

**Title 33**  
**ENVIRONMENTAL QUALITY**  
**PART VII. SOLID WASTE**

**Chapter 3. Scope and Mandatory Provisions of the Program**

**§301. Wastes Governed by These Regulations**

All solid wastes as defined by the act and these regulations are subject to the provisions of these regulations, except as follows:

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[See Prior Text in A - A.7]

8. infectious waste or other hospital or clinic wastes that are not processed or disposed of in solid waste processing or disposal facilities permitted under these regulations; and

9. sewage sludge and domestic septage as defined by LAC 33:IX.Chapter 23.Subchapter X of the Water Quality regulations will be exempt from all requirements of LAC 33:VII, except for the transportation requirements in LAC 33:VII.503, 529, and 705, upon the date of receipt by the department of sewage sludge program authority from EPA in accordance with 40 CFR Part **503.501** under the NPDES program. Provisions addressing sewage sludge and domestic septage found throughout these regulations will no longer apply once the department receives program authority.

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[See Prior Text in B - B.6]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Solid and Hazardous Waste, Solid Waste Division, LR 19:187 (February 1993), amended LR 22:279 (April 1996), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2273 (October 2000), LR 26:2515 (November 2000), LR 28.

**TITLE 33**  
**ENVIRONMENTAL QUALITY**  
**Part IX. Water Quality**

**Chapter 23. The LPDES Program**

**Subchapter X. Standards for the Use or Disposal of Sewage Sludge**

**§3101. General Provisions**

A. Purpose and Applicability

1. Purpose

a. This Subchapter establishes standards, which consist of general and other requirements, pollutant limits, general and other management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works and of domestic septage. Standards are included in this Subchapter for sewage sludge, a material derived from sewage sludge, and domestic septage that is applied to the land or sewage sludge fired in a sewage sludge incinerator. Also included in this Subchapter are pathogen and alternative vector attraction reduction requirements for sewage sludge, a material derived from sewage sludge, and domestic septage applied to the land and also the siting, operation, and financial assurance requirements for commercial blenders, composters, mixers, or preparers of sewage sludge or a material derived from sewage sludge.

b. The standards in this Subchapter include the frequency of monitoring, recordkeeping requirements, and reporting requirements for Class I sludge management facilities as defined in Subsection H of this Section.

c. This Subchapter establishes requirements for the person who prepares sewage sludge that is disposed in a Municipal Solid Waste Landfill.

d. In addition, this Subchapter contains specific prohibitions and restrictions regarding the use and disposal of sewage sludge.

2. Applicability

a. This Subchapter applies to:

i. any person who prepares sewage sludge or a material derived from sewage sludge;

ii. any person who applies sewage sludge, a material derived from sewage sludge, or domestic septage to the land;

- iii. any person who prepares sewage sludge that is disposed in a Municipal Solid Waste Landfill;
- iv. the owner/operator of a surface disposal site; and
- v. the owner/operator of a sewage sludge incinerator.

b. This Subchapter applies to sewage sludge, a material derived from sewage sludge, or domestic septage that is applied to the land or placed on a surface disposal site, to the land where the sewage sludge, a material derived from sewage sludge, or domestic septage is applied, and to a surface disposal site.

c. This Subchapter applies to sewage sludge fired in a sewage sludge incinerator, the sewage sludge incinerator, and the exit gas from a sewage sludge incinerator stack.

d. This Subchapter applies to the person who prepares sewage sludge that is disposed in a Municipal Solid Waste Landfill (MSWL).

#### B. Compliance Period

1. Except as otherwise specified in this Subchapter and in Paragraph B.3 of this Section, compliance with the standards in this Subchapter shall be achieved as expeditiously as practicable, but in no case later than February 19, 1994. When compliance with the standards requires construction of new pollution control facilities, compliance with the standards shall be achieved as expeditiously as practicable, but in no case later than February 19, 1995.

2.a. The requirements for frequency of monitoring, recordkeeping, and reporting in this Subchapter for total hydrocarbons in the exit gas from a sewage sludge incinerator are effective February 19, 1994, or if compliance with the operational standard for total hydrocarbons in this Subchapter requires the construction of new pollution control facilities, February 19, 1995.

b. All other requirements for frequency of monitoring, recordkeeping, and reporting in this Subchapter are effective on July 20, 1993.

3.a. Unless otherwise specified in LAC 33:IX.3113, compliance with the requirements in LAC 33:IX.3113.B, beginning with the definition of *average daily concentration* through the definition of *wet scrubber*, 3113.D.3, 4, and 5, F.5, 6.a, 7, 8.e, and 10, and G.1.a and c shall be achieved as expeditiously as practicable, but in no case later than September 5, 2000. When new pollution control facilities must be constructed to comply with the revised requirements in LAC 33:IX.3113, compliance with the revised requirements shall be achieved as expeditiously as practicable, but no later than September 4, 2001.

b. Compliance with the requirements in Paragraphs E.2, 3, and 4 of this Section shall be achieved as expeditiously as practicable, but in no case later than 2 years from receipt of program authorization under the NPDES program.

c. Upon the effective date of these regulations, those persons who have received an exemption under LAC 33:VII for any form of use or disposal of sewage sludge will have 180 days to submit an application for permit coverage under these regulations.

### C. Permits and Permitting Requirements

1.a. Except as exempted in Paragraph C.2 of this Section, no person shall prepare sewage sludge or a material derived from sewage sludge; apply sewage sludge, a material derived from sewage sludge, or domestic septage to the land; or own or operate a sewage sludge incinerator without first obtaining a permit that authorizes such practice in accordance with the applicable requirements of this Subchapter and LAC 33:III.Chapter 5, in the case of sewage sludge incinerators.

b. The person who prepares sewage sludge or a material derived from sewage sludge and the person who applies sewage sludge, a material derived from sewage sludge, or domestic septage to the land shall use the application forms indicated in LAC 33:IX.2331.A.2 and furnish the information requested in LAC 33:IX.2331.Q.

c. The owner/operator of a sewage sludge incinerator shall apply for a permit issued either under Title V of the 1990 amended Clean Air Act or other appropriate air quality permit and shall use the permit application forms indicated in LAC 33:IX.2331.A.2 and furnish the information requested in LAC 33:IX.2331.Q and LAC 33:III.Chapter 5. The permit shall be in accordance with all applicable requirements of this Subchapter and other applicable requirements of LAC 33:IX.Chapter 23.

2.a. The person who applies bagged sewage sludge or a bagged material derived from sewage sludge to the land is exempt from the requirement of obtaining a permit if the person applies bagged sewage sludge or a bagged material derived from sewage sludge that is Exceptional Quality as defined in Subsection H of this Section.

b. The person who applies bulk sewage sludge or a bulk material derived from sewage sludge to the land is exempt from the requirement of obtaining a permit if the person applies bulk sewage sludge or a bulk material derived from sewage sludge that was obtained from a facility with an Exceptional Quality Certification under LAC 33:IX.3103.J and that person provides proof to the state administrative authority that the bulk sewage sludge or the bulk material derived from sewage sludge was obtained from a facility with an Exceptional Quality Certification.

c. The state administrative authority may exempt any other person who applies sewage sludge, a material derived from sewage sludge, or domestic septage to the land from the requirement of obtaining a permit, on a case-by-case basis, after determining that

human health and the environment will not be adversely affected by the application of sewage sludge, a material derived from sewage sludge, or domestic septage to the land.

D. Sewage Sludge Disposed in a Municipal Solid Waste Landfill

1. The Municipal Solid Waste Landfill where sewage sludge is disposed must possess a permit issued under LAC 33:VII or subtitle C of the Solid Waste Disposal Act.

2. The person who produces sewage sludge that is disposed in a Municipal Solid Waste Landfill shall provide the necessary information to the owner/operator of the landfill where the sewage sludge is to be disposed to assure that the landfill will be in compliance with its permit requirements.

3. The person who produces sewage sludge that is disposed in a Municipal Solid Waste Landfill shall provide proof to the state administrative authority that the sewage sludge is being disposed at an approved landfill by furnishing the name, address, and permit number of the landfill to the state administrative authority.

E. Prohibitions, Restrictions, and Additional or More Stringent Requirements

1.a. No person shall use or dispose of sewage sludge, a material derived from sewage sludge, or domestic septage through any practice for which requirements have not been established in this Subchapter.

b. No person shall use or dispose of sewage sludge, a material derived from sewage sludge, or domestic septage except in accordance with the requirements in this Subchapter.

2. Surface disposal, as defined in Subsection H of this Section, is prohibited as a use or disposal method of sewage sludge, of a material derived from sewage sludge, or of domestic septage.

3.a. To store, or storage of, sewage sludge, as defined in Subsection H of this Section, is allowed for a period not to exceed six consecutive months when:

i. necessary for the upgrade, repair, or maintenance of a treatment works treating domestic sewage or for agricultural storage purposes when the sewage sludge is to be used for beneficial use as defined in Subsection H of this Section;

ii. notification has been made by the person who wishes to store the sewage sludge to the state administrative authority; and

iii. subsequent approval by the state administrative authority has been received.

b.i. The state administrative authority may approve the storage of sewage sludge for commercial blenders, composters, mixers, or preparers of sewage sludge or for purposes other than those listed in Subparagraph E.3.a of this Section, for a period greater than six consecutive months, if the person who stores the sewage sludge demonstrates that the storage of the sewage sludge will not adversely affect human health and the environment.

ii. The demonstration shall be in the form of an official request forwarded to the state administrative authority at least 90 days prior to the storage of the sewage sludge and shall include, but is not limited to:

(a). the name and address of the person who prepared the sewage sludge;

(b). the name and address of the person who either owns the land or leases the land where the sewage sludge is to be stored, if different from the person who prepared the sewage sludge;

(c). the location, by either street address or latitude and longitude, of the land;

(d). an explanation of why the sewage sludge needs to remain on the land;

(e). an explanation of how human health and the environment will not be affected;

(f). the approximate date when the sewage sludge will be stored on the land and the approximate length of time the sewage sludge will be stored on the land; and

(g). the final use and disposal method after the storage period has expired.

iii.(a). The state administrative authority shall make a determination as to whether or not the information submitted is complete and shall issue the determination within 30 days of having received the request. If the information is deemed incomplete, the state administrative authority will issue a notice of deficiency. The commercial blender, composter, mixer, or preparer of sewage sludge shall have 45 days, thereafter, to respond to the notice of deficiency.

(b). Within 30 days after deeming the information complete, the state administrative authority will then make and issue a determination to grant or deny the request for the storage of sewage sludge.

4.a. The use of ponds, lagoons, or landfarms is allowed for the treatment of sewage sludge or domestic septage, as defined in Subsection H of this Section, only after the

applicable air, solid waste, hazardous waste, and water discharge permits have been applied for and granted by the state administrative authority.

b. The person who makes use of a pond, lagoon, or landfarm to treat sewage sludge or domestic septage shall provide documentation to the state administrative authority that indicates the final use or disposal method for the sewage sludge or domestic septage and shall apply for the appropriate permit for the chosen final use or disposal in accordance with this Subchapter.

5. The application of domestic septage to a residential lawn or garden is prohibited.

6.a. The blending, composting, or mixing of sewage sludge with feedstock or supplements containing any of the materials listed in Table 1 of LAC 33:IX.3101.E or whose hazardous waste codes are those other than D002 or D003 is prohibited.

b. The state administrative authority may prohibit the use of other materials as feedstock or supplements if the use of such materials has a potential to adversely affect human health or the environment, as determined by the administrative authority.

<b>Table 1 of LAC 33:IX.3101.E</b>	
<b>Materials Prohibited from Feedstock or Supplements that are Blended, Composted, or Mixed with Sewage Sludge</b>	
Antifreeze	Pesticides
Automotive (lead-acid) batteries	Photographic supplies
Brake fluid	Propane cylinders
Cleaners (drain, oven, toilet)	Treated wood containing the preservatives CCA and/or PCP
Gasoline and gasoline cans	Tubes and buckets of adhesives, caulking, etc.
Herbicides	Swimming pool chemicals
Household (dry cell) batteries	Unmarked containers
Oil-based paint	Used motor oil

7.a. The use of sewage sludge for daily cover at landfill facilities is prohibited.

b. The use of sewage sludge as interim and final cover for landfill facilities is allowed only if the sewage sludge meets the requirements and is used in accordance with the requirements in LAC 33:IX.3103.

8.a. On a case-by-case basis, the permitting authority may impose requirements in addition to or more stringent than the requirements in this Subchapter when necessary to protect human health and the environment from any adverse effect of a pollutant in the sewage sludge.

b. Nothing in this Subchapter precludes a local government, district, or political subdivision thereof or interstate agency from imposing additional or more stringent requirements than the requirements presented in this Subchapter.

F. Exclusions

1. Treatment Processes. This Subchapter does not establish requirements for processes used to treat domestic sewage or for processes used to treat sewage sludge prior to final use or disposal, except as provided in LAC 33:IX.3111.C and D.

2. Selection of a Use or Disposal Practice. This Subchapter does not require the selection of a sewage sludge use or disposal practice. The determination of the manner in which sewage sludge is used or disposed is to be made by the person who prepares the sewage sludge.

3. Co-Firing of Sewage Sludge

a. Except for the co-firing of sewage sludge with auxiliary fuel, as defined in LAC 33:IX.3113.B, this Subchapter does not establish requirements for sewage sludge co-fired in an incinerator with other wastes or for the incinerator in which sewage sludge and other wastes are co-fired.

b. This Subchapter does not establish requirements for sewage sludge co-fired with auxiliary fuel if the auxiliary fuel exceeds 30 percent of the dry weight of the sewage sludge and auxiliary fuel mixture.

4. Sludge Generated at an Industrial Facility. This Subchapter does not establish requirements for the use or disposal of sludge generated at an industrial facility during the treatment of industrial wastewater, including sewage sludge generated during the treatment of industrial wastewater combined with domestic sewage.

5. Hazardous Sewage Sludge. This Subchapter does not establish requirements for the use or disposal of sewage sludge or a material derived from sewage sludge that is hazardous under 40 CFR Part 261 and/or LAC 33:V.

6. Sewage Sludge with High PCB Concentration. This Subchapter does not establish requirements for the use or disposal of sewage sludge with a concentration of polychlorinated biphenyls (PCBs) equal to or greater than 50 milligrams per kilogram of total solids (dry weight basis).

7. Incinerator Ash. This Subchapter does not establish requirements for the use or disposal of ash generated during the firing of sewage sludge in a sewage sludge incinerator.

8. **Grit and Screenings.** This Subchapter does not establish requirements for the use or disposal of grit (e.g., sand, gravel, cinders, or other materials with a high specific gravity) or screenings (e.g., relatively large materials such as rags) generated during preliminary treatment of domestic sewage in a treatment works.

9. **Drinking Water Treatment Sludge.** This Subchapter does not establish requirements for the use or disposal of sludge generated during the treatment of either surface water or groundwater used for drinking water.

10. **Commercial and Industrial Septage.** This Subchapter does not establish requirements for the use or disposal of commercial septage, industrial septage, a mixture of domestic septage and commercial septage, or a mixture of domestic septage and industrial septage.

11. **Transporters and Haulers of Sewage Sludge or Domestic Septage.** This Subchapter does not establish requirements for the transporting and hauling of sewage sludge or domestic septage. Transporters and haulers of sewage sludge or domestic septage must comply with all of the applicable requirements of LAC 33:VII pertaining to the transporting or hauling of sewage sludge or domestic septage.

#### G. Sampling and Analysis

##### 1. Sampling

a. The permittee shall collect and analyze representative samples of sewage sludge, a material derived from sewage sludge, or domestic septage that is applied to the land and sewage sludge fired in a sewage sludge incinerator.

b. The permittee shall create and maintain records of sampling and monitoring information that shall include:

- i. the date, exact place, and time of sampling or measurements;
- ii. the individual(s) who performed the sampling or measurements;
- iii. the date(s) analyses were performed;
- iv. the individual(s) who performed the analysis;
- v. the analytical techniques or methods used; and
- vi. the results of such analysis.

2. Methods. The materials listed below are incorporated by reference in this Subchapter. The materials are incorporated as they exist on the date of approval, and notice of any change in these materials will be published in the *Louisiana Register*. They are available for inspection at the Office of the Federal Register, 7th Floor, Suite 700, 800 North Capitol Street, NW, Washington, DC, and at the Office of Water Docket, Room L-102, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC. Copies may be obtained from the standard producer or publisher listed in the regulation. Information regarding other sources of these documents is available from the Department of Environmental Quality, Office of Environmental Services, Permits Division. Methods in the materials listed below shall be used to analyze samples of sewage sludge.

a. Enteric Viruses. ASTM Designation: D 4994-89, "Standard Practice for Recovery of Viruses From Wastewater Sludges," 1992 Annual Book of ASTM Standards: Section 11--Water and Environmental Technology, ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

b. Fecal Coliform. Part 9221 E or Part 9222 D, "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005.

c. Helminth Ova. Yanko, W.A., "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges," EPA 600/1-87-014, 1987. National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (PB 88-154273/AS).

d. Inorganic Pollutants. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and Third Edition (November 1986) with Revision I (December 1987). Second Edition and Updates I and II are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (PB-87-120-291). Third Edition and Revision I are available from Superintendent of Documents, Government Printing Office, 941 North Capitol Street, NE, Washington, DC 20002 (Document Number 955-001-00000-1).

e. *Salmonella sp.* Bacteria. Part 9260 D, "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005; or Kenner, B.A. and H.P. Clark, "Detection and Enumeration of Salmonella and Pseudomonas Aeruginosa," Journal of the Water Pollution Control Federation, Vol. 46, No. 9, September 1974, pp. 2163-2171. Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314.

f. Specific Oxygen Uptake Rate. Part 2710 B, "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005.

g. Total, Fixed, and Volatile Solids. Part 2540 G, “Standard Methods for the Examination of Water and Wastewater,” 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005.

h. Incineration of Sewage Sludge – Standards of Performance and Particulate Matter. Materials and Methods at 40 CFR Part 60 as incorporated by reference at LAC 33:III.3003.

i. Incineration of Sewage Sludge – National Emission Standards for Beryllium and for Mercury. Materials, Methods, and Standards at 40 CFR Part 61 as incorporated by reference at LAC 33:III.5116.

j. Composting of Sewage Sludge. “Test Methods for the Examination of Composting and Compost,” The US Composting Council Research and Education Foundation and USDA, TMECC Website: <http://tmecc.org/tmecc/index.html>.

## H. General Definitions

*Apply Sewage Sludge or Sewage Sludge Applied to the Land*—land application of sewage sludge.

*Base Flood*—a flood that has a 1 percent chance of occurring in any given year (i.e., a flood with a magnitude equaled once in 100 years).

*Beneficial Use*—using sewage sludge or a material derived from sewage sludge or domestic septage for the purpose of soil conditioning or crop or vegetative fertilization in a manner that does not pose adverse effects upon human health and the environment or cause any deterioration of land surfaces, soils, surface waters, or groundwater.

*Bulk Sewage Sludge*—sewage sludge that is not sold or given away in a bag or other container for application to the land.

*Class I Sludge Management Facility*—for the purpose of this Subchapter:

- a. any publicly owned treatment works (POTW) or privately owned wastewater treatment device or system, regardless of ownership, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage;
- b. the person who prepares sewage sludge or a material derived from sewage sludge, including commercial blenders, composters, mixers, or preparers;
- c. the owner/operator of a sewage sludge incinerator; and
- d. the person who applies sewage sludge, a material derived from sewage sludge, or domestic septage to the land.

*Commercial Blender, Composter, Mixer, or Preparer of Sewage Sludge*—any person who prepares sewage sludge or a material derived from sewage sludge for monetary profit or other financial consideration and either the person is not the generator of the sewage sludge or the sewage sludge was obtained from a facility or facilities not owned by or associated with the person.

*Cover Crop*—a small grain crop, such as oats, wheat, or barley, not grown for harvest.

*Domestic Septage*—either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

*Domestic Sewage*—waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

*Dry Weight Basis*—calculated on the basis of having been dried at 105°C until reaching a constant mass (i.e., essentially 100 percent solids content).

*Exceptional Quality*—sewage sludge or a material derived from sewage sludge that meets the ceiling concentrations in Table 1 of LAC 33:IX.3103.D, the pollutant concentrations in Table 3 of LAC 33:IX.3103.D, the pathogen requirements in LAC 33:IX.3111.C.1, one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h, and the concentration of PCBs of less than 10 mg/kg of total solids (dry weight).

*Feed Crops*—crops produced primarily for consumption by animals.

*Feedstock*—primarily biologically decomposable organic material that is blended, mixed, or composted with sewage sludge.

*Fiber Crops*—crops such as flax and cotton.

*Food Crops*—crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

*Groundwater*—water below the land surface in the saturated zone.

*Industrial Wastewater*—wastewater generated in a commercial or industrial process.

*Land Application*—the beneficial use of sewage sludge, a material derived from sewage sludge, or domestic septage by either spraying or spreading onto the land surface, injection below the land surface, or incorporation into the soil.

*Other Container*—either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

*Permitting Authority*—either EPA or a state with an EPA-approved sludge management program.

*Person Who Prepares Sewage Sludge*—either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

*Pollutant*—an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the administrative authority, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

*Pollutant Limit*—a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare); or the volume of a material that can be applied to a unit area of land (e.g., gallons per acre).

*Runoff*—rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.

