

## **1107. Part II Supplementary Information Required for Beneficial-use Facilities**

The following information is required in the permit application for beneficial-use facilities. All responses and exhibits must be identified within the following sequence to facilitate the evaluation. Additionally, all applicable sections of LAC 33:VII.1109 must be addressed and incorporated into the application responses. If a section does not apply, the applicant must state that it does not apply and why it does not apply.

A. Location Characteristics. Standards pertaining to location characteristics are contained in LAC 33:VII.1109.A.

1. Area Master Plan. A location map showing the facility, major drainage systems, drainage flow patterns, location of the 100-year floodplain, and other pertinent information. The scale of the maps and drawings must be legible, and engineering drawings are required.

2. Environmental Characteristics. The following information is required:

a. a list of all known recreation areas, designated wildlife management areas, swamps and marshes, wetlands, habitat for endangered species, and other sensitive ecologic areas within 1,000 feet of the facility perimeter or as otherwise appropriate;

b. documentation from the appropriate state and federal agencies substantiating the recreation areas, designated wildlife management areas, wetlands, habitat for endangered species, and other sensitive ecologic areas within 1,000 feet of the facility; and

c. a map showing the locations of all known locations of all public water systems, industrial water wells and irrigation wells within one mile of the facility.

B. Facility Characteristics. Standards concerning facility characteristics are contained in LAC 33:VII.1109. A facility plan, including drawings and a narrative, describing the information required below must be provided:

1. elements of the beneficial-use system employed, including as applicable, property lines, original contours (shown at not greater than five-foot intervals), units of the facility, drainage, ditches, and roads;

2. security and signs;

3. buffer zone; and

4. other features, as appropriate.

C. Facility Geology. The following information regarding geology is required:

1. a general description of the soils, provided by a qualified professional (such as a geotechnical engineer, soil scientist, or geologist) along with a description of the method used to determine soil characteristics; and

2. logs of all known soil borings taken on the facility.

D. Certification. The person preparing the permit application must provide the following certification:

"I certify under penalty of law that I have personally examined and I am familiar with the information submitted in this permit application and that the facility as described in this permit application meets the requirements of the Solid Waste Rules and Regulations. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment."

E. Facility Administrative Procedures. Standards governing facility administrative procedures are contained in LAC 33:VII.1109. The following information on administrative procedures is required for all facilities:

1. a recordkeeping system, types of records to be kept, and the use of records by management to control operations;
2. an estimate of the minimum personnel, listed by general job classification, required to operate the facility; and
3. the maximum days of operation per week and per facility operating-day (the maximum hours of operation within a 24-hour period).

F. Facility Operational Plans. Standards governing facility operational plans are contained in LAC 33:VII.1109. The following information is required:

1. types of waste (including chemical, physical, and biological characteristics), maximum quantities of wastes per year, and sources of wastes that are to be beneficially used;
2. waste-handling procedures from entry to final application;
3. minimum equipment to be used at the facility;
4. procedures planned in case of breakdowns, inclement weather, and other abnormal conditions;
5. procedures, equipment, and contingency plans for protecting employees and the general public from accidents, fires, explosions, etc., and provisions for emergency care should an accident occur (include the proximity to a hospital, fire and emergency services, and training programs);
6. provisions for vector, dust, litter, and odor control;
7. a comprehensive operational plan describing the total operation including, but not limited to, inspection of incoming waste to ensure that only permitted wastes are accepted, equipment operation, personnel involvement, and day-to-day activities;
8. detailed analysis of waste including, but not limited to, pH, phosphorus, nitrogen, potassium, sodium, calcium, magnesium, sodium adsorption ratio, and total metals (as listed in LAC 33:VII.1109.G.3.a.i);
9. soil classification, cation-exchange capacity, organic matter, content in soil, soil pH, nitrogen, phosphorus, metals (as listed in LAC 33:VII:1109.G.3.a.i), salts, sodium, calcium, magnesium, sodium adsorption ratio, and PCB concentrations of the treatment zone;
10. annual application rate (dry-tons per acre) and weekly hydraulic loading (inches per acre);

11. an evaluation of the potential for nitrogen to enter the groundwater; and
  12. if the facility is to be used for food-chain cropland, the following information is required:
    - a. a description of the pathogen-reduction method for domestic septage, sewage sludges, and other sludges subject to pathogen production;
    - b. crops to be grown and the dates for planting;
    - c. PCB concentrations in waste;
    - d. annual application rates of cadmium and PCB application; and
    - e. cumulative applications of cadmium and PCBs.
  13. if the facility is to be used for non-food-chain purposes the following information is required:
    - a. a description of the pathogen-reduction method in septage, domestic sewage sludges, and other sludges subject to pathogen production; and
    - b. a description of control of public and livestock access.
- G. Facility Closure. The facility must provide the date of final closure.

