits Division, LDEQ, 7290 Bluebonnet Road, Baton Rouge, LA 70810, within the specified 90 days. Records of operating conditions and analytical data from condition (1) must be compiled, summarized, and maintained on-site for a minimum of five years. These records and data must be furnished upon request by the department and made available for inspection. Failure to submit the required data within the specified time period or failure to maintain the required records on-site for the specified time will be considered by the department, at its discretion, sufficient basis to revoke the exclusion. 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:</p>	
<p>"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."</p>	
<p>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."</p>	

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), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2509 (November 2000).

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

Treaters, Storers, and/or Disposers

A. A one-time application fee is charged to cover application, evaluation, and other related program costs.

B. 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, research and development fee, and if applicable, siting fee according to the schedule included in the permit application form. Payment of this fee must be attached to the application.

B. Application Fee Schedule

Item	Fee
Site analysis—per acre site size	\$ 250 ¹
Process and plan analysis	\$ 1,000
Facility analysis—per facility ²	\$ 500
Management/financial analysis	\$ 1,000

[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. Initial Research and Development Fee Schedule

Application Fee x 0.25 = Initial Research and Development Fee

D. (Fee per site + fee per facility + fee based on volume) x 0.30 = Administrative Cost Fee

E. 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.

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 27:287 (March 2001).

§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

Formula to apportion fees:

Annual Maintenance Fee = fee per site + fee per facility + fee based on volume + annual research and development fee + 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.

A. Fee per site:

Off-Site Disposer (Commercial)	\$79,800
Reclaimer (compensated for waste removed)	\$35,000
Reclaimer (uncompensated for waste removed or pays for waste removed)	\$25,000
Off-Site Disposer (Non-commercial)	\$20,000
On-Site Disposer	\$10,000

[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.	\$ 3,273
Treatment	
Incinerator/Boiler/Industrial Furnace/Filtration Unit/etc.	\$ 5,270
Disposal	
Landfill/Miscellaneous Unit/etc.	\$ 8,270

C. Fee Based on Volume

Less than 1,000 tons	\$ 1,952
Less than 10,000 tons	\$ 4,904
Less than 100,000 tons	\$ 7,856
Less than 1,000,000 tons	\$ 10,808
More than 1,000,000 tons	\$ 13,760

D. Annual Research and Development Fee

(Fee per site + fee per facility + fee based on volume) x 0.25 = annual research and development fee

E. Administrative Cost Fee

(Fee per site + fee per facility + fee based on volume) x 0.30 = Administrative Cost Fee

F. Land Disposal Prohibitions Fee. 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	\$1,000
Off-Site Non-commercial	\$2,000
Reclaimer	\$2,500
Off-Site Commercial	\$5,000

G. Groundwater Protection Fee (applies only to sites with groundwater monitoring) in accordance with LAC 33:V.5139.

H. Incinerator and Boiler/Industrial Furnace Inspection and Monitoring Fee in accordance with LAC 33:V.5141.

I. Annual Landfill Inspection and Monitoring Fee in accordance with LAC 33:V.5143.

J. Annual Land Treatment Unsaturated Zone Monitoring Inspection Fee in accordance with LAC 33:V.5145.

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).

§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	\$10,000
Exemption	45,000
Extension	5,000
No-Alternatives Determinations	
Original Petition	10,000
Renewal Petition/Request	10,000
Request for determination for addition of a hazardous waste(s) not covered by existing determination	1,000

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).

§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	\$9.46
-------------	--------

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).

§5125. Annual Monitoring and Maintenance Fee

A. Fee will annually be \$283.65, plus the prohibited waste fee.

B. Annual prohibited waste fee is \$100 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).

§5127. Payment

A. All fee payments shall be made by check, draft, or money order payable to the Department of Environmental Quality and mailed to the department at the address provided 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 12:676 (October 1986), LR 18:725 (July 1992), amended by the Office of Management and Finance, Fiscal Services Division, LR 22:18 (January 1996).

§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 five 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 five 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 five 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 \$200 per year to the department. There will be only one fee regardless of the number of vehicles in the service of the transporter.

B. All transporters of hazardous waste which do not have a facility in Louisiana shall pay a fee of \$10 per vehicle when traveling through or into the state.

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).

§5136. Manifest Form Fee

These fees cover the costs associated with printing, handling, data entry, and other administrative activities.

A. The fee for manifest forms acquired according to LAC 33:V.1107.A.9 and LAC 33:V.Chapter 40 shall be \$1.50 per form.

B. The fee for continuation sheets acquired according to LAC 33:V.1107.A.9 shall be \$2.50 per form.

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 21:267 (March 1995).

§5137. Conditionally Exempt Small Quantity Generator Fee

A. Conditionally exempt small quantity generators (see LAC 33:V.108) shall pay a fee of \$50 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).

§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)	\$ 5,000 each
Permit Modifications	
Class 1 and 2	\$ 200 each
Class 3	\$ 750 each
Solid Waste Facilities (1 time)	\$ 5,000 each
Permit Modifications	
Major	\$ 500 each
Minor	\$ 200 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	\$ 100 each
Casing reamed out	\$ 200 each
Casing left in place	\$ 500 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	\$ 500
-----------	--------

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 \$ 250

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).

§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 \$500 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 to the Hazardous Waste Division 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 \$1,000.

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).

§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 \$100.

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).

§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	\$1,000 each acre
Soil-pore liquid monitors (Lysimeters)	\$2,500 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	\$1,000 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	\$5,000 each
Permit Modifications	
Class 1	\$ 200 each
Class 2 and 3	\$ 750 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).

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 Subsection 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 Subsection A.1 of this Section.

2. If any waste military munitions shipped under Subsection 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 Subsection 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 Subsection A.1 of this Section applies only so long as all of the conditions in Subsection A.1 of this Section are met.

B. Reinstatement of Exemption. If any waste military munition loses its exemption under Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection A.1 of this Section on the date the Department of Defense publishes notice in the Federal Register that the shipping controls referenced in Subsection 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, Permits Division of the location of any waste storage unit used to store waste military munitions for which the conditional exemption in Subsection A.1 of this Section is claimed;

e. the owner or operator must provide oral notice to the Office of Environmental Compliance by telephone at (225) 763-3908 during office hours; (225) 342-1234 after hours, weekends, and holidays; or by e-mail utilizing the Incident Report Form and procedures found at www.deq.state.la.us/surveillance 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 Subsection 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 owner or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of Subsection 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 Subsection A1 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 Subsection 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 Subsection A.1 of this Section applies only so long as all of the conditions in Subsection 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, Permits Division when a storage unit identified in Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection 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 Subsection A.1 of this Section on the date the Department of Defense publishes notice in the Federal Register that the DDESB standards referenced in Subsection 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).

§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).