*Surface Disposal*—the use or disposal of sewage sludge that does not meet the criteria of *land application* as defined in this Subsection. This may include, but is not limited to, ponds, lagoons, sewage sludge only landfills (monofills), or landfarms.

*Supplements*—for the purpose of this Subchapter, materials blended, composted, or mixed with sewage sludge or other feedstock and sewage sludge in order to raise the moisture level and/or to adjust the carbon to nitrogen ratio, and materials added during composting or to compost to provide attributes required by customers for certain compost products.

*To Store, or Storage of, Sewage Sludge*—the temporary placement of sewage sludge on land.

*To Treat, or Treatment of, Sewage Sludge or Domestic Septage*—the preparation of sewage sludge or domestic septage for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

*Treatment Works*—either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28.

### **§3103. Land Application**

#### **A. Applicability**

1. This Section applies to any person who prepares sewage sludge or a material derived from sewage sludge that is applied to the land; to any person who applies sewage sludge, a material derived from sewage sludge, or domestic septage to the land; to sewage sludge, a material derived from sewage sludge, or domestic septage that is applied to the land; and to the land on which sewage sludge, a material derived from sewage sludge, or domestic septage is applied.

2.a.i. The general requirements in Paragraph C.1 of this Section, the other requirements in Paragraph E.1 of this Section, the general management practices in Subparagraph C.2.a of this Section, and the other management practices in Paragraph E.2 of this Section do not apply when bulk sewage sludge is applied to the land if the bulk sewage sludge is Exceptional Quality as defined in LAC 33:IX.3101.H and the preparer has received and maintains an Exceptional Quality Certification under the requirements in Subsection J of this Section.

ii. The general requirements in Paragraph C.1 of this Section, the other requirements in Paragraph E.1 of this Section, the general management practices in Subparagraph C.2.a of this Section, and the other management practices in Paragraph E.2 of this Section do not apply when a bulk material derived from sewage sludge is applied to the land if the derived bulk material is Exceptional Quality as defined in LAC 33:IX.3101.H and the preparer has received and maintains an Exceptional Quality Certification under the requirements in Subsection J of this Section.

b. The state administrative authority may apply any or all of the general requirements in Paragraph C.1 of this Section, the other requirements in Paragraph E.1 of this Section, the general management practices in Subparagraph C.2.a of this Section and the other management practices in Paragraph E.2 of this Section to the bulk sewage sludge in Clause A.2.a.i of this Section and the bulk material in Clause A.2.a.ii of this Section on a case-by-case basis after determining that any or all of the requirements or management practices are needed to protect human health and the environment from any reasonably anticipated adverse effect that may occur from the application of the bulk sewage sludge or bulk material derived from sewage sludge to the land.

3.a.i. The general requirements in Paragraph C.1 of this Section and the general management practices in Paragraph C.2 of this Section do not apply if sewage sludge sold or given away in a bag or other container is Exceptional Quality as defined in LAC 33:IX.3101.H and the preparer has received and maintains an Exceptional Quality Certification under the requirements in Subsection J of this Section.

ii. The general requirements in Paragraph C.1 of this Section and the general management practices in Paragraph C.2 of this Section do not apply if a material derived from sewage sludge is sold or given away in a bag or other container and the material is Exceptional Quality as defined in LAC 33:IX.3101.H and the preparer has received and maintains an Exceptional Quality Certification under the requirements in Subsection J of this Section.

iii. The general requirements in Paragraph C.1 of this Section and the general management practices in Paragraph C.2 of this Section do not apply when a material derived from sewage sludge is sold or given away in a bag or other container for application to the land if the sewage sludge from which the material is derived is Exceptional Quality as defined in LAC 33:IX.3101.H and the preparer has received and maintains an Exceptional Quality Certification under the requirements in Subsection J of this Section.

b. The state administrative authority may apply any or all of the general requirements in Paragraph C.1 of this Section and the general management practices in Paragraph C.2 of this Section to the sewage sludge in Clause A.3.a.i of this Section or the derived material in Clause A.3.a.ii or iii of this Section on a case-by-case basis after determining that the general requirements or the general management practices are needed to protect human health and the environment from any reasonably anticipated adverse effect that may occur from the application of the sewage sludge or derived material to the land.

## B. Special Definitions

*Agricultural Land*—land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

*Agronomic Rate*—

- a. the whole sludge application rate (dry weight basis) designed:
  - i. to provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and
  - ii. to minimize the amount of nitrogen in the sewage sludge that is not utilized by the crop or vegetation grown on the land and either passes below the root zone to the groundwater or gets into surface waters during storm events;

b. agronomic rate may be extended to include phosphorus to application sites that are located within the drainage basin of water bodies that have been determined by the state administrative authority to be impaired by phosphorus.

*Annual Pollutant Loading Rate*—the maximum amount of a pollutant that can be applied to a unit area of land during a 365-day period.

*Annual Whole Sludge Application Rate*—the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365-day period.

*Cumulative Pollutant Loading Rate*—the maximum amount of an inorganic pollutant that can be applied to an area of land.

*Forest*—a tract of land thick with trees and underbrush.

*Monthly Average*—the arithmetic mean of all measurements taken during the month.

*Pasture*—land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

*Public Contact Site*—land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

*Range Land*—open land with indigenous vegetation.

*Reclamation Site*—drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

## C. General Requirements and General Management Practices

### 1. General Requirements

a.i. When a person who prepares sewage sludge provides the sewage sludge to another person who prepares the sewage sludge, the person who receives the sewage sludge shall comply with the requirements in this Subchapter.

ii. The person who provides the sewage sludge shall provide the person who receives the sewage sludge the following information:

(a). the name, mailing address, and location of the facility or facilities of the person providing the sewage sludge;

(b). the total dry metric tons being provided per 365-day period; and

(c). a description of any treatment processes occurring at the providing facility or facilities, including blending, composting, or mixing activities and the treatment to reduce pathogens and/or vector attraction reduction.

b. No person shall apply sewage sludge, a material derived from sewage sludge, or domestic septage to the land except in accordance with the requirements in this Subchapter.

c. The person who applies sewage sludge, a material derived from sewage sludge, or domestic septage to the land shall obtain information needed to comply with the requirements in this Subchapter.

d. Sewage sludge, a material derived from sewage sludge, or domestic septage shall not be applied to the land until either a determination has been made by the administrative authority that the land application site is a legitimate beneficial use site or the person who applies the sewage sludge or a material derived from sewage sludge to the land furnishes to the administrative authority written documentation from a qualified, independent third party, such as the Louisiana Cooperative Extension Service or the Louisiana Department of Agriculture, that the land application site is a legitimate beneficial use site.

## 2. General Management Practices

a. All Sewage Sludge, a Material Derived from Sewage Sludge, or Domestic Septage

i. All sewage sludge or a material derived from sewage sludge shall be applied to agricultural land, forest, a public contact site, or a reclamation site only at a whole sludge application rate that is equal to or less than the agronomic rate for the sewage sludge or a material derived from sewage sludge, unless, in the case of a reclamation site, otherwise specified by the permitting authority.

ii. Sewage sludge, a material derived from sewage sludge, or domestic septage shall be applied to the land only in accordance with the requirements pertaining to slope in Table 1 of LAC 33:IX:3103.C.

iii. In addition to the restrictions addressed in Clause C.2.a.ii of this Section, all sewage sludge, a material derived from sewage sludge, or domestic septage having a concentration of PCBs equal to or greater than 10 mg/kg of total solids (dry wt.) must be incorporated into the soil regardless of slope.

iv. When sewage sludge, a material derived from sewage sludge, or domestic septage is applied to agricultural land, forest, or a reclamation site, the following buffer zones shall be established for each application area, unless otherwise specified by the state administrative authority:

(a). private potable water supply well - 300 feet, unless special permission is granted by the private potable water supply owner;

(b). public potable water supply well, surface water intake, treatment plant, or public potable water supply elevated or ground storage tank - 300 feet, unless special permission is granted by the Department of Health & Hospitals;

(c). established school, institution, business, or occupied residential structure - 200 feet, unless special permission is granted by a qualified representative of the established school, institution, business, or occupied residential structure; and

(d). property boundary - 100 feet, unless special permission is granted by the property owner(s).

v. Sewage sludge, a material derived from sewage sludge, or domestic septage shall not be applied to agricultural land, forest, or a reclamation site if the water table is less than three feet below the zone of incorporation at the time of application.

vi. No person shall apply domestic septage to agricultural land, forest, or a reclamation site during a 365-day period if the annual application rate in Paragraph D.3 of this Section has been reached during that period.

b. Sewage Sludge Sold or Given Away in a Bag or Other Container

i. Sewage sludge sold or given away in a bag or other container shall not be applied to the land at a rate that would cause any of the annual pollutant loading rates in Table 4 of LAC 33:IX.3103.D to be exceeded.

ii. The permittee shall either affix a label to the bag or other container holding sewage sludge that is sold or given away for application to the land, or shall provide an information sheet to the person who receives sewage sludge sold or given away in a bag or other container for application to the land. The label or information sheet shall contain the following information:

(a). the name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land;

(b). **application instructions and** a statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet;

(c). the annual whole sludge application rate for the sewage sludge that does not cause any of the annual pollutant loading rates in Table 4 of LAC 33:IX.3103.D to be exceeded; and

(d). concentration of PCBs in mg/kg of total solids (dry wt.).

<b>Table 1 of LAC 33:IX.3103.C</b>	
<b>Slope Limitations For Land Application of Sewage Sludge or Domestic Septage</b>	
<b>Slope Percent</b>	<b>Application Restriction</b>
0-3	None, except drainage to prevent standing water shall be provided.
3-6	A 100-foot vegetated runoff area should be provided at the down slope end of the application area if a liquid is applied. Measures should be taken to prevent erosion.
6-12	Liquid material must be injected into the soil. Solid material must be incorporated into the soil if the site is not covered with vegetation. A 100-foot vegetated runoff area is required at the down slope end of the application area for all applications. Measures must be taken to prevent erosion. Terracing may be required if deemed a necessity by the state administrative authority to prevent runoff from the land application site and erosion.
>12	Unsuitable for application unless terraces are constructed and a 200-foot vegetated buffer area with a slope of less than 3 percent is provided at the down slope edge of the application area and the material is incorporated (solid material) and injected (liquid material) into the soil. Measures must be taken to prevent runoff from the land application site and to prevent erosion.

D. Pollutant Limits

1. Sewage Sludge

a. Bulk sewage sludge or sewage sludge sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the sewage sludge exceeds the ceiling concentration for the pollutant in Table 1 of LAC 33:IX.3103.D.

b. If bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site, either:

i. the cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2 of LAC 33:IX.3103.D; or

ii. the concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of LAC 33:IX.3103.D.

c. If sewage sludge or a material derived from sewage sludge is applied to a lawn or a home garden, the concentration of each pollutant in the sewage sludge or the material derived from sewage sludge shall not exceed the ceiling concentrations in Table 1 of LAC 33:IX.3103.D and the pollutant concentrations for each pollutant listed in Table 3 of LAC 33:IX.3103.D, and the concentration of PCB must be less than 10 mg/kg of total solids (dry wt.).

d. If sewage sludge is sold or given away in a bag or other container for application to the land, either:

i. the concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of LAC 33:IX.3103.D; or

ii. the product of the concentration of each pollutant in the sewage sludge and the annual whole sludge application rate for the sewage sludge shall not cause the annual pollutant loading rate for the pollutant in Table 4 of LAC 33:IX.3103.D to be exceeded. The procedure used to determine the annual whole sludge application rate is presented in Appendix P of this Chapter.

2. Pollutant Concentrations and Loading Rates - Sewage Sludge

a. Ceiling Concentrations

<b>Table 1 of LAC 33:IX.3103.D</b>	
<b>Ceiling Concentrations</b>	
<b>Pollutant</b>	<b>Ceiling Concentration (milligrams per kilogram)<sup>1</sup></b>
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

<sup>1</sup>Dry weight basis

b. Cumulative Pollutant Loading Rates

<b>Table 2 of LAC 33:IX.3103.D</b>	
<b>Cumulative Pollutant Loading Rates</b>	
<b>Pollutant</b>	<b>Cumulative Pollutant Loading Rate (kilograms per hectare)</b>
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

c. Pollutant Concentrations

<b>Table 3 of LAC 33:IX.3103.D</b>	
<b>Pollutant Concentrations</b>	
<b>Pollutant</b>	<b>Monthly Average Concentration (milligrams per kilogram)<sup>1</sup></b>
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

<sup>1</sup>Dry weight basis

d. Annual Pollutant Loading Rates

<b>Table 4 of LAC 33:IX.3103.D</b>	
<b>Annual Pollutant Loading Rates</b>	
<b>Pollutant</b>	<b>Annual Pollutant Loading Rate (kilograms per hectare per 365-day period)</b>
Arsenic	2.0
Cadmium	1.9
Copper	75
Lead	15
Mercury	0.85
Nickel	21
Selenium	5.0
Zinc	140

3. Domestic Septage. The annual application rate for domestic septage applied to agricultural land, forest, or a reclamation site shall not exceed the annual application rate calculated using equation (1).

$$AAR = \frac{N}{0.0026} \quad \text{Equation (1)}$$

Where:

AAR = annual application rate in gallons per acre per 365-day period.

N = amount of nitrogen in pounds per acre per 365-day period needed by the crop or vegetation grown on the land.

E. Other Requirements and Other Management Practices for Bulk Sewage Sludge

1. Other Requirements

a. The person who prepares bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk sewage sludge written notification of the concentration, on a dry weight basis, of total nitrogen, ammonia (as N), nitrates, potassium, and phosphorus in the bulk sewage sludge.

b. When a person who prepares bulk sewage sludge provides the bulk sewage sludge to a person who applies the bulk sewage sludge to the land, the person who prepares the bulk sewage sludge shall provide the person who applies the bulk sewage sludge notice and necessary information to comply with the requirements in this Subchapter.

c. The person who applies bulk sewage sludge to the land shall provide the owner or leaseholder of the land on which the bulk sewage sludge is applied notice and necessary information to comply with the requirements in this Subchapter.

d. No person shall apply bulk sewage sludge subject to the cumulative pollutant loading rates in Table 2 of LAC 33:IX.3103.D to the land without first contacting the state administrative authority to determine if bulk sewage sludge subject to the cumulative pollutant loading rates in Table 2 of LAC 33:IX.3103.D has been applied to the land since July 20, 1993.

e. No person shall apply bulk sewage sludge subject to the cumulative pollutant loading rates in Table 2 of LAC 33:IX.3103.D to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in Table 2 of LAC 33:IX.3103.D has been reached.

f. If bulk sewage sludge has not been applied to a site since July 20, 1993, the cumulative amount for each pollutant listed in Table 2 of LAC 33:IX.3103.D may be applied to the site in accordance with Clause D.1.b.i of this Section.

g. If bulk sewage sludge has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk sewage sludge since that date is known, the cumulative amount of each pollutant applied to the site shall be used to determine the additional amount of each pollutant that can be applied to the site in accordance with Clause D.1.b.i of this Section.

h. If bulk sewage sludge has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk sewage sludge since that date is not known, an additional amount of each pollutant shall not be applied to the site in accordance with Clause D.1.b.i of this Section.

## 2. Other Management Practices

a. Bulk sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat.

b. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a *wetland* or other *waters of the state*, as defined in LAC 33:IX.2313, except as provided in a permit issued in accordance with Section 402 or 404 of the CWA or LAC 33:IX.Chapter 23.

c. Bulk sewage sludge shall not be applied to agricultural land, forest, or a reclamation site that is 33 feet (10 meters) or less from *waters of the state*, as defined in LAC 33:IX.2313, unless otherwise specified by the permitting authority.

F. Operational Standards - Pathogens and Vector Attraction Reduction

1. Pathogens - Sewage Sludge

a. The Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1 or the Class B pathogen requirements and site restrictions in LAC 33:IX.3111.C.2 shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

b. The Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1 shall be met when sewage sludge or a material derived from sewage sludge is applied to a lawn or a home garden.

c. The Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1 shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

2. Pathogens - Domestic Septage. The requirements in either LAC 33:IX.3111.C.3.a or b shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.

3. Vector Attraction Reduction - Sewage Sludge

a. One of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - j shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

b. One of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h shall be met when sewage sludge or a material derived from sewage sludge is applied to a lawn or a home garden.

c. One of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

4. Vector Attraction Reduction - Domestic Septage. The vector attraction reduction requirements in LAC 33:IX.3111.D.2.i, j, or k shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.

G. Frequency of Monitoring

1. Sewage Sludge

a. The frequency of monitoring for the pollutants listed in Table 1, Table 2, Table 3, and Table 4 of LAC 33:IX.3103.D; the frequency of monitoring for pathogen

density requirements in LAC 33:IX.3111.C.1 and 2.b; and the frequency of monitoring for vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - d and g - h shall be the frequency specified in Table 1 of LAC 33:IX.3103.G.

<b>Table 1 of LAC 33:IX.3103.G</b>	
<b>Frequency of Monitoring--Land Application</b>	
<b>Amount of sewage sludge<sup>1</sup> (metric tons per 365-day period)</b>	<b>Frequency</b>
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (four times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (six times per year)
Equal to or greater than 15,000	Once per month (12 times per year)

<sup>1</sup>Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge prepared for sale or give-away in a bag or other container for application to the land (dry weight basis).

b. After the sewage sludge has been monitored for two years at the frequency in Table 1 of LAC 33:IX.3103.G, the permitting authority may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in LAC 33:IX.3111.C.1.e.ii and iii.

2. Domestic Septage. If either the pathogen requirements in LAC 33:IX.3111.C.3.b or the vector attraction reduction requirements in LAC 33:IX.3111.D.2.k are met when domestic septage is applied to agricultural land, forest, or a reclamation site, the permittee shall monitor each container of domestic septage applied to the land for compliance with those requirements.

#### H. Recordkeeping

1. All Class I sludge management facilities, as defined in LAC 33:IX.2313, that prepare sewage sludge shall keep a record of the annual production of sewage sludge (i.e., dry ton or dry metric tons) and of the sewage sludge management practice used and retain such record for a period of five years.

#### 2. Sewage Sludge

a. The recordkeeping requirements for the person who prepares the sewage sludge or a material derived from sewage sludge that is land applied and meets the criteria in Subparagraph A.2.a or 3.a of this Section are those indicated in Subparagraph J.5.a of this Section.

b. For bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site and that meets the pollutant concentrations in Table 3 of LAC 33:IX.3103.D, the Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1, and the vector attraction reduction requirements in either LAC 33:IX.3111.D.2.i or j:

i. the person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years:

(a). the concentration of each pollutant listed in Table 3 of LAC 33:IX.3103.D;

(b). a description of how the Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1 are met; and

(c). the following certification statement:

“ I certify, under penalty of law, that the information that will be used to determine compliance with the Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1 was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”; and

ii. the person who applies the bulk sewage sludge to the land shall develop the following information and shall retain the information for five years:

(a). a description of how the general management practices in Clauses C.2.a.i - v of this Section and the other management practices in Paragraph E.2 of this Section are met for each site on which bulk sewage sludge is applied;

(b). a description of how the vector attraction reduction requirements in either LAC 33:IX.3111.D.2.i or j are met for each site on which bulk sewage sludge is applied; and

(c). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices in LAC 33:IX.3103.C.2.a.i - v, the other management practices in LAC 33:IX.3103.E.2 and the vector attraction reduction requirement in [insert either LAC 33:IX.3111.D.2.i or j] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”

c. For bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site and that meets the pollutant concentrations in Table 3 of LAC 33:IX.3103.D, the Class B pathogen requirements in LAC 33:IX.3111.C.2, and the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h for the person who prepares the bulk sewage sludge, and the vector attraction reduction requirements in LAC 33:IX.3111.D.2.i or j for the person who applies the bulk sewage sludge to the land:

i. the person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years:

(a). the concentration of each pollutant listed in Table 3 of LAC 33:IX.3103.D;

(b). a description of how the Class B pathogen requirements in LAC 33:IX.3111.C.2 are met;

(c). a description of how one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h is met; and

(d). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen requirements in LAC 33:IX.3111.C.2 and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”; and

ii. the person who applies the bulk sewage sludge to the land shall develop the following information and shall retain the information for five years:

(a). a description of how the general management practices in Clauses C.2.a.i - v of this Section and the other management practices in Paragraph E.2 of this Section are met for each land site on which bulk sewage sludge is applied;

(b). a description of how the site restrictions in LAC 33:IX.3111.C.2.e are met for each land site on which bulk sewage sludge is applied;

(c). a description of how the vector attraction reduction requirement in either LAC 33:IX.3111.D.2.i or j is met;

(d). the date bulk sewage sludge is applied to each site;  
and

(e). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices in LAC 33:IX.3103.C.2.a.i - v, the other management practices in LAC 33:IX.3103.E.2, the site restrictions in LAC 33:IX.3111.C.2.e, and the vector attraction reduction requirement in [insert either LAC 33:IX.3111.D.2.i or j] was prepared for each site on which bulk sewage sludge is applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”

d. For bulk sewage sludge applied to the land that is agricultural land, forest, a public contact site, or a reclamation site whose cumulative loading rate for each pollutant does not exceed the cumulative pollutant loading rate for each pollutant in Table 2 of LAC 33:IX.3103.D and that meets the Exceptional Quality or Class B pathogen requirements in LAC 33:IX.3111.C, and the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h for the person who prepares the bulk sewage sludge, and the vector attraction reduction requirements in LAC 33:IX.3111.D.2.i or j for the person who applies the bulk sewage sludge to the land:

i. the person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years:

(a). the concentration of each pollutant listed in Table 1 of LAC 33:IX.3103.D in the bulk sewage sludge;

(b). a description of how the Exceptional Quality or Class B pathogen requirements in LAC 33:IX.3111.C are met;

(c). how one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h is met; and

(d). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in [insert either LAC 33:IX.3111.C.1 or 2] and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”; and

ii. the person who applies the bulk sewage sludge to the land shall develop the following information, retain the information in Subclauses H.2.d.ii.(a) - (g) of

this Section indefinitely, and retain the information in Subclauses H.2.d.ii.(h) - (m) of this Section for five years:

- (a). the location, by either street address or latitude and longitude, of each land site on which bulk sewage sludge is applied;
- (b). the number of hectares or acres in each site on which bulk sewage sludge is applied;
- (c). the date bulk sewage sludge is applied to each land site;
- (d). the cumulative amount of each pollutant (i.e., kilograms) listed in Table 2 of LAC 33:IX.3103.D in the bulk sewage sludge applied to each land site, including the amount in Subparagraph E.1.g of this Section;
- (e). the amount of sewage sludge (i.e., tons or metric tons) applied to each land site;
- (f). a description of how the information was obtained in order to comply with Paragraph E.1 of this Section;
- (g). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the requirements in LAC 33:IX.3103.E.1 was prepared for each land site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”;

- (h). a description of how the general management practices in Clauses C.2.a.i - v of this Section and the other management practices in Paragraph E.2 of this Section are met for each land site on which bulk sewage sludge is applied;

- (i). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices in LAC 33:IX.3103.C.2.a.i - v and the other management practices in LAC 33:IX.3103.E.2 was prepared for each land site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”;

(j). a description of how the site restrictions in LAC 33:IX.3111.C.2.e are met for each land site on which Class B bulk sewage sludge is applied;

(k). the following certification statement when the bulk sewage sludge meets the Class B pathogen requirements in LAC 33:IX.3111.C.2:

“I certify, under penalty of law, that the information that will be used to determine compliance with the site restrictions in LAC 33:IX.3111.C.2.e for each land site on which Class B sewage sludge was applied was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”;

(l). if the vector attraction reduction requirements in either LAC 33:IX.3111.D.2.i or j are met, a description of how the requirements are met; and

(m). the following certification statement when the vector attraction reduction requirement in either LAC 33:IX.3111.D.2.i or j is met:

“I certify, under penalty of law, that the information that will be used to determine compliance with the vector attraction reduction requirement in [insert either LAC 33:IX.3111.D.2.i or j] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”

e. for sewage sludge sold or given away in a bag or other container for application to the land meeting the requirement at Clause D.1.d.ii of this Section, the Exceptional Quality pathogen requirements at LAC 33:IX.3111.C, and the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h:

i. the person who prepares the sewage sludge that is sold or given away in a bag or other container shall develop the following information and shall retain the information for five years:

(a). the annual whole sludge application rate for the sewage sludge that does not cause the annual pollutant loading rates in Table 4 of LAC 33:IX.3103.D to be exceeded;

(b). the concentration of each pollutant listed in Table 4 of LAC 33:IX.3103.D in the sewage sludge;

(c). a description of how the Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1 are met;

(d). a description of how one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h is met;

(e). a description of how the general management practice in Clause C.2.b.ii of this Section was met; and

(f). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the general management practice in LAC 33:IX.3103.C.2.b.ii, the Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1, and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”; and

ii. the person who applies the sewage sludge that is given away or sold in a bag or other container to the land that is agricultural land, forest, a public contact site, or a reclamation area shall develop the following information and shall retain the information for five years:

(a). a description of how the general management practices in Clauses C.2.a.i - v and b.i of this Section are met for each site on which the sewage sludge given away or sold in a bag or other container is applied; and

(b). the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices in LAC 33:IX.3103.C.2.a.i - v and b.i was prepared for each site on which sewage sludge given away or sold in a bag or other container is applied under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment.”

3. Domestic Septage. The person who applies domestic septage to agricultural land, forest, or a reclamation site shall develop the following information and shall retain the information for five years:

a. the location, by either street address or latitude and longitude, of each site on which domestic septage is applied;

b. the number of acres in each site on which domestic septage is applied;

- c. the date domestic septage is applied to each site;
- d. the nitrogen requirement for the crop or vegetation grown on each site during a 365-day period;
- e. the rate, in gallons per acre per 365-day period, at which domestic septage is applied to each site;
- f. a description of how the pathogen requirements in either LAC 33:IX.3111.C.3.a or b are met;
- g. a description of how the vector attraction reduction requirements in LAC 33:IX.3111.D.2.i, j, or k are met;
- h. a description of how the general management practices in Clauses C.2.a.ii - vi of this Section are met; and
- i. the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the general management practices at LAC 33:IX.3103.C.2.a.ii - vi, the pathogen requirements in [insert either LAC 33:IX.3111.C.3.a or b] and the vector attraction reduction requirements in [insert LAC 33:IX.3111.D.2.i, j, or k] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”

## I. Reporting

1. All Class I sludge management facilities, as defined in LAC 33:IX.2313, that prepare sewage sludge shall submit the information in Paragraph H.1 of this Section to the state administrative authority on February 19 of each year.
2. Additional Reporting Requirements
  - a. Reporting requirements for a person who prepares the sewage sludge or a material derived from sewage sludge having an Exceptional Quality Certification are as indicated in Subparagraph J.5.b of this Section.
  - b. All other Class I sludge management facilities, as defined in LAC 33:IX.2313, except the person in Clause H.2.d.ii of this Section who applies bulk sewage sludge to the land and the person who applies domestic septage to the land, that are required to obtain a permit under LAC 33:IX.3101.C, shall submit the information in Paragraph H.2 of this Section, except the information in Clause H.2.d.ii of this Section, for the appropriate requirements, to the state administrative authority on February 19 of each year.

c. The person referred to in Clause H.2.d.ii of this Section who applies bulk sewage sludge to the land and is required to obtain a permit under LAC 33:IX.3101.C shall submit the information in Clause H.2.d.ii of this Section to the state administrative authority on February 19 of each year when 90 percent or more of any of the cumulative pollutant loading rates in Table 2 of LAC 33:IX.3103.D is reached at a land application site.

d. The person who applies domestic septage to the land shall submit the information referred to in Paragraph H.3 of this Section for the appropriate requirements to the state administrative authority on February 19 of each year.

3. The state administrative authority may require any facility indicated in Subparagraph I.2.a of this Section to report any or all of the information required in Subparagraphs I.2.b - d of this Section if deemed necessary for the protection of human health or the environment.

#### J. Exceptional Quality Certification

1.a. The person who prepares the sewage sludge or a material derived from sewage sludge who desires to receive an Exceptional Quality Certification must prepare sewage sludge that is Exceptional Quality as defined in LAC 33:IX.3101.H and shall forward to the state administrative authority an Exceptional Quality Certification Request Form having the following information:

- i. the laboratory analysis of the metals in Table 3 of LAC 33:IX.3103.D;
- ii. the laboratory analysis for pH, percent dry solids, percent ammonia nitrogen, percent nitrate-nitrite, percent total Kjeldahl nitrogen, percent organic nitrogen, percent phosphorus, percent potassium, and percent organic matter;
- iii. the laboratory results for polychlorinated biphenyls (PCBs);
- iv. the Exceptional Quality pathogen requirement in LAC 33:IX.3111.C.1 used and the results obtained;
- v. the vector attraction reduction requirement in LAC 33:IX.3111.D.2.a - h used and the results obtained; and
- vi. for sewage sludge or a material derived from sewage sludge that is sold or given away either in bulk or in a bag, an example of the label or information sheet that will accompany the sewage sludge or material derived from sewage sludge. The label or information sheet shall contain the following information:

- (a). name and address of the preparer;

- of LAC 33:IX.3103.D;
- (b). concentration (by volume) of each metal in Table 3
  - (c). total nitrogen;
  - (d). percent ammonia (as N);
  - (e). percent phosphorus;
  - (f). pH; ~~and~~
  - (g). concentration of PCBs in mg/kg of total solids (dry wt.); ~~and~~
  - (h). application instructions and a statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.

b. Samples required to be collected in accordance with Clauses J.1.a.i – v of this Section shall be from at least four representative samplings of the sewage sludge or the material derived from sewage sludge taken at least 60 days apart within the 12 months prior to the date of the submittal of an Exceptional Quality Certification Request Form.

2. The state administrative authority shall determine whether the sewage sludge or the material derived from sewage sludge is of Exceptional Quality as defined in LAC 33:IX.3101.H, and shall determine whether to issue an Exceptional Quality Certification, within 30 days of having received a complete form having all of the information requested in Subparagraph J.1.a of this Section.

3. Any Exceptional Quality Certification shall have a term of not more than five years.

4.a. For the term of the Exceptional Quality Certification, the preparer of the sewage sludge or material derived from sewage sludge shall conduct continued sampling at the frequency of monitoring specified in Paragraph G.1 of this Section. The samples shall be analyzed for the parameters specified in Clauses J.1.a.i-iii of this Section, and for the pathogen and vector attraction reduction requirements in Clauses J.1.a.iv and v, as required by LAC 33:IX.3111.

b. If results of the sampling indicate that the sewage sludge or the material derived from sewage sludge no longer is Exceptional Quality as defined in LAC 33:IX.3101.H, then the preparer must cease any land application of the sewage sludge as an Exceptional Quality sewage sludge.

c. If the sewage sludge that is no longer of Exceptional Quality is used or disposed, the exemption for Exceptional Quality sewage sludge no longer applies and the

sewage sludge must meet all the requirements and restrictions of this Subchapter that apply to a sewage sludge that is not Exceptional Quality.

d. The sewage sludge or material derived from sewage sludge shall not be applied to the land as an Exceptional Quality sewage sludge until the sample analyses have shown that the sewage sludge or material derived from sewage sludge meets the criteria for Exceptional Quality as defined in LAC 33:IX.3101.H.

5.a. Recordkeeping. The person who prepares the sewage sludge or a material derived from sewage sludge shall develop the following information and shall retain the information for five years:

- i. the results of the sample analysis required in Subparagraph J.4.a of this Section; and
- ii. the following certification statement:

“I certify, under penalty of law, that the information that will be used to determine compliance with the Exceptional Quality pathogen requirements in LAC 33:IX.3111.C.1 and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in LAC 33:IX.3111.D.2.a - h] was prepared under my direction and supervision in accordance with the system as described in the permit application, designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”

b. Reporting. The person who prepares the sewage sludge or a material derived from sewage sludge shall forward the information required in Subparagraph J.5.a of this Section to the state administrative authority on a quarterly basis. The schedule for quarterly submission is contained in the following table.

SCHEDULE FOR QUARTERLY SUBMISSION	
Monitoring Period	DMR Due Date
January, February, March	April 28
April, May, June	July 28
July, August, September	October 28
October, November, December	January 28

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(3)(e).  
 HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28.

**§3105. Reserved**

**§3107. Siting and Operation Requirements for Commercial Blenders, Composters, Mixers, or Preparers of Sewage Sludge**

A. Siting

1. Location Characteristics

a. Facilities shall not be located less than 200 feet from a property line. A reduction in this requirement shall be allowed only with the permission, in the form of a notarized affidavit, of the adjoining landowners and occupants. A copy of the notarized affidavit waiving the 200-foot buffer zone shall be entered in the mortgage and conveyance records of the parish for the adjoining landowner's property.

b. Facilities shall not be located less than 200 feet from a residence or place of business.

c. Facilities shall not be located less than 100 feet from a private or public potable water source.

d. Facilities shall not be located less than 25 feet from a subsurface drainage pipe or drainage ditch that discharges directly to waters of the state.

e. Composting operations should not be located on airports. However, when they are located on an airport, composting operations should not be located closer than the greater of the following distances: 1,200 feet from any aircraft movement area, loading ramp, or aircraft parking space; or the distance called for by airport design requirements.

f. Facilities shall not be located less than 100 feet from a wetlands, surface waters (streams, ponds, lakes), or areas historically subject to overflow from floods.

g. Facilities shall only be located in a hydrologic section where the historic high water table is at a minimum of a three-foot depth below the surface, or the water table at the facility shall be controlled to a minimum of a three-foot depth below this zone.

h. Storage and processing of sewage sludge or any material derived from sewage sludge is prohibited within any of the buffer zones indicated in Subparagraphs A.1.a - g of this Section.

i. Facilities located in, or within, 1,000 feet of swamps, marshes, wetlands, estuaries, wildlife-hatchery areas, habitat of endangered species, archaeological sites, historic sites, publicly owned recreation areas, and similar critical environmental areas shall be isolated from such areas by effective barriers that eliminate probable adverse impacts from facility operations.

j. Facilities located in, or within, 1,000 feet of an aquifer recharge zone shall be designed to protect the areas from adverse impacts of operations at the facility.

k. Access to facilities by land or water transportation shall be by all-weather roads or waterways that can meet the demands of the facility and are designed to avoid, to the extent practicable, congestion, sharp turns, obstructions, or other hazards conducive to accidents; and the surface roadways shall be adequate to withstand the weight of transportation vehicles.

## 2. Facility Characteristics

### a. Perimeter Barriers, Security, and Signs

i. All facilities must have a perimeter barrier around the facility that prevents unauthorized ingress or egress, except by willful entry.

ii. During operating hours, each facility entry point shall be continuously monitored, manned, or locked.

iii. During non-operating hours, each facility entry point shall be locked.

iv. All facilities that receive wastes from off-site sources shall post readable signs that list the types of wastes that can be received at the facility.

b. Fire Protection and Medical Care. All facilities shall have access to required fire protection and medical care, or such services shall be provided internally.

### c. Receiving and Monitoring Sewage Sludge, other Feedstock, or Supplements Used

i. Each processing facility shall be equipped with a device or method to determine quantity (by wet-weight tonnage), sources (whether the sewage sludge or other feedstock or supplements to be mixed with the sewage were generated in-state or out-of-state), and types of feedstock or supplements. The facility shall also be equipped with a device or method to control entry of sewage sludge, other feedstock, or supplements coming on-site and prevent entry of unrecorded or unauthorized deliverables (i.e., hazardous, industrial, unauthorized, or unpermitted solid waste).

ii. Each processing facility shall be equipped with a central control and recordkeeping system for tabulating the information required in Clause A.2.c.i of this Section.

## 3. Facility Surface Hydrology

a. Surface-runoff-diversion levees, canals, or devices shall be installed to prevent drainage from the facility to adjoining areas during a 24-hour/25-year storm event. When rainfall records are not available, the design standard shall be 12 inches of rainfall below 31 degrees north latitude and 9 inches of rainfall above 31 degrees north latitude. If the 24-hour/25-year storm event level is lower, the design standard shall be required.

b. The topography of the facility shall provide for drainage to prevent standing water and shall allow for drainage away from the facility.

c. All storm water and wastewater from a facility must conform to applicable requirements of Subchapters A-W of this Chapter.

#### 4. Facility Geology

a. Except as provided in Subparagraph A.4.**bc** of this Section, facilities shall have natural stable soils of low permeability for the area occupied by the facility, including vehicle parking and turnaround areas, that should provide a barrier to prevent any penetration of surface spills into groundwater aquifers underlying the area or to a sand or other water-bearing stratum that would provide a conduit to such aquifer.

**b. The natural soil surface must be capable of supporting heavy equipment operation during and after prolonged periods of rain.**

**bc.** A design for surfacing natural soils that do not meet the requirements in Subparagraphs A.4.a **and b** of this Section shall be prepared under the supervision of a registered engineer, licensed in the state of Louisiana with expertise in geotechnical engineering and geohydrology. Written certification by the engineer that the surface satisfies the requirements of Subparagraphs A.4.a **and b** of this Section shall be provided.

5. Facility Plans and Specifications: Facility plans and specifications represented and described in the permit application or permit modifications for all facilities must be prepared under the supervision of, and certified by, a registered engineer, licensed in the state of Louisiana.

#### 6. Facility Administrative Procedures

a. Permit Modifications. Permit modifications shall be in accordance with the requirements of this Chapter.

b. Personnel. All facilities shall have the personnel necessary to achieve the operational requirements of the facility.

B. Operations

1. Composters, Mixers, Blenders, and Preparers

a. Facility Operations and Maintenance Manual

i. A Facility Operations and Maintenance Manual shall be developed and forwarded with the permit application to the state administrative authority.

ii. The Facility Operations and Maintenance Manual must describe, in specific detail, how the sewage sludge and the other feedstock or supplements to be blended, composted, or mixed with the sewage sludge (if applicable) will be managed during all phases of processing operations. At a minimum, the manual shall address the following:

- (a). site and project description;
- (b). regulatory interfaces;
- (c). process management plan;
- (d). pathogen treatment plan;
- (e). odor management plan;
- (f). worker health and safety management plan;
- (g). housekeeping and nuisance management plan;
- (h). emergency preparedness plan;
- (i). security, community relations, and public access plan;
- (j). regulated chemicals (list and location of regulated chemicals kept on-site);
- (k). recordkeeping procedures;
- (l). feedstock, supplements, and process management;
- (m). product distribution records;
- (n). operator certification; and

(o). administration of the operations and maintenance manual.

iii. The Facility Operations and Maintenance Manual shall be kept on-site and readily available to employees and, if requested, to the state administrative authority or his/her duly authorized representative.

b. Facility Operational Standards

i. The facility must include a receiving area, mixing area, curing area, compost storage area for composting operations, drying and screening areas, and truck wash area located on surfaces capable of preventing groundwater contamination (periodic inspections of the surface shall be made to ensure that the underlying soils and the surrounding land surface are not being contaminated).

ii. All containers shall provide containment of the sewage sludge and the other feedstock or supplements to be blended, composted, or mixed with the sewage sludge and thereby control litter and other pollution of adjoining areas.

iii. Provisions shall be made for the daily cleanup of the facility, including equipment and waste-handling areas.

iv. Treatment facilities for washdown and contaminated water shall be provided or the wastewater contained, collected, and transported off-site to an approved wastewater treatment facility.

v. Leachate Management. Leachate produced in the composting process:

(a). must be collected and disposed off-site at a permitted facility; or

(b). must be collected, treated, and discharged on-site in accordance with Subchapters A-W of this Chapter; or

(c). may be reused in the composting process as a source of moisture.

vi. Sufficient equipment shall be provided and maintained at all facilities to meet their operational needs.

vii. Odor Management

(a). The production of odor shall be minimized.

(b). Processed air and other sources of odor shall be contained and, if necessary, treated in order to remove odor before discharging to the atmosphere.

viii. Other feedstock and supplements that are blended, composted, or mixed with sewage sludge shall be treated for the effective removal of sharps including, but not limited to, sewing needles, straight pins, hypodermic needles, telephone wires, and metal bracelets.

## 2. Composters Only

a. Any compost made from sewage sludge that cannot be used according to these regulations shall be reprocessed or disposed of in an approved solid waste facility.

b. Composted sewage sludge shall be used, sold, or disposed of at a permitted disposal facility within 36 months of completion of the composting process.

## 3. Facility Closure Requirements

a. Notification of Intent to Close a Facility. All permit holders shall notify the administrative authority in writing at least 90 days before closure or intent to close, seal, or abandon any individual units within a facility and shall provide the following information:

- i. date of planned closure;
- ii. changes, if any, requested in the approved closure plan; and
- iii. closure schedule and estimated cost.

### b. Closure Requirements

i. An insect and rodent inspection is required before closure. Extermination measures, if required, must be provided.

ii. All remaining sewage sludge or a material derived from sewage sludge, other feedstock, and supplements shall be removed to a permitted facility for disposal.

iii. The permit holder shall verify that the underlying soils have not been contaminated in the operation of the facility. If contamination exists, a remediation/removal program developed to meet the requirements of Subparagraph B.3.c of this Section must be provided to the administrative authority.

### c. Remediation/Removal Program

i. Surface liquids and sewage sludges containing free liquids shall be dewatered or removed.

ii. If a clean closure is achieved, there are no further post-closure requirements. The plan for clean closure must reflect a method for determining that all waste has been removed, and such a plan shall, at a minimum, include the following:

(a). identification (analysis) of the sewage sludge, other feedstock, and supplements that have entered the facility;

(b). selection of the indicator parameters to be sampled that are intrinsic to the sewage sludge, other feedstock, and supplements that have entered the facility in order to establish clean-closure criteria. Justification of the parameters selected shall be provided in the closure plan;

(c). sampling and analyses of the uncontaminated soils in the general area of the facility for a determination of background levels using the indicator parameters selected. A diagram showing the location of the area proposed for the background sampling, along with a description of the sampling and testing methods, shall be provided;

(d). a discussion of the sampling and analyses of the "clean" soils for the selected parameters after the waste and contaminated soils have been excavated. Documentation regarding the sampling and testing methods (i.e., including a plan view of the facility, sampling locations, and sampling quality-assurance/quality-control programs) shall be provided;

(e). a discussion of a comparison of the sample(s) from the area of the excavated facility to the background sample. Concentrations of the selected parameter(s) of the bottom and side soil samples of the facility must be equal to or less than the background sample to meet clean closure criteria;

(f). analyses to be sent to the Office of Environmental Services, Permits Division confirming that the requirements of Subparagraph B.3.b of this Section have been satisfied;

(g). identification of the facility to be used for the disposal of the excavated waste; and

(h). a statement from the permit holder indicating that, after the closure requirements have been met, the permit holder will file a request for a closure inspection with the Office of Environmental Services, Permits Division before backfilling takes place. The administrative authority will determine whether the facility has been closed properly.

iii. If sewage sludge or a material derived from sewage sludge or other feedstock and supplements used in the blending, composting, or mixing process remains

at the facility, the closure and post-closure requirements for industrial (Type I) solid waste landfills or non-industrial landfills (Type II), as provided in LAC 33:VII, shall apply.

iv. If the permit holder demonstrates that removal of most of the sewage sludge or a material derived from sewage sludge or other feedstock and supplements to achieve an alternate level of contaminants based on indicator parameters in the contaminated soil will be adequately protective of human health and the environment (including groundwater) in accordance with LAC 33:I.Chapter 13, the administrative authority may decrease or eliminate the post-closure requirements.

(a). If levels of contamination at the time of closure meet residential standards as specified in LAC 33:I.Chapter 13 and approval of the administrative authority is granted, the requirements of Clause B.3.c.iv of this Section shall not apply.

(b). Excepting those sites closed in accordance with Subclause B.3.c.iv.(a) of this Section, within 90 days after a closure is completed, the permit holder must have entered in the mortgage and conveyance records of the parish in which the property is located, a notation stating that solid waste remains at the site and providing the indicator levels obtained during closure.

v. Upon determination by the administrative authority that a facility has completed closure in accordance with an approved plan, the administrative authority shall release the closure fund to the permit holder.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28.

### **§3109. Financial Assurance Requirements for Commercial Blenders, Composters, Mixers, or Preparers of Sewage Sludge**

A. Financial Responsibility During Operation. Permit holders or applicants for standard permits have the following financial responsibilities while the facility is in operation.

1. Permit holders and applicants must maintain liability insurance, or its equivalent, for sudden and accidental occurrences in the amount of \$1 million per occurrence and \$1 million annual aggregate, per site, exclusive of legal-defense costs, for claims arising from injury to persons or property, owing to the operation of the site. Evidence of this coverage shall be updated annually and provided to the Office of Management and Finance, Financial Services Division.

2. The financial responsibility may be established by any one or a combination of the following:

a. Evidence of liability insurance may consist of either a signed duplicate original of a commercial blender, composter, or mixer of sewage sludge liability endorsement, or a certificate of insurance. All liability endorsements and certificates of insurance must include:

- i. a statement of coverage relative to environmental risks;
- ii. a statement of all exclusions to the policy; and
- iii. a certification by the insurer that the insurance afforded with respect to such sudden accidental occurrences is subject to all of the terms and conditions of the policy, provided, however, that any provisions of the policy inconsistent with the following Subclauses (a) – (f) are amended to conform with said subclauses:

(a). bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations 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 Paragraph A.3, 4, or 5 of this Section;

(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 policy, whether by the insurer or the insured, will be effective only upon written notice and upon lapse of 60 days after a copy of such written notice is received by the Office of Management and Finance, Financial Services Division;

(e). any other termination of the policy will be effective only upon written notice and upon lapse of 30 days after a copy of such written notice is received by the Office of Management and Finance, Financial Services Division; and

(f). the insurer is admitted, authorized, or eligible to conduct insurance business in Louisiana.

b. The wording of the liability endorsement shall be identical to the wording in Document 1 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

c. The wording of the certificate of insurance shall be identical to the wording in Document 2 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

3. Letter of Credit. A permit holder or applicant may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the following requirements, and by submitting the letter to the administrative authority.

a. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

b. A permit holder or applicant who uses a letter of credit to satisfy the requirements of this Section must also provide to the administrative authority evidence of the establishment of 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. The wording of the standby trust fund agreement shall be as specified in Subparagraph B.3.i of this Section.

c. The letter of credit must be accompanied by a letter from the permit holder or applicant referring to the letter of credit by number, name of issuing institution, and date, and providing the following information:

- i. agency interest number;
- ii. site name;
- iii. facility name;
- iv. facility permit number; and
- v. the amount of funds assured for liability coverage of the facility by the letter of credit.

d. The letter of credit must be irrevocable and issued for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the permit holder 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 permit holder and the Office of Management and Finance, Financial Services Division receive the notice, as evidenced by the return receipts.

e. The wording of the letter of credit shall be identical to the wording in Document 3 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

#### 4. Financial Test

a. To meet this test, the applicant, permit holder, or parent corporation of the applicant (corporate guarantor) or permit holder must submit to the Office of

Management and Finance, Financial Services Division the documents required by Subsection B of this Section demonstrating that the requirements of Subsection B of this Section have been met. Use of the financial test may be disallowed on the basis of the accessibility of the assets of the permit holder, applicant, or parent corporation (corporate guarantor). If the applicant, permit holder, or parent corporation is using the financial test to demonstrate liability coverage and closure and post-closure care, only one letter from the chief financial officer is required.

b. The assets of the parent corporation of the applicant or permit holder shall not be used to determine whether the applicant or permit holder satisfies the financial test, unless the parent corporation has supplied a corporate guarantee as authorized in Paragraph A.5 of this Section.

c. The wording of the financial test shall be as specified in Subparagraph B.8.d of this Section.

#### 5. Corporate Guarantee

a. A permit holder or applicant may meet the requirements of Paragraph A.1 of this Section for liability coverage by obtaining a written guarantee, hereafter referred to as a "corporate guarantee." The guarantor must demonstrate to the administrative authority that the guarantor meets the requirements in this Subsection and must comply with the terms of the corporate guarantee. The corporate guarantee must accompany the items sent to the administrative authority specified in Subparagraphs B.8.b and d of this Section. The terms of the corporate guarantee must be in an authentic act signed and sworn to by an authorized officer of the corporation before a notary public and must provide that:

i. the guarantor meets or exceeds the financial-test criteria and agrees to comply with the reporting requirements for guarantors as specified in Paragraph B.8 of this Section;

ii. the guarantor is the parent corporation of the permit holder or applicant of the commercial blender, composter, or mixer of sewage sludge facility or facilities to be covered by the guarantee, and the guarantee extends to certain facilities;

iii. if the permit holder or applicant fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden and accidental occurrences (or both as the case may be), arising from the operation of facilities covered by the corporate guarantee, or fails to pay an amount agreed to in settlement of the claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage;

iv. the guarantor agrees that if, at the end of any fiscal year before termination of the guarantee, the guarantor fails to meet the financial-test criteria, the guarantor shall send within 90 days, by certified mail, notice to the Office of Management and Finance, Financial Services Division, and to the permit holder or applicant, that he intends to provide alternative financial assurance as specified in this Subsection, in the name of the permit

holder or applicant, and that within 120 days after the end of said fiscal year the guarantor shall establish such financial assurance, unless the permit holder or applicant has done so;

v. the guarantor agrees to notify the Office of Management and Finance, Financial Services Division by certified mail of a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding;

vi. the guarantor agrees that within 30 days after being notified by the administrative authority of a determination that the guarantor no longer meets the financial-test criteria or that he or she is disallowed from continuing as a guarantor of closure or post-closure care, he or she shall establish alternate financial assurance as specified in this Subsection in the name of the permit holder or applicant unless the permit holder or applicant has done so;

vii. the guarantor agrees to remain bound under the guarantee notwithstanding any or all of the following: amendment or modification of the permit, or any other modification or alteration of an obligation of the permit holder or applicant in accordance with these regulations;

viii. the guarantor agrees to remain bound under the guarantee for as long as the permit holder or applicant must comply with the applicable financial assurance requirements of Subsection B of this Section for the above-listed facilities, except that the guarantor may cancel this guarantee by sending notice by certified mail to the administrative authority and the permit holder or applicant. Such cancellation will become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the permit holder, as evidenced by the return receipts;

ix. the guarantor agrees that if the permit holder or applicant fails to provide alternate financial assurance, as specified in this Subsection, and obtain written approval of such assurance from the administrative authority within 60 days after the administrative authority receives the guarantor's notice of cancellation, the guarantor shall provide such alternate financial assurance in the name of the permit holder or applicant;

x. the guarantor expressly waives notice of acceptance of the guarantee by the administrative authority or by the permit holder or applicant. Guarantor also expressly waives notice of amendments or modifications of the facility permit(s);

xi. the wording of the corporate guarantee shall be as specified in Subparagraph B.8.i of this Section.

b. A corporate guarantee may be used to satisfy the requirements of this Section only if the attorney general(s) or insurance commissioner(s) of the state in which the guarantor is incorporated, and the state in which the facility covered by the guarantee is located, has submitted a written statement to the Office of Management and Finance, Financial Services Division that a corporate guarantee is a legally valid and enforceable obligation in that state.

6. The use of a particular financial responsibility mechanism is subject to the approval of the administrative authority.

7. Permit holders of existing facilities must submit, on or before February 20, 1995, financial responsibility documentation that complies with the requirements of this Subsection. Applicants for permits for new facilities must submit evidence of financial assurance in accordance with this Section at least 60 days before the date on which sewage sludge, other feedstock, or supplements are first received for processing.

#### B. Financial Responsibility for Closure and Post-Closure Care

1. Permit holders or applicants have the following financial responsibilities for closure and post-closure care.

a. Permit holders or applicants shall establish and maintain financial assurance for closure and post-closure care.

b. The applicant or permit holder shall submit to the Office of Management and Finance, Financial Services Division the estimated closure date and the estimated cost of closure and post-closure care in accordance with the following procedures:

i. The applicant or permit holder must have a written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in these rules. The estimate must equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by the closure plan, and shall be based on the cost of hiring a third party to close the facility in accordance with the closure plan.

ii. The applicant or permit holder of a facility subject to post-closure monitoring or maintenance requirements must have a written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the provisions of these rules. The estimate of post-closure costs is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required and shall be based on the cost of hiring a third party to conduct post-closure activities in accordance with the closure plan.

iii. The cost estimates must be adjusted within 30 days after each anniversary of the date on which the first cost estimate was prepared on the basis of either the inflation factor derived from the Annual Implicit Price Deflator for Gross Domestic Product, as published by the U.S. Department of Commerce in its *Survey of Current Business* or a reestimation of the closure and post-closure costs in accordance with Clauses B.1.b.i – ii of this Section. The permit holder or applicant must revise the cost estimate whenever a change in the closure/post-closure plans increases or decreases the cost of the closure plan. The permit holder or applicant must submit a written notice of any such adjustment to the Office of Management and Finance, Financial Services Division within 15 days following such adjustment.

iv. For trust funds, the first payment must be at least equal to the current closure and post-closure cost estimate, divided by the number of years in the pay-in period. Subsequent payments must be made no later than 30 days after each annual anniversary of the date of the first payment. The amount of each subsequent payment must be determined by subtracting the current value of the trust fund from the current closure and post-closure cost estimates and dividing the result by the number of years remaining in the pay-in period. The initial pay-in period is based on the estimated life of the facility.

2. Financial Assurance Mechanisms. The financial assurance mechanism must be one or a combination of the following: a trust fund, a financial guarantee bond ensuring closure funding, a performance bond, a letter of credit, an insurance policy, or the financial test. The financial assurance mechanism is subject to the approval of the administrative authority and must fulfill the following criteria:

a. Except when a financial test, trust fund, or certificate of insurance is used as the financial assurance mechanism, a standby trust fund naming the administrative authority as beneficiary must be established at the time of the creation of the financial assurance mechanism into which the proceeds of such mechanism could be transferred should such funds be necessary for either closure or post-closure of the facility, and a signed copy must be furnished to the administrative authority with the mechanism.

b. A permit holder or applicant may use a financial assurance mechanism specified in this Section for more than one facility, if all such facilities are located within Louisiana and are specifically identified in the mechanism.

c. The amount covered by the financial assurance mechanism(s) must equal the total of the current closure and post-closure estimates for each facility covered.

d. When all closure and post-closure requirements have been satisfactorily completed, the administrative authority shall execute an approval to terminate the financial assurance mechanism(s).

3. Trust Funds. A permit holder or applicant may satisfy the requirements of this Section by establishing a closure trust fund that conforms to the following requirements and submitting an originally signed duplicate of the trust agreement to the Office of Management and Finance, Financial Services Division.

a. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

b. Trusts must be accomplished in accordance with and subject to the laws of Louisiana. The beneficiary of the trust shall be the administrative authority.

c. Trust-fund earnings may be used to offset required payments into the fund, to pay the fund trustee, or to pay other expenses of the funds, or may be reclaimed by the permit holder or applicant upon approval of the administrative authority.

d. The trust agreement must be accompanied by an affidavit certifying the authority of the individual signing the trust on behalf of the permit holder or applicant.

e. The permit holder or applicant may accelerate payments into the trust fund or deposit the full amount of the current closure cost estimate at the time the fund is established. The permit holder or applicant must, however, 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 Clause B.1.b.iv of this Section.

f. If the permit holder or applicant establishes a trust fund after having used one or more of the alternate mechanisms specified in this Section, 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 the specifications of this Paragraph.

g. After the pay-in period is completed, whenever the current cost estimate changes, the permit holder 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 permit holder or applicant, within 60 days after the change in the cost estimate, must either deposit an amount into the fund that will make its value at least equal to the amount of the closure/post-closure cost estimate or it must estimate or obtain other financial assurance as specified in this Section to cover the difference.

h. After beginning final closure, a permit holder or any other person authorized by the permit holder to perform closure and/or post-closure may request reimbursement for closure and/or post-closure expenditures by submitting itemized bills to the Office of Management and Finance, Financial Services Division. Within 60 days after receiving bills for such activities, the administrative authority will determine whether the closure and/or post-closure expenditures are in accordance with the closure plan or otherwise justified, and if so, he or she will instruct the trustee 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 and/or post-closure will be significantly greater than the value of the trust fund, he may withhold reimbursement for such amounts as he deems prudent until he determines that the permit holder is no longer required to maintain financial assurance.

i. The wording of the trust agreement shall be identical to the wording in Document 4 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted. The trust agreement shall be accompanied by a formal certification of acknowledgement, as in the example in Document 4 of Appendix R of this Chapter.

4. Surety Bonds. A permit holder or applicant may satisfy the requirements of this Section by obtaining a surety bond that conforms to the following requirements and submitting the bond to the Office of Management and Finance, Financial Services Division.

a. 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.

b. The permit holder or applicant who uses a surety bond to satisfy the requirements of this Section must also provide to the administrative authority evidence of the establishment of 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. The wording of the standby trust fund shall be as specified in Subparagraph B.3.i of this Section.

c. The bond must guarantee that the operator will:

i. 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;

ii. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin closure or post-closure is issued; or

iii. provide alternate financial assurance, as specified in this Section, and obtain the administrative authority's written approval of the assurance provided within 90 days after receipt by both the permit holder and the administrative authority of a notice of cancellation of the bond from the surety.

d. Under the terms of the bond, the surety will become liable on the bond obligation when the permit holder fails to perform as guaranteed by the bond.

e. The penal sum of the bond must be at least equal to the current closure and post-closure cost estimates.

f. Whenever the current cost-estimate increases to an amount greater than the penal sum, the permit holder, 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 and post-closure 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 Section to cover the increase. Whenever the current cost estimate decreases, the penal sum may be reduced to the amount of the current cost estimate following written approval by the administrative authority.

g. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the permit holder and to the administrative authority. Cancellation may not occur, however, before 120 days have elapsed, beginning on the

date that both the permit holder and the administrative authority receive the notice of cancellation, as evidenced by the return receipts.

h. The wording of the surety bond guaranteeing payment into a standby trust fund shall be identical to the wording in Document 5 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

5. Performance Bonds. A permit holder or applicant may satisfy the requirements of this Section by obtaining a surety bond that conforms to the following requirements and submitting the bond to the Office of Management and Finance, Financial Services Division.

a. 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.

b. The permit holder or applicant who uses a surety bond to satisfy the requirements of this Section must also provide to the administrative authority evidence of establishment of 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. The wording of the standby trust fund shall be as specified in Subparagraph B.3.i of this Section.

c. The bond must guarantee that the permit holder or applicant will:

i. perform final closure and post-closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; or

ii. provide alternate financial assurance, as specified in this Section, and obtain the administrative authority's written approval of the assurance provided within 90 days after the date both the permit holder and the administrative authority receive notice of cancellation of the bond from the surety.

d. Under the terms of the bond, the surety will become liable on the bond obligation when the permit holder fails to perform as guaranteed by the bond. Following a determination by the administrative authority that the permit holder has failed to perform final closure and post-closure in accordance with the closure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform final closure and post-closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.

e. The penal sum of the bond must be at least equal to the current closure and post-closure cost estimates.

f. Whenever the current closure cost estimate increases to an amount greater than the penal sum, the permit holder, 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 and post-closure cost estimates 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 Section. Whenever the current cost estimate decreases, the penal sum may be reduced to the amount of the current cost estimate after written approval of the administrative authority.

g. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the permit holder and to the Office of Management and Finance, Financial Services Division. Cancellation may not occur before 120 days have elapsed beginning on the date that both the permit holder and the administrative authority receive the notice of cancellation, as evidenced by the return receipts.

h. The wording of the performance bond shall be identical to the wording in Document 6 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

6. Letter of Credit. A permit holder or applicant may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the following requirements and submitting the letter to the Office of Management and Finance, Financial Services Division.

a. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

b. A permit holder or applicant who uses a letter of credit to satisfy the requirements of this Section must also provide to the administrative authority evidence of the establishment of 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. The wording of the standby trust fund shall be as specified in Subparagraph B.3.i of this Section.

c. The letter of credit must be accompanied by a letter from the permit holder or applicant referring to the letter of credit by number, issuing institution, and date, and providing the following information:

- i. agency interest number;
- ii. site name;
- iii. facility name;
- iv. facility permit number; and

v. the amount of funds assured for closure and/or post closure of the facility by the letter of credit.

d. The letter of credit must be irrevocable and issued for a period of at least one year, unless, at least 120 days before the current expiration date, the issuing institution notifies both the permit holder and 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 permit holder and the administrative authority receive the notice, as evidenced by the return receipts.

e. The letter of credit must be issued in an amount at least equal to the current closure and post-closure cost estimates.

f. Whenever the current cost estimates increase to an amount greater than the amount of the credit, the permit holder, 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 and post-closure cost estimates 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 Section to cover the increase. Whenever the current cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure and post-closure cost estimates upon written approval of the administrative authority.

g. Following a determination by the administrative authority that the permit holder has failed to perform final closure or post-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.

h. The wording of the letter of credit shall be identical to the wording in Document 7 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

7. Insurance. A permit holder or applicant may satisfy the requirements of this Section by obtaining insurance that conforms to the following requirements and submitting a certificate of such insurance to the Office of Management and Finance, Financial Services Division.

a. At a minimum, the insurer must be 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 insurance business in Louisiana.

b. The insurance policy must be issued for a face amount at least equal to the current closure and post-closure cost estimates.

c. 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.

d. The insurance policy must guarantee that funds will be available to close the facility and provide post-closure care once 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.

e. After beginning final closure, a permit holder or any other person authorized by the permit holder to perform closure and post-closure may request reimbursement for closure or post-closure expenditures by submitting itemized bills to the Office of Management and Finance, Financial Services Division. Within 60 days after receiving such bills, the administrative authority will determine whether the expenditures are in accordance with the closure plan or otherwise justified, and if so, he or she will instruct the insurer to make reimbursement in such amounts as the administrative authority specifies in writing.

f. The permit holder must maintain the policy in full force and effect until the administrative authority consents to termination of the policy by the permit holder.

g. Each policy must contain a provision allowing assignment of the policy to a successor permit holder. Such assignment may be conditional upon consent of the insurer, provided consent is not unreasonably refused.

h. 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 permit holder and the Office of Management and Finance, Financial Services Division. Cancellation, termination, or failure to renew may not occur, however, before 120 days have elapsed, beginning on the date that both the administrative authority and the permit holder receive notice of cancellation, 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:

- i. the administrative authority deems the facility abandoned;
- ii. the permit is terminated or revoked or a new permit is denied;
- iii. closure and/or post-closure is ordered;
- iv. the permit holder is named as debtor in a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code; or
- v. the premium due is paid.

i. Whenever the current cost estimate increases to an amount greater than the face amount of the policy, the permit holder, within 60 days after the increase, must either increase the face amount to at least equal to the current closure and post-closure cost estimates 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 Section to cover the increase. Whenever the current cost estimate decreases, the face amount may be reduced to the amount of the current closure and post-closure cost estimates following written approval by the administrative authority.

j. The wording of the certificate of insurance shall be identical to the wording in Document 8 of Appendix R of this Chapter, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

8. Financial Test. A permit holder, applicant, or parent corporation of the permit holder or applicant, which will be responsible for the financial obligations, may satisfy the requirements of this Section by demonstrating that he or she passes a financial test as specified in this Paragraph. The assets of the parent corporation of the applicant or permit holder shall not be used to determine whether the applicant or permit holder satisfies the financial test, unless the parent corporation has supplied a corporate guarantee as outlined in Paragraph A.5 of this Section.

a. To pass this test, the permit holder, applicant, or parent corporation of the permit holder or applicant must meet either of the following criteria:

i. the permit holder, applicant, or parent corporation of the permit holder or applicant must have:

(a). tangible net worth of at least six times the sum of the current closure and post-closure estimates to be demonstrated by this test and the amount of liability coverage to be demonstrated by this test;

(b). tangible net worth of at least \$10 million; and

(c). assets in the United States amounting to either at least 90 percent of his total assets, or at least six times the sum of the current closure and post-closure estimates, to be demonstrated by this test, and the amount of liability coverage to be demonstrated by this test; or

ii. the permit holder, applicant, or parent corporation of the permit holder or applicant must have:

(a). 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, or Baa, as issued by *Moody's*;

(b). tangible net worth of at least \$10 million; and

(c). assets in the United States amounting to either 90 percent of his total assets or at least six times the sum of the current closure and post-closure estimates, to be demonstrated by this test, and the amount of liability coverage to be demonstrated by this test.

b. To demonstrate that he or she meets this test, the permit holder, applicant, or parent corporation of the permit holder or applicant must submit the following three items to the Office of Management and Finance, Financial Services Division:

i. a letter signed by the chief financial officer of the permit holder, applicant, or parent corporation demonstrating and certifying the criteria in Subparagraph B.8.a of this Section and including the information required by Subparagraph B.8.d of this Section. If the financial test is provided to demonstrate both assurance for closure and/or post-closure care and liability coverage, a single letter to cover both forms of financial responsibility is required;

ii. a copy of the independent certified public accountant (CPA)'s report on the financial statements of the permit holder, applicant, or parent corporation of the permit holder or applicant for the latest completed fiscal year; and

iii. a special report from the independent CPA to the permit holder, applicant, or parent corporation of the permit holder or applicant stating that:

(a). the CPA has computed the data specified by the chief financial officer as having been derived from the independently audited, year-end financial statements with the amounts for the latest fiscal year in such financial statements; and

(b). in connection with that procedure, no matters came to his attention that caused him to believe that the specified data should be adjusted.

c. The administrative authority may disallow use of this test on the basis of the opinion expressed by the independent CPA in his report on qualifications based on the financial statements. 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 administrative authority may disallow the use of this test on the basis of the accessibility of the assets of the parent corporation (corporate guarantor), permit holder, or applicant. The permit holder, applicant, or parent corporation must provide evidence of insurance for the entire amount of required liability coverage, as specified in this Section, within 30 days after notification of disallowance.

d. The permit holder, applicant, or parent corporation (if a corporate guarantor) of the permit holder or applicant shall provide to the Office of Management and Finance, Financial Services Division a letter from the chief financial officer, the wording of which shall be identical to the wording in Document 9 of Appendix R of this Chapter, except that

the instructions in brackets are to be replaced with the relevant information and the brackets deleted. The letter shall certify the following information:

i. a list of commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, owned or operated by the permit holder or applicant of the facility, for which financial assurance for liability coverage is demonstrated through the use of financial tests, including the amount of liability coverage;

ii. a list of commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, owned or operated by the permit holder or applicant, for which financial assurance for the closure or post-closure care is demonstrated through the use of a financial test or self-insurance by the permit holder or applicant, including the cost estimates for the closure and post-closure care of each facility;

iii. a list of the commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, owned or operated by any subsidiaries of the parent corporation for which financial assurance for closure and/or post-closure is demonstrated through the financial test or through use of self-insurance, including the current cost estimate for the closure or post-closure care for each facility and the amount of annual aggregate liability coverage for each facility; and

iv. a list of commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, for which financial assurance for closure or post-closure care is not demonstrated through the financial test, self-insurance, or other substantially equivalent state mechanisms, including the estimated cost of closure and post-closure of such facilities.

e. For the purposes of this Subsection the phrase "tangible net worth" shall mean the tangible assets that remain after liabilities have been deducted; such assets would not include intangibles such as good will and rights to patents or royalties.

f. The phrase "current closure and post-closure cost estimates," as used in Subparagraph B.8.a of this Section, includes the cost estimates required to be shown in Subclause B.8.a.i.(a) of this Section.

g. After initial submission of the items specified in Subparagraph B.8.b of this Section, the permit holder, applicant, or parent corporation of the permit holder or applicant 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 include all three items specified in Subparagraph B.8.b of this Section.

h. The administrative authority may, on the basis of a reasonable belief that the permit holder, applicant, or parent corporation of the permit holder or applicant may no longer meet the requirements of Paragraph B.8 of this Section, require reports of financial condition at any time in addition to those specified in Subparagraph B.8.b of this Section. If the administrative authority finds, on the basis of such reports or other information,

that the permit holder, applicant, or parent corporation of the permit holder or applicant no longer meets the requirements of Subparagraph B.8.b of this Section, the permit holder or applicant, or parent corporation of the permit holder or applicant must provide alternate financial assurance as specified in this Subsection within 30 days after notification of such a finding.

i. A permit holder or applicant may meet the requirements of Paragraph B.8 of this Section for closure and/or post-closure by obtaining a written guarantee, hereafter referred to as a "corporate guarantee." The guarantor must be the parent corporation of the permit holder or applicant. The guarantor must meet the requirements and submit all information required for permit holders or applicants in Subparagraphs B.8.a – h of this Section and must comply with the terms of the corporate guarantee. The corporate guarantee must accompany the items sent to the administrative authority specified in Subparagraphs B.8.b and d of this Section. The wording of the corporate guarantee must be identical to the wording in Document 10 of Appendix R of this Chapter, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted. The terms of the corporate guarantee must be in an authentic act signed and sworn by an authorized officer of the corporation before a notary public and must provide that:

i. the guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Paragraph B.8 of this Section;

ii. the guarantor is the parent corporation of the permit holder or applicant of the commercial blender, composter, or mixer of sewage sludge facility or facilities to be covered by the guarantee, and the guarantee extends to certain facilities;

iii. "closure plans," as used in the guarantee, refers to the plans maintained as required by the Louisiana commercial blender, composter, or mixer of sewage sludge rules and regulations for the closure and post-closure care of facilities, as identified in the guarantee;

iv. for value received from the permit holder or applicant, the guarantor guarantees to the Louisiana Department of Environmental Quality that the permit holder or applicant will perform closure, post-closure care, or closure and post-closure care of the facility or facilities listed in the guarantee, in accordance with the closure plan and other permit or regulatory requirements whenever required to do so. In the event that the permit holder or applicant fails to perform as specified in the closure plan, the guarantor shall do so or establish a trust fund as specified in Paragraph B.3 of this Section, in the name of the permit holder or applicant, in the amount of the current closure or post-closure cost estimates or as specified in Subparagraph B.1.b of this Section;

v. guarantor agrees that if, at the end of any fiscal year before termination of the guarantee, the guarantor fails to meet the financial test criteria, the guarantor shall send within 90 days after the end of the fiscal year, by certified mail, notice to the Office of Management and Finance, Financial Services Division and to the permit holder or applicant that he intends to provide alternative financial assurance as specified in this Subsection, in the name

of the permit holder or applicant, and that within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless the permit holder or applicant has done so;

vi. the guarantor agrees to notify the Office of Management and Finance, Financial Services Division by certified mail of a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding;

vii. the guarantor agrees that within 30 days after being notified by the administrative authority of a determination that the 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 this Subsection in the name of the permit holder or applicant, unless the permit holder or applicant has done so;

viii. the guarantor agrees to remain bound under the guarantee, notwithstanding any or all of the following: amendment or modification of the closure plan, amendment or modification of the permit, extension or reduction of the time of performance of closure or post closure, or any other modification or alteration of an obligation of the permit holder or applicant in accordance with these regulations;

ix. the guarantor agrees to remain bound under the guarantee for as long as the permit holder must comply with the applicable financial assurance requirements of this Subsection for the above-listed facilities, except that the guarantor may cancel this guarantee by sending notice by certified mail to the Office of Management and Finance, Financial Services Division and the permit holder or applicant. The cancellation will become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the permit holder or applicant, as evidenced by the return receipts;

x. the guarantor agrees that if the permit holder or applicant fails to provide alternative financial assurance as specified in this Subsection, and to obtain written approval of such assurance from the administrative authority within 60 days after the administrative authority receives the guarantor's notice of cancellation, the guarantor shall provide such alternate financial assurance in the name of the owner or operator; and

xi. the guarantor expressly waives notice of acceptance of the guarantee by the administrative authority or by the permit holder. Guarantor also expressly waives notice of amendments or modifications of the closure plan and of amendments or modifications of the facility permit(s).

9. Local Government Financial Test. An owner or operator that satisfies the requirements of Subparagraphs B.9.a – c of this Section may demonstrate financial assurance up to the amount specified in Subparagraph B.9.d of this Section.

a. Financial Component

i. The owner or operator must satisfy the following conditions, as applicable:

(a). if the owner or operator has outstanding, rated, general obligation bonds that are not secured by insurance, a letter of credit, or other collateral or guarantee, he must have a current rating of Aaa, Aa, A, or Baa, as issued by *Moody's*, or AAA, AA, A, or BBB, as issued by *Standard and Poor's*, on all such general obligation bonds; or

(b). the owner or operator must satisfy the ratio of cash plus marketable securities to total expenditures being greater than or equal to 0.05 and the ratio of annual debt service to total expenditures less than or equal to 0.20 based on the owner or operator's most recent audited annual financial statement.

ii. The owner or operator must prepare its financial statements in conformity with *Generally Accepted Accounting Principles* for governments and have his financial statements audited by an independent certified public accountant (or appropriate state agency).

iii. A local government is not eligible to assure its obligations under Paragraph B.9 of this Section if it:

(a). is currently in default on any outstanding general obligation bonds;

(b). has any outstanding general obligation bonds rated lower than Baa as issued by *Moody's* or BBB as issued by *Standard and Poor's*;

(c). operated at a deficit equal to 5 percent or more of total annual revenue in each of the past two fiscal years; or

(d). receives an adverse opinion, disclaimer of opinion, or other qualified opinion from the independent certified public accountant (or appropriate state agency) auditing its financial statement as required under Clause B.9.a.ii of this Section. The administrative authority may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the administrative authority deems the qualification insufficient to warrant disallowance of use of the test.

iv. The following terms used in this Subsection are defined as follows:

(a). *Deficit*—total annual revenues minus total annual expenditures.

(b). *Total Revenues*—revenues from all taxes and fees, but does not include the proceeds from borrowing or asset sales, excluding revenue from funds managed by local government on behalf of a specific third party.

(c). *Total Expenditures*—all expenditures, excluding capital outlays and debt repayment.

(d). *Cash Plus Marketable Securities*—all the cash plus marketable securities held by the local government on the last day of a fiscal year, excluding cash and marketable securities designated to satisfy past obligations such as pensions.

(e). *Debt Service*—the amount of principal and interest due on a loan in a given time period, typically the current year.

b. **Public Notice Component.** The local government owner or operator must place a reference to the closure and post-closure care costs assured through the financial test into its next comprehensive annual financial report (CAFR) after the effective date of this Section or prior to the initial receipt of sewage sludge, other feedstock, or supplements at the facility, whichever is later. Disclosure must include the nature and source of closure and post-closure care requirements, the reported liability at the balance sheet date, the estimated total closure and post-closure care cost remaining to be recognized, the percentage of landfill capacity used to date, and the estimated landfill life in years. For closure and post-closure costs, conformance with *Government Accounting Standards Board Statement 18* assures compliance with this public notice component.

c. **Recordkeeping and Reporting Requirements**

i. The local government owner or operator must place the following items in the facility's operating record:

(a). a letter signed by the local government's chief financial officer that lists all the current cost estimates covered by a financial test, as described in Subparagraph B.9.d of this Section. It must provide evidence that the local government meets the conditions of Clauses B.9.a.i – iii of this Section, and certify that the local government meets the conditions of Clauses B.9.a.i – iii and Subparagraphs B.9.b and d of this Section;

(b). the local government's independently audited year-end financial statements for the latest fiscal year (except for local governments where audits are required every two years and unaudited statements may be used in years when audits are not required), including the unqualified opinion of the auditor who must be an independent certified public accountant or an appropriate state agency that conducts equivalent comprehensive audits;

(c). a report to the local government from the local government's independent certified public accountant or the appropriate state agency based on performing an agreed upon procedures engagement relative to the financial ratios required by Subclause B.9.a.i.(b) of this Section, if applicable, and the requirements of Clause B.9.a.ii and Subclauses B.9.a.iii.(c) – (d) of this Section. The certified public accountant or state agency's report should state the procedures performed and the certified public accountant or state agency's findings; and

(d). a copy of the comprehensive annual financial report (CAFR) used to comply with Subparagraph B.9.b of this Section (certification that the requirements of *General Accounting Standards Board Statement 18* have been met).

ii. The items required in Clause B.9.c.i of this Section must be placed in the facility operating record, in the case of closure and post-closure care, either before the effective date of this Section or prior to the initial receipt of sewage sludge, other feedstock, or supplements at the facility, whichever is later.

iii. After the initial placement of the items in the facility's operating record, the local government owner or operator must update the information and place the updated information in the operating record within 180 days following the close of the owner or operator's fiscal year.

iv. The local government owner or operator is no longer required to meet the requirements of Subparagraph B.9.c of this Section when:

(a). the owner or operator substitutes alternate financial assurance, as specified in this Section; or

(b). the owner or operator is released from the requirements of this Section in accordance with Subsection A or B of this Section.

v. A local government must satisfy the requirements of the financial test at the close of each fiscal year. If the local government owner or operator no longer meets the requirements of the local government financial test, it must, within 210 days following the close of the owner or operator's fiscal year, obtain alternative financial assurance that meets the requirements of this Section, place the required submissions for that assurance in the operating record, and notify the Office of Management and Finance, Financial Services Division that the owner or operator no longer meets the criteria of the financial test and that alternate assurance has been obtained.

vi. The administrative authority, based on a reasonable belief that the local government owner or operator may no longer meet the requirements of the local government financial test, may require additional reports of financial condition from the local government at any time. If the administrative authority finds, on the basis of such reports or other information, that the owner or operator no longer meets the local government financial test, the local government must provide alternate financial assurance in accordance with this Section.

d. Calculation of Costs to be Assured. The portion of the closure, post-closure, and corrective action costs for which an owner or operator can assure under Paragraph B.9 of this Section is determined as follows:

i. if the local government owner or operator does not assure other environmental obligations through a financial test, it may assure closure, post-closure, and

corrective action costs that equal up to 43 percent of the local government's total annual revenue;  
or

ii. if the local government assures other environmental obligations through a financial test, including those associated with UIC facilities under 40 CFR 144.62, petroleum underground storage tank facilities under 40 CFR Part 280, PCB storage facilities under 40 CFR Part 761, and hazardous waste treatment, storage, and disposal facilities under 40 CFR Parts 264 and 265, or corresponding state programs, it must add those costs to the closure, post-closure, and corrective action costs it seeks to assure under Paragraph B.9 of this Section. The total that may be assured must not exceed 43 percent of the local government's total annual revenue; and

iii. the owner or operator must obtain an alternate financial assurance instrument for those costs that exceed the limits set in Clauses B.9.d.i – ii of this Section.

10. Local Government Guarantee. An owner or operator may demonstrate financial assurance for closure and post-closure, as required by Subsections A and B of this Section, by obtaining a written guarantee provided by a local government. The guarantor must meet the requirements of the local government financial test in Paragraph B.9 of this Section, and must comply with the terms of a written guarantee.

a. Terms of the Written Guarantee. The guarantee must be effective before the initial receipt of sewage sludge, other feedstock, or supplements or before the effective date of this Section, whichever is later, in the case of closure and post-closure care. The guarantee must provide that:

i. if the owner or operator fails to perform closure and post-closure care, of a facility covered by the guarantee, the guarantor will:

(a). perform, or pay a third party to perform, closure and post-closure care as required; or

(b). establish a fully funded trust fund as specified in Paragraph B.3 of this Section 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 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

iii. if a guarantee is canceled, the owner or operator must, within 90 days following receipt of the cancellation notice by the owner or operator and the administrative authority, obtain alternate financial assurance, place evidence of that alternate financial assurance in the facility operating record, and notify the Office of Management and

Finance, Financial Services Division. If the owner or operator fails to provide alternate financial assurance within the 90-day period, then the **owner or operator guarantor** must provide that alternate assurance within 120 days following the guarantor's notice of cancellation, place evidence of the alternate assurance in the facility operating record, and notify the Office of Management and Finance, Financial Services Division.

b. Recordkeeping and Reporting

i. The owner or operator must place a certified copy of the guarantee, along with the items required under Subparagraph B.9.c of this Section, into the facility's operating record before the initial receipt of sewage sludge, other feedstock, or supplements or before the effective date of this Section, whichever is later, in the case of closure or post-closure care.

ii. The owner or operator is no longer required to maintain the items specified in Clause B.10.b.i of this Section when:

(a). the owner or operator substitutes alternate financial assurance as specified in this Section; or

(b). the owner or operator is released from the requirements of this Section in accordance with Subsections A and B of this Section.

iii. If a local government guarantor no longer meets the requirements of Paragraph B.9 of this Section, the owner or operator must, within 90 days, obtain alternate assurance, place evidence of the alternate assurance in the facility operating record, and notify the Office of Management and Finance, Financial Services Division. If the owner or operator fails to obtain alternate financial assurance within that 90-day period, the guarantor must provide that alternate assurance within the next 30 days.

11. Use of Multiple Mechanisms. An owner or operator may demonstrate financial assurance for closure, post-closure, and corrective action, as required by Subsections A and B of this Section, by establishing more than one financial mechanism per facility, except that mechanisms guaranteeing performance, rather than payment, may not be combined with other instruments. The mechanisms must be as specified in Paragraphs B.3 – 8 of this Section, except that financial assurance for an amount at least equal to the current cost estimate for closure, post-closure care, and/or corrective action may be provided by a combination of mechanisms, rather than a single mechanism.

12. Discounting. The administrative authority may allow discounting of closure and post-closure cost estimates in this Subsection up to the rate of return for essentially risk-free investments, net of inflation, under the following conditions:

a. the administrative authority determines that cost estimates are complete and accurate and the owner or operator has submitted a statement from a registered

professional engineer to the Office of Management and Finance, Financial Services Division so stating;

b. the state finds the facility in compliance with applicable and appropriate permit conditions;

c. the administrative authority determines that the closure date is certain and the owner or operator certifies that there are no foreseeable factors that will change the estimate of site life; and

d. discounted cost estimates must be adjusted annually to reflect inflation and years of remaining life.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28.

### **§3111. Pathogens and Vector Attraction Reduction**

A. Scope. This Section contains the following:

1. the requirements for a sewage sludge to be classified either Exceptional Quality or Class B with respect to pathogens;

2. the site restrictions for land on which a Class B sewage sludge is applied;

3. the pathogen requirements for domestic septage applied to agricultural land, forest, or a reclamation site; and

4. alternative vector attraction reduction requirements for sewage sludge that is applied to the land.

B. Special Definitions. In addition to the terms referenced and defined at LAC 33:IX.3101.H, the following definitions apply to this Section:

*Aerobic Digestion*—the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

*Anaerobic Digestion*—the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

*Density of Microorganisms*—the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

*Land With a High Potential for Public Exposure*—land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a city).

*Land With a Low Potential for Public Exposure*—land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

*Pathogenic Organisms*—disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

*pH*—the logarithm of the reciprocal of the hydrogen ion concentration measured at 25°C or measured at another temperature and then converted to an equivalent value at 25°C.

*Specific Oxygen Uptake Rate (SOUR)*—the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in the sewage sludge.

*Total Solids*—the materials in sewage sludge that remain as residue when the sewage sludge is dried to a constant weight at 103° to 105°C.

*Unstabilized Solids*—organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

*Vector Attraction*—the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

*Volatile Solids*—the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550° C in the presence of excess air.

## C. Pathogens

### 1. Sewage Sludge - Exceptional Quality

a. The requirement in Subparagraph C.1.b of this Section and the requirements in either Subparagraph C.1.c, d, e, f, g, or h of this Section shall be met for a sewage sludge to be classified Exceptional Quality with respect to pathogens.

b. The Exceptional Quality pathogen requirements in Subparagraphs C.1.c - h of this Section shall be met either prior to meeting or at the same time the vector attraction reduction requirements in Subsection D of this Section, except the vector attraction reduction requirements in Subparagraphs D.2.f – h of this Section, are met.

### c. Exceptional Quality - Alternative 1

i. Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the

density of *Salmonella sp.* bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of Exceptional Quality as defined in LAC 33:IX.3101.H.

ii. The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time.

(a). When the percent solids of the sewage sludge is 7 percent or higher, the temperature of the sewage sludge shall be 50°C or higher, the time period shall be 20 minutes or longer, and the temperature and time period shall be determined using equation (2), except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid.

$$D = \frac{131,700,000}{10^{0.1400t}} \quad \text{Equation (2)}$$

Where:

D = time in days.

t = temperature in degrees Celsius.

(b). When the percent solids of the sewage sludge is 7 percent or higher and small particles of sewage sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sewage sludge shall be 50°C or higher, the time period shall be 15 seconds or longer, and the temperature and time period shall be determined using equation (2).

(c). When the percent solids of the sewage sludge is less than 7 percent and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using equation (2).

(d). When the percent solids of the sewage sludge is less than 7 percent, the temperature of the sewage sludge is 50°C or higher, and the time period is 30 minutes or longer, the temperature and time period shall be determined using equation (3).

$$D = \frac{50,070,000}{10^{0.1400t}} \quad \text{Equation (3)}$$

Where:

D = time in days.

t = temperature in degrees Celsius.

d. Exceptional Quality - Alternative 2

i. Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of Exceptional Quality as defined in LAC 33:IX.3101.H.

ii.(a). The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

(b). The temperature of the sewage sludge shall be above 52° C for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

(c). At the end of the 72-hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

e. Exceptional Quality - Alternative 3

i. Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of Exceptional Quality as defined in LAC 33:IX.3101.H.

ii.(a). The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses.

(b). When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Exceptional Quality with respect to enteric viruses until the next monitoring episode for the sewage sludge.

(c). When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Exceptional Quality with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented.

(d). After the enteric virus reduction in Subclause C.1.e.ii.(c) of this Section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Exceptional Quality with respect to enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in Subclause C.1.e.ii.(c) of this Section.

iii.(a). The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains viable helminth ova.

(b). When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is less than one per four grams of total solids (dry weight basis), the sewage sludge is Exceptional Quality with respect to viable helminth ova until the next monitoring episode for the sewage sludge.

(c). When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is equal to or greater than one per four grams of total solids (dry weight basis), the sewage sludge is Exceptional Quality with respect to viable helminth ova when the density of viable helminth ova in the sewage sludge after pathogen treatment is less than one per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the viable helminth ova density requirement are documented.

(d). After the viable helminth ova reduction in Subclause C.1.e.iii.(c) of this Section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Exceptional Quality with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in Subclause C.1.e.iii.(c) of this Section.

f. Exceptional Quality - Alternative 4

i. Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land or at the time the sewage sludge or material derived from

sewage sludge is prepared to meet the requirements of Exceptional Quality as defined in LAC 33:IX.3101.H.

ii. The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in LAC 33:IX.3103.A.2.a and 3.a, unless otherwise specified by the permitting authority.

iii. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of Exceptional Quality as defined in LAC 33:IX.3101.H.

g. Exceptional Quality - Alternative 5

i. Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of Exceptional Quality as defined in LAC 33:IX.3101.H.

ii. Sewage sludge that is used or disposed shall be treated in one of the Processes to Further Reduce Pathogens described in Appendix Q of this Chapter.

h. Exceptional Quality - Alternative 6

i. Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella sp.* bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements of Exceptional Quality as defined in LAC 33:IX.3101.H.

ii. Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Further Reduce Pathogens, as determined by the permitting authority.

2. Sewage Sludge - Class B

a.i. The requirements in either of Subparagraph C.2.b, c, or d of this Section shall be met for a sewage sludge to be classified Class B with respect to pathogens.

ii. The site restrictions in Subparagraph C.2.e of this Section shall be met when sewage sludge that meets the Class B pathogen requirements in Subparagraph C.2.b, c, or d of this Section is applied to the land.

b. Class B - Alternative 1

i. Seven representative samples of the sewage sludge that is used or disposed shall be collected.

ii. The geometric mean of the density of fecal coliform in the samples required by Clause C.2.b.i of this Section shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

c. Class B - Alternative 2. Sewage sludge that is used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in Appendix Q of this Chapter.

d. Class B - Alternative 3. Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority.

e. Site Restrictions

i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

v. Animals shall not be grazed on the land for 30 days after application of sewage sludge.

vi. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

vii. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge, by means approved by the administrative authority.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge, by means approved by the administrative authority.

3. Domestic Septage. For domestic septage applied to agricultural land, forest, or a reclamation site:

a. the site restrictions in Subparagraph C.2.e of this Section shall be met; or

b. the pH of the domestic septage shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes and the site restrictions in Clauses C.2.e.i – iv of this Section shall be met.

#### D. Vector Attraction Reduction

1.a. One of the vector attraction reduction requirements in Subparagraphs D.2.a – j of this Section shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

b. One of the vector attraction reduction requirements in Subparagraphs D.2.a – h of this Section shall be met when bulk sewage sludge is applied to a lawn or a home garden.

c. One of the vector attraction reduction requirements in Subparagraphs D.2.a – h of this Section shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

d. One of the vector attraction reduction requirements in Subparagraph D.2.i, j, or k of this Section shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.

2.a. The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent (see calculation procedures in *Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge*, EPA-625/R-92/013, 1992, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268).

b. When the 38 percent volatile solids reduction requirement in Subparagraph D.2.a of this Section cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° C. When at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

c. When the 38 percent volatile solids reduction requirement in Subparagraph D.2.a of this Section cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of 2 percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° C. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

d. The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° C.

e. Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° C and the average temperature of the sewage sludge shall be higher than 45° C.

f. The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

g. The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.

h. The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

i.i. Sewage sludge shall be injected below the surface of the land.

ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

iii. When the sewage sludge that is injected below the surface of the land is Exceptional Quality with respect to pathogens, the sewage sludge shall be injected

below the land surface within eight hours after being discharged from the pathogen treatment process.

j.i. Sewage sludge applied to the land surface shall be incorporated into the soil within six hours after application to the land, unless otherwise specified by the permitting authority.

ii. When sewage sludge that is incorporated into the soil is Exceptional Quality with respect to pathogens, the sewage sludge shall be applied to the land within eight hours after being discharged from the pathogen treatment process.

k. The pH of domestic septage shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(3)(e).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28.

### **§3113. Incineration**

#### **A. Applicability**

1. This Section applies to a person who fires only sewage sludge or sewage sludge and auxiliary fuel, as defined in Subsection B of this Section, in a sewage sludge incinerator, to a sewage sludge incinerator, as defined in Subsection B of this Section, and to sewage sludge or sewage sludge and auxiliary fuel fired in a sewage sludge incinerator.

2. This Section applies to the exit gas from a sewage sludge incinerator stack.

B. Special Definitions. All terms not defined below shall have the meaning given them in LAC 33:IX.3101.H and in LAC 33:III.111:

*Air Pollution Control Device*—one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

*Auxiliary Fuel*—fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

*Average Daily Concentration*—the arithmetic mean of the concentration of a pollutant in milligrams per kilogram of sewage sludge (dry weight basis) in the samples collected and analyzed in a month.

*Control Efficiency*—the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

*Dispersion Factor*—the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

*Fluidized Bed Incinerator*—an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

*Hourly Average*—the arithmetic mean of all measurements, taken during an hour. At least two measurements must be taken during the hour.

*Incineration*—the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

*Incinerator Operating Combustion Temperature*—the arithmetic mean of the temperature readings in the hottest zone of the furnace recorded in a day (24 hours) when the temperature is averaged and recorded at least hourly during the hours the incinerator operates in a day.

*Monthly Average*—the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

*Performance Test Combustion Temperature*—the arithmetic mean of the average combustion temperature in the hottest zone of the furnace for each of the runs in a performance test.

*Risk Specific Concentration*—the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of the site where the sewage sludge incinerator is located.

*Sewage Sludge Feed Rate*—either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365-day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

*Sewage Sludge Incinerator*—an enclosed device in which only sewage sludge or sewage sludge and auxiliary fuel are fired.

*Stack Height*—the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 214 feet (65 meters). When the difference is greater than 214 feet (65

meters), stack height is the creditable stack height determined in accordance with LAC 33:III.921.

*Standard*—a standard of performance proposed or promulgated under this Subchapter.

*Stationary Source*—any building, structure, facility, or installation that emits or may emit any air pollutant.

*Total Hydrocarbons*—the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

*Wet Electrostatic Precipitator*—an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

*Wet Scrubber*—an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

### C. General Requirements

1. No person shall fire sewage sludge or sewage sludge and auxiliary fuel in a sewage sludge incinerator except in compliance with the requirements in this Section.

#### 2. Performance Tests for New Stationary Sources

a. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility and at such other times as may be required by the state administrative authority, the owner or operator of such facility shall conduct performance test(s) and furnish the state administrative authority a written report of the results of such performance test(s).

b. Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained for each applicable requirement in Subsections D, E, and F of this Section, unless the state administrative authority:

i. specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;

ii. approves the use of an equivalent method;

iii. approves the use of an alternative method the results of which have been determined by the state administrative authority to be adequate for indicating whether a specific source is in compliance;

iv. waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means, to the state administrative authority's satisfaction, that the affected facility is in compliance with the standard; or

v. approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this Subparagraph shall be construed to abrogate the state administrative authority's right to require additional testing if deemed necessary for proper determination of the standard of performance of the new stationary source.

c. Performance tests shall be conducted under such conditions as the state administrative authority shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the state administrative authority such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of start-up, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

d. The owner or operator of an affected facility shall provide the state administrative authority at least 30 days prior notice of any performance test, except as otherwise specified in this Subsection, to afford the state administrative authority the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the state administrative authority as soon as possible of any delay in the original test date either by providing at least seven days prior notice of the rescheduled date of the performance test or by arranging a rescheduled date with the state administrative authority by mutual agreement.

e. The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

i. sampling ports adequate for test methods applicable to such facility, including:

(a). constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(b). providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

ii. safe sampling platform(s);

iii. safe access to sampling platform(s); and

iv. utilities for sampling and testing equipment.

f. Unless otherwise specified in the applicable parts of this Paragraph, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the state administrative authority's approval, be determined using the arithmetic mean of the results of the two other runs.

3. In conducting the performance tests required in Paragraph C.2 of this Section, the owner or operator shall use as reference methods and procedures the test methods referenced in LAC 33:IX.3101.G or other methods and procedures as specified in this Section, except as provided for in Subparagraph C.2.b of this Section.

4.a. The owner or operator of any sewage sludge incinerator subject to the provisions of this Subchapter shall conduct a performance test during which the monitoring and recording devices required under Paragraphs F.2, 4, and 6, Subparagraph F.8.a, and Paragraph F.9 of this Section are installed and operating and for which the sampling and analysis procedures required under Subparagraph G.1.d of this Section are performed as follows:

i. for incinerators that commenced construction or modification on or before April 18, 1986, the performance test shall be conducted within 360 days of the effective date of these regulations, unless the monitoring and recording devices required under Paragraphs F.2, 4, and 6, Subparagraph F.8.a, and Paragraph F.9 of this Section were installed and operating and the sampling and analysis procedures required under Subparagraph G.1.d of this Section were performed during the most recent performance test and a record of the measurements taken during the performance test is available for review by the state administrative authority; and

ii. for incinerators that commence construction or modification on or after the effective date of these regulations, the date of the performance test shall be determined by the requirements in Paragraph C.2 of this Section.

b. The owner or operator shall provide the state administrative authority at least 30 days prior notice of the performance test to afford the state administrative authority the opportunity to have an observer present.

5. The owner or operator of any sewage sludge incinerator, other than a multiple hearth, fluidized bed, or electric incinerator or any sewage sludge incinerator equipped with a control device other than a wet scrubber, shall submit a plan to the state administrative

authority for approval for monitoring and recording incinerator and control device operation parameters. The plan shall be submitted to the state administrative authority as follows:

- a. no later than 90 days after October 6, 1988, for sources that have provided notification of commencement of construction prior to October 6, 1988;
- b. no later than 90 days after the notification of commencement of construction, for sources that provide notification of commencement of construction on or after October 6, 1988; and
- c. at least 90 days prior to the date on which the new control device becomes operative for sources switching to a control device other than a wet scrubber.

#### D. Pollutant Limits

1. Firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the national emission standard for beryllium in Subpart C of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116).

2. Firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the national emission standard for mercury in Subpart E of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116).

#### 3. Pollutant Limit – Lead

a. The average daily concentration for lead in sewage sludge fed to a sewage sludge incinerator shall not exceed the concentration calculated using equation (4).

$$C = \frac{0.1 \times NAAQS \times 86,400}{DF \times (1 - CE) \times SF} \quad \text{Equation (4)}$$

Where:

C = average daily concentration of lead in sewage sludge.

NAAQS = national Ambient Air Quality Standard for lead in micrograms per cubic meter.

DF = dispersion factor in micrograms per cubic meter per gram per second.

CE = sewage sludge incinerator control efficiency for lead in hundredths.

SF = sewage sludge feed rate in metric tons per day (dry weight basis).

b. The dispersion factor (DF) in equation (4) shall be determined from an air dispersion model in accordance with Paragraph D.5 of this Section.

i. When the sewage sludge stack height is 214 feet (65 meters) or less, the actual sewage sludge incinerator stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for equation (4).

ii. When the sewage sludge incinerator stack height exceeds 214 feet (65 meters), the creditable stack height shall be determined in accordance with LAC 33:III.921 and the creditable stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for equation (4).

c. The control efficiency (CE) for equation (4) shall be determined from a performance test of the sewage sludge incinerator in accordance with Paragraph D.5 of this Section.

#### 4. Pollutant Limit - Arsenic, Cadmium, Chromium, and Nickel

a. The average daily concentration for arsenic, cadmium, chromium, and nickel in sewage sludge fed to a sewage sludge incinerator each shall not exceed the concentration calculated using equation (5).

$$C = \frac{RSC \times 86,400}{DF \times (1 - CE) \times SF} \quad \text{Equation (5)}$$

Where:

C = average daily concentration of arsenic, cadmium, chromium, or nickel in sewage sludge.

CE = sewage sludge incinerator control efficiency for arsenic, cadmium, chromium, or nickel in hundredths.

DF = dispersion factor in micrograms per cubic meter per gram per second.

RSC = risk specific concentration for arsenic, cadmium, chromium, or nickel in micrograms per cubic meter.

SF = sewage sludge feed rate in metric tons per day (dry weight basis).

b. The risk specific concentrations for arsenic, cadmium, and nickel used in equation (5) shall be obtained from Table 1 of LAC 33:IX.3113.D.

<b>Table 1 of LAC 33:IX.3113.D</b>	
<b>Risk Specific Concentration for Arsenic, Cadmium, and Nickel</b>	
<b>Pollutant</b>	<b>Risk Specific Concentration (micrograms per cubic meter)</b>
Arsenic	0.023
Cadmium	0.057
Nickel	2.0

c. The risk specific concentration for chromium used in equation (5) shall be obtained from Table 2 of LAC 33:IX.3113.D or shall be calculated using equation (6).

<b>Table 2 of LAC 33:IX.3113.D</b>	
<b>Risk Specific Concentration For Chromium</b>	
<b>Type of Incinerator</b>	<b>Risk Specific Concentration (micrograms per cubic meter)</b>
Fluidized bed with wet scrubber	0.65
Fluidized bed with wet scrubber and wet electrostatic precipitator	0.23
Other types with wet scrubber	0.064
Other types with wet scrubber and wet electrostatic precipitator	0.016

$$RSC = \frac{0.0085}{r} \quad \text{Equation (6)}$$

Where:

RSC = risk specific concentration for chromium in micrograms per cubic meter used in equation (5).

r = decimal fraction of the hexavalent chromium concentration in the total chromium concentration measured in the exit gas from the sewage sludge incinerator stack in hundredths.

d. The dispersion factor (DF) in equation (5) shall be determined from an air dispersion model in accordance with Paragraph D.5 of this Section.

i. When the sewage sludge incinerator stack height is equal to or less than 214 feet (65 meters), the actual sewage sludge incinerator stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for equation (5).

ii. When the sewage sludge incinerator stack height is greater than 214 feet (65 meters), the creditable stack height shall be determined in accordance with LAC 33:III.921 and the creditable stack height shall be used in the air dispersion model to determine the dispersion factor (DF) for equation (5).

e. The control efficiency (CE) for equation (5) shall be determined from a performance test of the sewage sludge incinerator in accordance with Paragraph D.5 of this Section.

## 5. Air Dispersion Modeling and Performance Testing

a. The air dispersion model used to determine the dispersion factor in Subparagraphs D.3.b and 4.d of this Section shall be appropriate for the geographical, physical, and population characteristics at the sewage sludge incinerator site. The performance test used to determine the control efficiencies in Subparagraphs D.3.c and 4.e of this Section shall be appropriate for the type of sewage sludge incinerator.

b. For air dispersion modeling initiated after September 3, 1999, the modeling results shall be submitted to the state administrative authority 30 days after completion of the modeling. In addition to the modeling results, the submission shall include a description of the air dispersion model and the values used for the model parameters.

c. The following procedures, at a minimum, shall apply in conducting performance tests to determine the control efficiencies in Subparagraphs D.3.c and 4.e of this Section after September 3, 1999:

i. the performance test shall be conducted under representative sewage sludge incinerator conditions at the highest expected sewage sludge feed rate within the design capacity of the sewage sludge incinerator;

ii. the state administrative authority shall be notified at least 30 days prior to any performance test so the state administrative authority may have the opportunity to observe the test. The notice shall include a test protocol with incinerator operating conditions and a list of test methods to be used; and

iii. each performance test shall consist of three separate runs using the applicable test method. The control efficiency for a pollutant shall be the arithmetic mean of the control efficiencies for the pollutant from the three runs.

d. The pollutant limits in Paragraphs D.3 and 4 of this Section shall be submitted to the state administrative authority no later than 30 days after completion of the air dispersion modeling and performance test.

e. Significant changes in geographic or physical characteristics at the incinerator site or in incinerator operating conditions require new air dispersion modeling or

performance testing to determine a new dispersion factor or a new control efficiency that will be used to calculate revised pollutant limits.

## 6. Standards for Particulate Matter

a. No owner or operator of any sewage sludge incinerator subject to the provisions of this Section shall discharge or cause the discharge into the atmosphere of:

i. particulate matter at a rate in excess of 0.65 g/kg dry sewage sludge input (1.30 lb/ton dry sewage sludge input); and

ii. any gases that exhibit 20 percent opacity or greater.

b. The owner or operator of a sewage sludge incinerator shall determine compliance with the particulate matter emission standards in Subparagraph D.6.a of this Section as follows:

i. the emission rate (E) of particulate matter for each run shall be computed using the following equation:

$$E = K(C_s Q_{sd})/S$$

where:

E = emission rate of particulate matter, g/kg (lb/ton) of dry sewage sludge input.

$C_s$  = concentration of particulate matter, g/dscm (g/dscf).

$Q_{sd}$  = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

S = charging rate of dry sewage sludge during the run, kg/hr (lb/hr).

K = conversion factor, 1.0 g/g [4.409 lb<sup>2</sup>/(g-ton)];

ii. method 5 shall be used to determine the particulate matter concentration ( $C_s$ ) and the volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf);

iii. the dry sewage sludge charging rate (S) for each run shall be computed using either of the following equations:

$$S = K_m S_m R_{dm} / \Theta$$

$$S = K_v S_v R_{dv} / \Theta$$

where:

$S$  = charging rate of dry sewage sludge, kg/hr (lb/hr).

$S_m$  = total mass of sewage sludge charged, kg (lb).

$R_{dm}$  = average mass of dry sewage sludge per unit mass of sludge charged, mg/mg (lb/lb).

$\Theta$  = duration of run, in minutes.

$K_m$  = conversion factor, 60 min/hr.

$S_v$  = total volume of sewage sludge charged,  $m^3$  (gal).

$R_{dv}$  = average mass of dry sewage sludge per unit volume of sewage charged, mg/liter (lb/ft<sup>3</sup>).

$K_v$  = conversion factor,  $60 \times 10^{-3}$  (liter-kg-min)/(m<sup>3</sup>-mg-hr) [8.021 (ft<sup>3</sup>-min)/(gal-hr)].

iv. the flow measuring device of Paragraph F.2 of this Section shall be used to determine the total mass ( $S_m$ ) or volume ( $S_v$ ) of sewage sludge charged to the incinerator during each run. If the flow measuring device is on a time rate basis, readings shall be taken and recorded at 5-minute intervals during the run and the total charge of sewage sludge shall be computed using the following equations, as applicable:

$$S_m = \sum_{i=1}^n Q_{mi} / \Theta_i$$

$$S_v = \sum_{i=1}^n Q_{vi} / \Theta_i$$

where:

$Q_{mi}$  = average mass flow rate calculated by averaging the flow rates at the beginning and end of each interval "i", kg/min (gal/min).

$Q_{vi}$  = average volume flow rate calculated by averaging the flow rates at the beginning and end of each interval "i", m<sup>3</sup>/min (gal/min).

$\theta_i$  = duration of interval “i”, min;

v. samples of the sewage sludge charged to the incinerator shall be collected in nonporous jars at the beginning of each run and at approximately 1-hour intervals thereafter until the test ends, and “209 F. Method for Solid and Semisolid Samples” (40 CFR 60.17, incorporated by reference in LAC 33:III.3003) shall be used to determine dry sewage sludge content of each sample (total solids residue), except that:

(a). evaporating dishes shall be ignited to at least 103°C rather than the 550°C specified in step 3(a)(1);

(b). determination of volatile residue, step 3(b) may be deleted;

(c). the quantity of dry sewage sludge per unit sewage sludge charged shall be determined in terms of mg/liter (lb/ft<sup>3</sup>) or mg/mg (lb/lb); and

(d). the average dry sewage sludge content shall be the arithmetic average of all the samples taken during the run; and

vi. method 9 and the procedures in 40 CFR 60.11 (incorporated by reference in LAC 33:III.3003) shall be used to determine opacity.

#### E. Operational Standard - Total Hydrocarbons

1. The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected for 0 percent moisture by multiplying the measured total hydrocarbons concentration by the correction factor calculated using equation (7).

$$\text{Correction factor (percent moisture)} = \frac{1}{(1 - X)} \quad \text{Equation (7)}$$

Where:

X = decimal fraction of the percent moisture in the sewage sludge incinerator exit gas in hundredths.

2. The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected to 7 percent oxygen by multiplying the measured total hydrocarbons concentration by the correction factor calculated using equation (8).

$$\text{Correction factor (oxygen)} = \frac{14}{(21 - Y)} \quad \text{Equation (8)}$$

Where:

Y = percent oxygen concentration in the sewage sludge incinerator stack exit gas (dry volume/dry volume).

3. The monthly average concentration for total hydrocarbons in the exit gas from a sewage sludge incinerator stack, corrected for 0 percent moisture using the correction factor from equation (7) and to 7 percent oxygen using the correction factor from equation (8), shall not exceed 100 parts per million on a volumetric basis when measured using the instrument required by Paragraph F.5 of this Section.

#### F. Management Practices

1. The owner or operator of a sewage sludge incinerator shall provide access to the sewage sludge charged so that a well-mixed representative grab sample of the sewage sludge can be obtained.

2.a. A flow measuring device that can be used to determine either the mass or volume of sewage sludge charged to the incinerator shall be installed, calibrated, maintained, and properly operated.

b. The flow measuring device shall be certified by the manufacturer to have an accuracy of  $\pm 5$  percent over its operating range.

c. The flow measuring device shall be operated continuously and data recorded during all periods of operation of the incinerator, unless specified otherwise by the state administrative authority.

3.a. A weighing device for determining the mass of any municipal solid waste charged to the incinerator when sewage sludge and municipal solid waste are incinerated together shall be installed, calibrated, maintained, and properly operated.

b. The weighing device shall have an accuracy of  $\pm 5$  percent over its operating range.

4.a. For incinerators equipped with a wet scrubbing device, a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device shall be installed, calibrated, maintained, and properly operated.

b. Where a combination of wet scrubbers is used in series, the pressure drop of the gas flow through the combined system shall be continuously monitored.

c. The device used to monitor scrubber pressure drop shall be certified by the manufacturer to be accurate within  $\pm 250$  pascals ( $\pm 1$  inch water gauge) and shall be calibrated on an annual basis in accordance with the manufacturer's instructions.

5.a. An instrument that continuously measures and records the total hydrocarbons concentration in the sewage sludge incinerator stack exit gas shall be installed, calibrated, operated, and maintained for a sewage sludge incinerator.

b. The total hydrocarbons instrument shall employ a flame ionization detector, have a heated sampling line maintained at a temperature of  $150^{\circ}\text{C}$  or higher at all times, and be calibrated at least once every 24-hour operating period using propane.

6.a. An instrument that continuously measures and records the oxygen concentration in the sewage sludge incinerator stack exit gas shall be installed, calibrated, operated, and maintained for a sewage sludge incinerator.

b. The oxygen monitor shall be located upstream of any rabble shaft cooling air inlet into the incinerator exhaust gas stream, fan, ambient air recirculation damper, or any other source of dilution air.

c. The oxygen monitoring device shall be certified by the manufacturer to have a relative accuracy of  $\pm 5$  percent over its operating range and shall be calibrated according to method(s) prescribed by the manufacturer at least once each 24-hour operating period.

7. An instrument that continuously measures and records information used to determine the moisture content in the sewage sludge incinerator stack exit gas shall be installed, calibrated, operated, and maintained for a sewage sludge incinerator.

8.a. An instrument that continuously records combustion temperature at every hearth in multiple hearth furnaces, in the bed and outlet of fluidized bed incinerators, and in the drying, combustion, and cooling zones of electric incinerators shall be installed, calibrated, maintained, and properly operated.

b. For multiple hearth furnaces, a minimum of one thermocouple shall be installed in each hearth in the cooling and drying zones, and a minimum of two thermocouples shall be installed in each hearth in the combustion zone.

c. For electric incinerators, a minimum of one thermocouple shall be installed in the drying zone and one in the cooling zone, and a minimum of two thermocouples shall be installed in the combustion zone.

d. Each temperature measuring device shall be certified by the manufacturer to have an accuracy of  $\pm 5$  percent over its operating range.

e. Operation of a sewage sludge incinerator shall not cause the operating combustion temperature for the sewage sludge incinerator to exceed the performance test combustion temperature by more than 20 percent.

9.a. A device for measuring the fuel flow to the incinerator shall be installed, calibrated, maintained, and properly operated.

b. The fuel flow measuring device shall be certified by the manufacturer to have an accuracy of  $\pm 5$  percent over its operating range.

c. The fuel flow measuring device shall be operated continuously and data recorded during all periods of operation of the incinerator, unless specified otherwise by the state administrative authority.

10.a. An air pollution control device shall be appropriate for the type of sewage sludge incinerator and the operating parameters for the air pollution control device shall be adequate to indicate proper performance of the air pollution control device.

b. Operation of the air pollution control device shall not cause a significant exceedance of the average value for the air pollution control device operating parameters from the performance test required by Subparagraphs D.3.c and 4.e of this Section nor shall the operation of the air pollution control device violate any other requirements of this Section for which the air pollution control device is subjected.

11. The permittee shall collect and analyze sewage sludge fed to a sewage sludge incinerator for dry sludge content and volatile solids content using the method specified at Clause D.6.b.v of this Section, except that the determination of volatile solids, step (3) (b) of the method shall not be deleted.

12. Sewage sludge shall not be fired in a sewage sludge incinerator if it is likely to adversely affect a threatened or endangered species, listed under Section 4 of the Endangered Species Act, or its designated critical habitat.

13. The instruments required in Paragraphs F.2 – 9 of this Section shall be appropriate for the type of sewage sludge incinerator.

14. The state administrative authority may exempt the owner or operator of any multiple hearth, fluidized bed, or electric sewage sludge incinerator from the daily sampling and analysis of sludge feed in Paragraph F.11 and Subparagraph G.1.d of this Section and from the recordkeeping requirement in Subparagraph H.2.p of this Section for the volatile solids content, only, of the sewage sludge charged to the incinerator during all periods of this incinerator following the performance test if:

a. the particulate matter emission rate measured during the performance test required under Paragraph C.4 of this Section is less than or equal to 0.38 g/kg of dry sewage sludge input (0.75 lb/ton); and

b. the state administrative authority determines that the requirements will not be necessary to evaluate the effects upon the environment and human health resulting from the emissions from the sewage sludge incinerator.

G. Frequency of Monitoring. Except as specified otherwise in this Section, the frequency of monitoring shall be as follows:

1. Sewage Sludge

a. The frequency of monitoring for beryllium shall be as required in Subpart C of 40 CFR Part 61 (as incorporated by reference in LAC 33:III.5116), and for mercury as required in Subpart E of 40 CFR Part 61 (as incorporated by reference in LAC 33:III.5116).

b. The frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel in sewage sludge fed to a sewage sludge incinerator shall be the frequency in Table 1 of LAC 33:IX.3113.G.

<b>Table 1 of LAC 33:IX.3113.G</b>	
<b>Frequency of Monitoring – Incineration</b>	
<b>Amount of sewage sludge<sup>1</sup> (metric tons per 365-day period)</b>	<b>Frequency</b>
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (4 times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (6 times per year)
Equal to or greater than 15,000	Once per month (12 times per year)

<sup>1</sup> Amount of sewage sludge fired in a sewage sludge incinerator (dry weight basis)

c. After the sewage sludge has been monitored for two years at the frequency in Table 1 of LAC 33:IX.3113.G, the state administrative authority may reduce the frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel.

d. The frequency of monitoring for dry sewage sludge content and volatile solids content of the sewage sludge shall be once per day as a grab sample of the sewage sludge fed to the incinerator.

2. Total Hydrocarbons, Oxygen Concentration, Information to Determine Moisture Content, and Combustion Temperatures. The total hydrocarbons concentration and oxygen concentration in the exit gas from a sewage sludge incinerator stack, the information used to measure moisture content in the exit gas, and the combustion temperatures for the sewage sludge incinerator shall be monitored continuously.

3. Air Pollution Control Device Operating Parameters. Unless specified otherwise in this Subchapter, the frequency of monitoring for the appropriate air pollution control device operating parameters shall be daily.

4.a. The frequency of monitoring shall be as specified in this Section for any performance testing or other sampling requirements not covered above.

b. If the frequency of monitoring is not specified, then the frequency of monitoring shall be as specified by the state administrative authority.

#### H. Recordkeeping

1. If the owner/operator of a sewage sludge incinerator is the person who prepares sewage sludge, the owner/operator of the sewage sludge incinerator shall keep a record of the annual production of sewage sludge (i.e., dry ton or dry metric tons) and of the sewage sludge management practice used and retain such record for a period of five years.

2. The owner/operator of a sewage sludge incinerator shall develop the following information and shall retain this information for five years:

a. the concentration of lead, arsenic, cadmium, chromium, and nickel in the sewage sludge fed to the sewage sludge incinerator;

b. the total hydrocarbons concentrations in the exit gas from the sewage sludge incinerator stack;

c. information that indicates the requirements in the national emission standard for beryllium in Subpart C of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116) are met;

d. information that indicates the requirements in the national emission standard for mercury in Subpart E of 40 CFR Part 61 (as incorporated by reference at LAC 33:III.5116) are met;

e. the operating combustion temperatures for the sewage sludge incinerator;

f. values for the air pollution control device operating parameters;

g. the oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack;

h. the sewage sludge feed rate;

i. the stack height for the sewage sludge incinerator;

- j. the dispersion factor for the site where the sewage sludge incinerator is located;
- k. the control efficiency for lead, arsenic, cadmium, chromium, and nickel for each sewage sludge incinerator;
- l. the risk specific concentration for chromium calculated using equation (6), if applicable;
- m. a calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures;
- n. results of the particulate matter testing required in Subparagraph D.6.b of this Section;
- o. for incinerators equipped with a wet scrubbing device, a record of the measured pressure drop of the gas flow through the wet scrubbing device, as required by Paragraph F.4 of this Section;
- p. a record of the rate of sewage sludge fed to the incinerator, the fuel flow to the incinerator, and the total solids and volatile solids content of the sewage sludge charged to the incinerator; and
- q. results of all applicable performance tests required in this Section.

#### I. Reporting

- 1. If the owner/operator of a sewage sludge incinerator is the person who prepares the sewage sludge, the owner/operator shall submit the information in Paragraph H.1 of this Section to the state administrative authority on February 19 of each year.
- 2. The owner/operator of a sewage sludge incinerator shall submit the information in Subparagraphs H.2.a – q of this Section to the state administrative authority on February 19 of each year.
  - 3.a. In addition to the reporting requirements in Paragraphs I.1 and 2 of this Section, the owner/operator of any multiple hearth, fluidized bed, or electric sewage sludge incinerator subject to the provisions of this Subchapter shall submit to the state administrative authority on February 19 and August 19 of each year (semiannually) a report in writing that contains the following:
    - i. a record of average scrubber pressure drop measurements for each period of 15 minutes duration or more during which the pressure drop of the scrubber was less than, by a percentage specified below, the average scrubber pressure drop measured

during the most recent performance test. The percent reduction in scrubber pressure drop for which a report is required shall be determined as follows:

(a). for incinerators that achieved an average particulate matter emission rate of 0.38 kg/mg (0.75 lb/ton) dry sewage sludge input or less during the most recent performance test, a scrubber pressure drop reduction of more than 30 percent from the average scrubber pressure drop recorded during the most recent performance test shall be reported; and

(b). for incinerators that achieved an average particulate matter emission rate of greater than 0.38 kg/mg (0.75 lb/ton) dry sewage sludge input during the most recent performance test, a percent reduction in pressure drop greater than that calculated according to the following equation:

$$P = -111E + 72.15$$

where:

P = percent reduction in pressure drop.

E = average particulate matter emissions (kg/megagram); and

ii. a record of average oxygen content in the incinerator exhaust gas for each period of 1-hour duration or more that the oxygen content of the incinerator exhaust gas exceeds the average oxygen content measured during the most recent performance test by more ~~than~~ **that** than 3 percent.

b. The owner or operator of any multiple hearth, fluidized bed, or electric sewage sludge incinerator from which the average particulate matter emission rate measured during the performance test required at Paragraph C.4 of this Section exceeds 0.38 g/kg of dry sewage sludge input (0.75 lb/ton of dry sewage sludge input) shall include in the report for each calendar day that a decrease in scrubber pressure drop or increase in oxygen content of exhaust gas is reported, a record of the following:

i. scrubber pressure drop averaged over each 1-hour incinerator operating period;

ii. oxygen content in the incinerator exhaust averaged over each 1-hour incinerator operating period;

iii. temperatures of every hearth in multiple hearth incinerators, the bed and outlet of fluidized bed incinerators, and the drying, combustion, and cooling zones of electric incinerators averaged over each 1-hour incinerator operating period;

iv. rate of sewage sludge charged to the incinerator averaged over each 1-hour incinerator operating period;

v. incinerator fuel use averaged over each 8-hour incinerator operating period; and

vi. moisture and volatile solids content of the daily grab sample of sewage sludge charged to the incinerator.

c. The owner or operator of any sewage sludge incinerator other than a multiple hearth, fluidized bed, or electric incinerator or any sewage sludge incinerator equipped with a control device other than a wet scrubber shall include in the semiannual report a record of control device operation measurements, as specified in the plan approved under Paragraph C.5 of this Section.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(3)(e).  
 HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28.

### **Appendix P**

#### **Procedure to Determine the Annual Whole Sludge Application Rate for a Sewage Sludge**

LAC 33:IX.3103.D.1.d.ii requires that the product of the concentration for each pollutant listed in Table 4 of LAC 33:IX.3103.D in sewage sludge sold or given away in a bag or other container for application to the land and the annual whole sludge application rate (AWSAR) for the sewage sludge not cause the annual pollutant loading rate for the pollutant in Table 4 of LAC 33:IX.3103.D to be exceeded. This Appendix contains the procedure used to determine the AWSAR for a sewage sludge that does not cause the annual pollutant loading rates in Table 4 of LAC 33:IX.3103.D to be exceeded.

The relationship between the annual pollutant loading rate (APLR) for a pollutant and the annual whole sludge application rate (AWSAR) for a sewage sludge is shown in equation (1).

$$APLR = C \times AWSAR \times 0.001 \text{ Equation (1)}$$

Where:

APLR = annual pollutant loading rate in kilograms per hectare per 365-day period.

C = pollutant concentration in milligrams per kilogram of total solids (dry weight basis).

AWSAR = annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight basis).

0.001 = a conversion factor.

To determine the AWSAR, equation (1) is rearranged into equation (2):

$$AWSAR = \frac{APLR}{C \times 0.001} \quad \text{Equation (2)}$$

The procedure used to determine the AWSAR for a sewage sludge is presented below.

Procedure:

1. Analyze a sample of the sewage sludge to determine the concentration for each of the pollutants listed in Table 4 of LAC 33:IX.3103.D in the sewage sludge.
2. Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of LAC 33:IX.3103.D, calculate an AWSAR for each pollutant using equation (2) above.
3. The AWSAR for the sewage sludge is the lowest AWSAR calculated in Step 2.

## **Appendix Q Pathogen Treatment Processes**

### **A. Processes to Significantly Reduce Pathogens (PSRP)**

1. **Aerobic Digestion.** Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20°C and 60 days at 15°C.
2. **Air Drying.** Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above 0°C.
3. **Anaerobic Digestion.** Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35° to 55°C and 60 days at 20°C.
4. **Composting.** Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40°C or higher and remains at 40°C or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55°C.

5. Lime Stabilization. Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

B. Processes to Further Reduce Pathogens (PFRP)

1. Composting. Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55°C or higher for three days. Using the windrow composting method, the temperature of the sewage sludge is maintained at 55°C or higher for 15 days or longer. During the period when the compost is maintained at 55°C or higher, there shall be a minimum of five turnings of the windrow.

2. Heat Drying. Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80°C or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80°C.

3. Heat Treatment. Liquid sewage sludge is heated to a temperature of 180°C or higher for 30 minutes.

4. Thermophilic Aerobic Digestion. Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is 10 days at 55° to 60°C.

5. Beta Ray Irradiation. Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (approximately 20°C).

6. Gamma Ray Irradiation. Sewage sludge is irradiated with gamma rays from certain isotopes, such as <sup>60</sup>Cobalt and <sup>137</sup>Cesium, at dosages of at least 1.0 megarad at room temperature (approximately 20°C).

7. Pasteurization. The temperature of the sewage sludge is maintained at 70°C or higher for 30 minutes or longer.

**Appendix R**  
**Financial Assurance Documents**

**Document 1. Liability Endorsement**

COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE LIABILITY  
ENDORSEMENT

Secretary

Louisiana Department of Environmental Quality  
Post Office Box 82231  
Baton Rouge, Louisiana 70884-2231

Attention: Office of Management and Finance, Financial Services Division

Dear Sir:

(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 [name of the insured, which must be either the permit holder, the applicant, or the operator. (Note: The operator will provide the liability-insurance documentation only when the permit holder/applicant is a public governing body and the public governing body is not the operator.)] The insured's obligation to demonstrate financial responsibility is required in accordance with *Louisiana Administrative Code* (LAC), Title 33, Part IX.3109.A. The coverage applies at [list the site identification number, site name, facility name, facility permit number, and facility address] for sudden and accidental occurrences. The limits of liability are per occurrence, and annual aggregate, per site, 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 Subclauses (1) - (5), below, are hereby amended to conform with Subclauses (1) - (5), below:

(1). Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy to which this endorsement is attached.

(2). 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:IX.3109.A.3, 4, or 5.

(3). 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.

(4). Cancellation of this endorsement, whether by the insurer or the insured, will be effective only upon written notice and upon lapse of 60 days after a copy of such written notice is received by the administrative authority.

(5). Any other termination of this endorsement will be effective only upon written notice and upon lapse of 30 days after a copy of such written notice is received by the administrative authority.

(C). Attached is the endorsement which forms part of the policy [policy number] issued by [name of insurer], herein called the insurer, of [address of the insurer] to [name of the insured] of [address of the insured], this [date]. The effective date of said policy is [date].

(D). I hereby certify that the wording of this endorsement is identical to the wording specified in LAC 33:IX.3109.A.2.b, effective on the date first written above and that 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 admitted, authorized, or eligible to conduct insurance business in the state of Louisiana.

[Signature of authorized representative of insurer]

[Typed name of authorized representative of insurer]

[Title of authorized representative of insurer]

[Address of authorized representative of insurer]

## **Document 2. Certificate of Insurance**

### COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY CERTIFICATE OF LIABILITY INSURANCE

Secretary  
Louisiana Department of Environmental Quality  
Post Office Box 82231  
Baton Rouge, Louisiana 70884-2231

Attention: Office of Management and Finance, Financial Services Division

Dear Sir:

(A). [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, which must be either the permit holder or applicant of the facility], the "insured," of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under *Louisiana Administrative Code* (LAC), Title 33, Part IX.3109.A. The coverage applies at [list agency interest number, site name, facility name, facility permit number, and site address] for sudden and accidental occurrences. The limits of liability are each occurrence and annual aggregate, per site, exclusive of legal-defense costs. The coverage is provided under policy number [policy number], issued on [date]. The effective date of said policy is [date].

(B). The insurer further certifies the following with respect to the insurance described in Paragraph (A):

(1). Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy.

(2). 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:IX.3109.A.3, 4, or 5.

(3). Whenever requested by the administrative authority, the insurer agrees to furnish to him a signed duplicate original of the policy and all endorsements.

(4). Cancellation of the insurance, whether by the insurer or the insured, will be effective only upon written notice and upon lapse of 60 days after a copy of such written notice is received by the administrative authority.

(5). Any other termination of the insurance will be effective only upon written notice and upon lapse of 30 days after a copy of such written notice is received by the administrative authority.

(C). I hereby certify that the wording of this certificate is identical to the wording specified in LAC 33:IX.3109.A.2.c, as such regulations were constituted on the date first written above, 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 admitted, authorized, or eligible to conduct insurance business in the state of Louisiana.

[Signature of authorized representative of insurer]

[Typed name of authorized representative of insurer]

[Title of authorized representative of insurer]

[Address of authorized representative of insurer]

**Document 3. Letter of Credit**

COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY  
IRREVOCABLE LETTER OF CREDIT

Secretary  
Louisiana Department of Environmental Quality  
Post Office Box 82231  
Baton Rouge, Louisiana 70884-2231

Attention: Office of Management and Finance, Financial Services Division

Dear Sir:

We hereby establish our Irrevocable Standby Letter of Credit No.[number] at the request and for the account of [permit holder's or applicant's name and address] for its [list site identification number, site name, facility name, and facility permit number] at [location], Louisiana, in favor of any governmental body, person, or other entity for any sum or sums up to the aggregate amount of U.S. dollars [amount] upon presentation of:

(A). A final judgment issued by a competent court of law in favor of a governmental body, person, or other entity and against [permit holder's or applicant's name] for sudden and accidental occurrences for claims arising out of injury to persons or property due to the operation of the commercial blender, compostor, or mixer of sewage sludge site at the [name of permit holder or applicant] at [site location] as set forth in the *Louisiana Administrative Code (LAC)*, Title 33, Part IX.3109.A.

(B). A sight draft bearing reference to the Letter of Credit No. [number] drawn by the governmental body, person, or other entity, in whose favor the judgment has been rendered as evidenced by documentary requirement in Paragraph (A).

The Letter of Credit is effective as of [date] and will expire on [date], but such expiration date will be automatically extended for a period of at least one year on the above expiration date [date] and on each successive expiration date thereafter, unless, at least 120 days before the then-current expiration date, we notify both the administrative authority and [name of permit holder or applicant] 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 this Letter of Credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both the Department of Environmental Quality and [name of permit holder/applicant] 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 permit holder or applicant] in accordance with the administrative authority's instructions.

Except to the extent otherwise expressly agreed to, the Uniform Customs and Practice for Documentary Letters of Credit (1983), International Chamber of Commerce Publication No. 400, shall apply to this Letter of Credit.

We certify that the wording of this Letter of Credit is identical to the wording specified in LAC 33:IX.3109.A.3.e, effective on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution(s)]

[date]

**Document 4. Trust Agreement**

COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY  
TRUST AGREEMENT/STANDBY TRUST AGREEMENT

This Trust Agreement (the "Agreement") is entered into as of [date] by and between [name of permit holder or applicant], 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 a permit holder or applicant for a permit of a commercial blender, composter, or mixer of sewage sludge processing 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 permit holder or applicant 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 of the Louisiana Department of Environmental Quality.
- (d). The term "Administrative Authority" means the Secretary or a person designated by him 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, list the agency interest number, site name, facility name, facility permit number, and the annual aggregate amount of liability coverage or 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 shall 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 except 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/OR POST-CLOSURE CARE OR LIABILITY COVERAGE

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 [liability claims, 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 [liability claims, closure and/or 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 COMPRISED BY 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 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 like character and with like aims, except that:

(a). Securities or other obligations of the Grantor, or any owner of the [facility or 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, at 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 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, or underwritten, or one to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares at 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 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 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 questions 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, in writing, specify to the Grantor, the administrative authority, and the present Trustee by certified mail, 10 days before such change becomes effective, the date on which it assumes administration of the trust. 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 the persons designated in the attached Exhibit A or such other persons 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 and signed by the administrative authority. 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 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 10 days following the expiration of the 30-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 the 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 direction 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 reasonable expenses incurred in its defense in the event that 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 to as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.3109.B.3.i, on the date first written above.

WITNESSES:

\_\_\_\_\_  
\_\_\_\_\_  
Its: \_\_\_\_\_

[Seal]

TRUSTEE:

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_

GRANTOR:

\_\_\_\_\_  
By: \_\_\_\_\_

[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

(The following is an example of the certification of acknowledgement that must accompany the trust agreement.)

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 name as such, together with said appearer and me, said authority, after due reading of the whole.

WITNESSES:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**Document 5. Surety Bond**

COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY  
FINANCIAL GUARANTEE BOND

Date bond was executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: [legal name and business address of permit holder or applicant]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation: \_\_\_\_\_

Surety: [name and business address]

[agency interest number, site name, facility name, facility permit number, and current closure and/or post-closure amount(s) for each facility guaranteed by this bond]

Total penal sum of bond: \$ \_\_\_\_\_

Surety's bond number: \_\_\_\_\_

Know All Persons By These Presents, That we, the Principal and Surety 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 Sureties are corporations acting as cosureties, 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 or liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS, said Principal is required, under the Louisiana Environmental Quality Act, R.S. 30:2001, et seq., to have a permit in order to own or operate the commercial blender, composter, or mixer of sewage sludge facility identified above; and

WHEREAS, the Principal is required by law to provide financial assurance for closure and/or post-closure care, as a condition of the permit; and

WHEREAS, said Principal shall establish a standby trust fund as is required by the *Louisiana Administrative Code* (LAC), Title 33, Part IX.3109, 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 an order to close is issued by the administrative authority or a court of competent jurisdiction,

OR, if the Principal shall provide alternate financial assurance as specified in LAC 33:IX.3109.B and obtain written approval from the administrative authority of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the administrative authority from the Surety,

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 above. Upon notification by the administrative authority that the Principal has failed to perform as guaranteed by this bond, the Surety shall place funds in the amount guaranteed for the facility into the standby trust fund as directed by the administrative authority.

The Surety hereby waives notification or 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 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 hereunder exceed the amount of the penal sum.

The Surety may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the administrative authority. Cancellation shall not occur before 120 days have elapsed beginning on the date that both the Principal and the administrative authority received the notice of cancellation, 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 has received written authorization for termination of the bond by the administrative authority.

Principal and Surety hereby agree to adjust the penal sum of the bond yearly in accordance with LAC 33:IX.3109.B and the conditions of the commercial blender, composter, or mixer of sewage sludge 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 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, 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:IX.3109.B.4.h, effective 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 cosurety]

Bond Premium: \$ \_\_\_\_\_

**Document 6. Performance Bond**

**COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY  
PERFORMANCE BOND**

Date bond was executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: [legal name and business address of permit holder or applicant]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation: \_\_\_\_\_

Surety: [name(s) and business address(es)]

[agency interest number, site name, facility name, facility permit number, facility address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond (indicate closure and/or post-closure costs separately)]

Total penal sum of bond: \$ \_\_\_\_\_

Surety's bond number: \_\_\_\_\_

Know All Persons By These Presents, That we, the Principal and Surety 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 Sureties are corporations acting as cosureties, 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 Louisiana Environmental Quality Act, R.S. 30:2001, et seq., to have a permit in order to own or operate the commercial blender, composter, or mixer of sewage sludge facility identified above; and

WHEREAS, the Principal is required by law to provide financial assurance for closure and/or 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;

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 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 financial assurance as specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.3109.B and obtain written approval of the administrative authority of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the 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:IX.3107.B.3, or of its permit, for the facility for which this bond guarantees performances of closure, the Surety 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 LAC 33:IX.3107.B.3, or of its permit for the facility for which this bond guarantees performance of post-closure, the Surety shall either perform post-closure in accordance with the 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:IX.3109.B, 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 shall place funds in the amount guaranteed for the facility into the standby trust fund as directed by the administrative authority.

The Surety hereby waives notification of amendments to closure plans, permit, 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 hereunder exceed the amount of the penal sum.

The Surety may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the administrative authority. Cancellation shall not occur before 120 days have lapsed beginning on the date that both the Principal and the administrative authority received the notice of cancellation, 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 receives written authorization for termination of the bond by the administrative authority.

Principal and Surety hereby agree to adjust the penal sum of the bond yearly in accordance with LAC 33:IX.3109.B and the conditions of the commercial blender, composter, or mixer of sewage sludge 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 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 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, 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:IX.3109.B.5.h, effective on the date this bond was executed.

PRINCIPAL  
[Signature(s)]  
[Name(s)]  
[Title(s)]  
[Corporate seal]

CORPORATE SURETY  
[Name and address]  
State of incorporation: \_\_\_\_\_  
Liability limit: \$ \_\_\_\_\_  
[Signature(s)]  
[Name(s) and title(s)]  
[Corporate seal]

[For every cosurety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ \_\_\_\_\_

**Document 7. Letter of Credit**

COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY  
IRREVOCABLE LETTER OF CREDIT

Secretary  
Louisiana Department of Environmental Quality  
Post Office Box 82231  
Baton Rouge, Louisiana 70884-2231

Attention: Office of Management and Finance, Financial Services Division

Dear Sir:

We hereby establish our Irrevocable Standby Letter of Credit No. \_\_\_\_\_ in favor of the Department of Environmental Quality of the state of Louisiana at the request and for the account of [permit holder's or applicant's name and address] for the [closure and/or post-closure] fund for its [list agency interest number, site name, facility name, facility permit number] at [location], Louisiana, for any sum or sums up to the aggregate amount of U.S. dollars \$ \_\_\_\_\_ upon presentation of:

(i). A sight draft, bearing reference to the Letter of Credit No. \_\_\_\_\_ drawn by the administrative authority, together with;

(ii). A statement, signed by the administrative authority, declaring that the amount of the draft is payable into the standby trust fund pursuant to the Louisiana Environmental Quality Act, R.S. 30:2001, et seq.

The Letter of Credit is effective as of [date] and will expire on [date], but such expiration date will be automatically extended for a period of at least one year on the above expiration date [date] and on each successive expiration date thereafter, unless, at least 120 days before the then-current expiration date, we notify both the administrative authority and [name of permit holder or applicant] by certified mail that we have decided not to extend this Letter of Credit beyond the then-current expiration date. In the event that we give such notification, any unused portion of this Letter of Credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both the Department of Environmental Quality and [name of permit holder or applicant], 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 permit holder or applicant] in accordance with the administrative authority's instructions.

Except to the extent otherwise expressly agreed to, the Uniform Customs and Practice for Documentary Letters of Credit (1983), International Chamber of Commerce Publication No. 400, shall apply to this Letter of Credit.

We certify that the wording of this Letter of Credit is identical to the wording specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.3109.B.6.h, effective on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution(s)]  
[date]

## **Document 8. Certificate of Insurance**

### COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY CERTIFICATE OF INSURANCE FOR CLOSURE AND/OR POST-CLOSURE CARE

Name and Address of Insurer: \_\_\_\_\_  
(hereinafter called the "Insurer")

Name and Address of Insured: \_\_\_\_\_  
(hereinafter called the "Insured") (Note: Insured must be the permit holder or applicant)

Facilities covered: [list the agency interest number, site name, facility name, facility permit number, address, and amount of insurance for closure and/or post-closure care] (These amounts for all facilities 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 and/or post-closure care"] for the facilities identified above. The Insurer further warrants that such policy conforms in all respects to the requirements of LAC 33:IX.3109.B, 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 Insurer is admitted, authorized, or eligible to conduct insurance business in the state of Louisiana and that the wording of this certificate is identical to the wording specified in LAC 33:IX.3109.B.7.j, effective on the date shown immediately below.

[Authorized signature of Insurer]  
 [Name of person signing]  
 [Title of person signing]  
 Signature of witness or notary: \_\_\_\_\_  
 [Date]

#### **Document 9. Letter from the Chief Financial Officer**

COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY  
 LETTER FROM THE CHIEF FINANCIAL OFFICER  
 (Liability Coverage, Closure, and/or Post-Closure)

Secretary  
 Louisiana Department of Environmental Quality  
 Post Office Box 82231  
 Baton Rouge, Louisiana 70884-2231

Attention: Office of Management and Finance, Financial Services Division

Dear Sir:

I am the chief financial officer of [name and address of firm, which may be either the permit holder, applicant, or parent corporation of the permit holder or applicant]. This letter is in support of this firm's use of the financial test to demonstrate financial responsibility for [insert "liability coverage," "closure," and/or "post-closure," as applicable] as specified in [insert

"Louisiana Administrative Code (LAC), Title 33, Part IX.3109.A," "LAC 33:IX.3109.B," or LAC 33:IX.3109.A and B"].

[Fill out the following four paragraphs regarding facilities and associated liability coverage, and closure and post-closure cost estimates. If your firm does not have facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, list the agency interest number, site name, facility name, and facility permit number.]

(A). The firm identified above is the [insert "permit holder," "applicant for a standard permit," or "parent corporation of the permit holder or applicant for a standard permit"] of the following commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, for which liability coverage is being demonstrated through the financial test specified in LAC 33:IX.3109.A. The amount of annual aggregate liability coverage covered by the test is shown for each facility:

(B). The firm identified above is the [insert "permit holder," "applicant for a standard permit," or "parent corporation of the permit holder or applicant for a standard permit"] of the following commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, for which financial assurance for [insert "closure," "post-closure," or "closure and post-closure"] is demonstrated through a financial test similar to that specified in LAC 33:IX.3109.B or other forms of self-insurance. The current [insert "closure," "post-closure," or "closure and post-closure"] cost estimates covered by the test are shown for each facility:

(C). This firm guarantees through a corporate guarantee similar to that specified in [insert "LAC 33:IX.3109.B" or "LAC 33:IX.3109.A and B"], [insert "liability coverage," "closure," "post-closure," or "closure and post-closure"] care of the following commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, of which [insert the name of the permit holder or applicant] are/is a subsidiary of this firm. The amount of annual aggregate liability coverage covered by the guarantee for each facility and/or the current cost estimates for the closure and/or post-closure care so guaranteed is shown for each facility:

(D). This firm is the owner or operator of the following commercial blender, composter, or mixer of sewage sludge facilities, whether in Louisiana or not, for which financial assurance for liability coverage, closure and/or post-closure care is not demonstrated either to the U.S. Environmental Protection Agency or to a state through a financial test or any other financial assurance mechanism similar to those specified in LAC 33:IX.3109.A and/or B. The current closure and/or post-closure cost estimates not covered by such financial assurance 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.]

PART A. LIABILITY COVERAGE FOR ACCIDENTAL OCCURRENCES

[Fill in Alternative I if the criteria of LAC 33:IX.3109.B.8.a.i are used.]

ALTERNATIVE I

- 1. Amount of annual aggregate liability coverage to be demonstrated \$ \_\_\_\_\_
  - \*2. Current assets \$ \_\_\_\_\_
  - \*3. Current liabilities \$ \_\_\_\_\_
  - \*4. Tangible net worth \$ \_\_\_\_\_
  - \*5. If less than 90 percent of assets are located in the U.S., give total U.S. assets \$ \_\_\_\_\_
- YES NO
- 6. Is line 4 at least \$10 million? \_\_\_\_\_
  - 7. Is line 4 at least 6 times line 1? \_\_\_\_\_
  - \*8. Are at least 90 percent of assets located in the U.S.? If not, complete line 9. \_\_\_\_\_
  - 9. Is line 4 at least 6 times line 1? \_\_\_\_\_

[Fill in Alternative II if the criteria of LAC 33:IX.3109.B.8.a.ii are used.]

ALTERNATIVE II

- 1. Amount of annual aggregate liability coverage to be demonstrated \$ \_\_\_\_\_
  - 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 \$ \_\_\_\_\_
  - \*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 6 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 6 times line 1? \_\_\_\_\_

[Fill in Part B if you are using the financial test to demonstrate assurance only for closure and/or post-closure care.]

PART B. CLOSURE AND/OR POST CLOSURE

[Fill in Alternative I if the criteria of LAC 33:IX.3109.B.8.a.i are used.]

ALTERNATIVE I

1. Sum of current closure and/or post-closure estimate (total all cost estimates shown above) \$ \_\_\_\_\_
- \*2. Tangible net worth \$ \_\_\_\_\_
- \*3. Net worth \$ \_\_\_\_\_
- \*4. Current Assets \$ \_\_\_\_\_
- \*5. Current liabilities \$ \_\_\_\_\_
- \*6. The sum of net income plus depreciation, depletion, and amortization \$ \_\_\_\_\_
- \*7. Total assets in U.S. (required only if less than 90 percent of firm's assets are located in the U.S.) \$ \_\_\_\_\_
8. Is line 2 at least \$10 million? YES NO  
\_\_\_\_\_
9. Is line 2 at least 6 times line 1? \_\_\_\_\_
- \*10. Are at least 90 percent of the firm's assets located in the U.S.? If not, complete line 11. \_\_\_\_\_
11. Is line 7 at least 6 times line 1? \_\_\_\_\_

[Fill in Alternative II if the criteria of LAC 33:IX.3109.B.8.a.ii are used.]

ALTERNATIVE II

1. Sum of current closure and post-closure cost estimates (total of all cost estimates shown 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/or post-closure cost estimate is included in "total liabilities" on your firm's financial statement, 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 the firm's assets are located in the U.S.) \$ \_\_\_\_\_
- |  | YES   | NO    |
|--|-------|-------|
| 7. Is line 5 at least \$10 million?  | _____ | _____ |
| 8. Is line 5 at least 6 times line 1?  | _____ | _____ |
| 9. Are at least 90 percent of the firm's assets located in the U.S.? If not, complete line 10. | _____ | _____ |
| 10. Is line 6 at least 6 times line 1?   | _____ | _____ |

[Fill in Part C if you are using the financial test to demonstrate assurance for liability coverage, closure, and/or post-closure care.]

PART C. LIABILITY COVERAGE, CLOSURE AND/OR POST-CLOSURE

[Fill in Alternative I if the criteria of LAC 33:IX.3109.B.8.a.i are used.]

ALTERNATIVE I

- 1. Sum of current closure and/or 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 and/or post-closure cost estimates is included in your "total liabilities" in your firm's financial statements, 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. The sum of net income plus depreciation, depletion, and amortization \$ \_\_\_\_\_
  - \*10. Total assets in the U.S. (required only if less than 90 percent of assets are located in the U.S.) \$ \_\_\_\_\_
- YES NO
- 11. Is line 5 at least \$10 million? \_\_\_\_\_
  - 12. Is line 5 at least 6 times line 3? \_\_\_\_\_
  - \*13. Are at least 90 percent of assets located in the U.S.? If not, complete line 14. \_\_\_\_\_
  - 14. Is line 10 at least 6 times line 3? \_\_\_\_\_

[Fill in Alternative II if the criteria of LAC 33:IX.3109.B.8.a.ii are used.]

ALTERNATIVE II

- 1. Sum of current closure and/or 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 of this firm 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 and/or post-closure cost estimates is included in the "total liabilities" in your firm's financial statements, you may add that portion to this line.) \$ \_\_\_\_\_
  - \*8. Total assets in 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 6 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 6 times line 3? \_\_\_\_\_

(The following is to be completed by all firms providing the financial test)

I hereby certify that the wording of this letter is identical to the wording specified in LAC 33:IX.3109.B.8.d.

[Signature of chief financial officer for the firm]

[Typed name of chief financial officer]

[Title]

[Date]

### Document 10. Corporate Guarantee

#### COMMERCIAL BLENDER, COMPOSTER, OR MIXER OF SEWAGE SLUDGE FACILITY CORPORATE GUARANTEE FOR LIABILITY COVERAGE, CLOSURE, AND/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], hereinafter referred to as guarantor, to the Louisiana Department of Environmental Quality, obligee, on behalf of our subsidiary [insert the name of the permit holder or applicant] of [business address].

#### Recitals

(A). The guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in *Louisiana Administrative Code* (LAC), Title 33, Part IX.3109.B.8.i.

(B). [Subsidiary] is the [insert "permit holder," or "applicant for a permit"] hereinafter referred to as [insert "permit holder" or "applicant"] for the following commercial blender, composter, or mixer of sewage sludge facility covered by this guarantee: [List the agency interest number, site name, facility name, and facility permit number. Indicate for each facility whether guarantee is for liability coverage, closure, and/or post-closure and the amount of annual aggregate liability coverage, closure, and/or post-closure costs covered by the guarantee]

[Fill in Paragraphs (C) and (D) below if the guarantee is for closure and/or post-closure.]

(C). "Closure plans" as used below refers to the plans maintained as required by LAC 33:IX.3107.B.3, for the closure and/or post-closure care of the facility identified in Paragraph (B) above.

(D). For value received from [insert "permit holder" or "applicant"], guarantor guarantees to the Louisiana Department of Environmental Quality that in the event that [insert "permit holder" or "applicant"] fails to perform [insert "closure," "post-closure care," or "closure and post-closure care"] of the above facility in accordance with the closure plan and other permit

requirements whenever required to do so, the guarantor shall do so or shall establish a trust fund as specified in LAC 33:IX.3109.B.3, as applicable, in the name of [insert "permit holder" or "applicant"] in the amount of the current closure and/or post-closure estimates as specified in LAC 33:IX.3109.B.

[Fill in Paragraph (E) below if the guarantee is for liability coverage.]

(E). For value received from [insert "permit holder" or "applicant"], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by sudden and accidental occurrences arising from operations of the facility covered by this guarantee that in the event that [insert "permit holder" or "applicant"] 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 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 coverage limits identified above.

(F). The 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 [insert "permit holder" or "applicant"] that he intends to provide alternative financial assurance as specified in [insert "LAC 33:IX.3109.A" and/or "LAC 33:IX.3109.B"], as applicable, in the name of the [insert "permit holder" or "applicant"]. Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless [insert "permit holder" or "applicant"] has done so.

(G). 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.

(H). The 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 [insert "liability coverage" or "closure and/or post-closure care"] he shall establish alternate financial assurance as specified in [insert "LAC 33:IX.3109.A" and/or "LAC 33:IX.3109.B"], as applicable, in the name of [insert "permit holder" or "applicant"] unless [insert "permit holder" or "applicant"] has done so.

(I). The guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: [if the guarantee is for closure and post-closure, insert "amendment or modification of the closure and/or post-closure care, the extension or reduction of the time of performance of closure and/or post-closure"], or any other modification or alteration of an obligation of the [insert "permit holder" or "applicant"] pursuant to LAC 33:IX.3107.B.3.

(J). The guarantor agrees to remain bound under this guarantee for as long as the [insert "permit holder" or "applicant"] must comply with the applicable financial assurance requirements of [insert "LAC 33:IX.3109.A" and/or "LAC 33:IX.3109.B"] for the above-listed facility, except that guarantor may cancel this guarantee by sending notice by certified mail, to

the administrative authority and to the [insert "permit holder" or "applicant"], such cancellation to become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the [insert "permit holder" or "applicant"], as evidenced by the return receipts.

(K). The guarantor agrees that if the [insert "permit holder" or "applicant"] fails to provide alternative financial assurance as specified in [insert "LAC 33:IX.3109.A" and/or "LAC 33:IX.3109.B"], as applicable, and obtain written approval of such assurance from the administrative authority within 60 days after a notice of cancellation by the guarantor is received by the administrative authority from guarantor, guarantor shall provide such alternate financial assurance in the name of the [insert "permit holder" or "applicant"].

(L). The guarantor expressly waives notice of acceptance of this guarantee by the administrative authority or by the [insert "permit holder" or "applicant"]. Guarantor 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:IX.3109.B.8.i, effective on the date first above written.

Effective date: \_\_\_\_\_  
[Name of Guarantor]  
[Authorized signature for guarantor]  
[Typed name and title of person signing]

Thus sworn and signed before me this [date].

\_\_\_\_\_  
Notary Public