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: \*\* (February 1993).

#### \_1109. Standards Governing Beneficial-use Facilities

##### A. Location Characteristics

Processing or disposal facilities may be subject to a comprehensive land use or zoning plan established by local regulations or ordinances.

##### B. Facility Characteristics

1. The following standards apply to perimeter barriers, security, and signs of all facilities: all facilities must have signs of sufficient size posted that warn of restricted access.

##### 2. Buffer Zones

a. The following standards apply to buffer zones for beneficial-use facilities:

i. Buffer zones of not less than 100 feet shall be provided between the facility and the property line. A reduction in this requirement shall be allowed only with the permission (in the form of a notarized affidavit) of the adjoining landowner and occupants. Buffer zone requirements may be exempted by the administrative authority in accordance with LAC 33:VII.307.

ii. No storage or application of solid waste shall occur within the buffer zone.

3. All facilities shall have access to required fire protection and medical care.
4. The following standards for receiving and monitoring incoming wastes shall apply for beneficial-use facilities:
  - a. Each facility shall control the entry of waste and prevent entry of unrecorded or unauthorized waste.
  - b. Each facility shall maintain records regarding application rates, application dates, and methods of application.
5. Discharges from beneficial-use facilities must be controlled and must conform to applicable state and federal laws.

C. Facility Surface Hydrology. The following standards regarding surface hydrological characteristics apply to beneficial-use facilities:

1. Land slope shall be controlled to prevent erosion.
2. Waste shall be applied in accordance with the slope guidelines in the following table.

Slope Percent	Application Restriction
0-3	None; liquid or solid material may be applied to surface.
3-6	Surface application of liquid or solid material may be made; a 100-foot vegetated runoff area is required at the downslope end of the application area with liquid applications.
6-12	Liquid material must be injected; solid material must be incorporated into soil if not vegetated; a 100-foot vegetated runoff area is required at the downslope end of the application area for all application.
>12	Unsuitable for application unless a 200- foot buffer area with slope less than 3% is provided at the downslope edge of the application area.

3. The topography of the facility shall provide for drainage to prevent standing water and shall allow for drainage away from the facility.
4. Wastes shall not be surface-applied within 100 feet of clean water ponds, lakes, or the 10-year high water mark for streams. In this 100-foot zone wastes must be injected.
5. Wastes shall not be applied within 300 feet of drinking water wells, irrigation wells, or industrial water supply wells.

D. Facility Geology

1. Facilities shall have natural stable soils suitable for the beneficial application of the waste.

2. Documentation shall be provided by a soil scientist or other individual with expertise in this area that soils meet the requirements in Subsection D.1 of this Section.

E. Facility Subsurface Hydrology. The following standard applies to subsurface hydrology for beneficial-use facilities:

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

F. Facility Administrative Procedures

1. Recordkeeping and Reports

a. Reports

i. The permit holder shall submit annual reports to the administrative authority indicating quantities and types of solid waste beneficially used, (expressed in wet-weight tons and dry-weight tons per year), during the reporting period. All calculations used to determine the amounts of solid waste received for processing or disposal during the annual reporting period shall be submitted to the administrative authority. A form for this purpose must be obtained from the administrative authority. The following standards apply to reports:

ii. The reporting period for the annual report shall be from July 1 through June 30, commencing July 1, 1992, and terminating upon closure of the facility in accordance with the permit.

iii. Annual reports shall be submitted to the administrative authority by August 1 of each reporting year.

iv. The annual report is to be provided for each individual permitted facility on a separate annual reporting form.

v. Facilities which receive industrial solid waste shall utilize, in their annual report, the seven-digit industrial waste number that has been assigned by the Solid Waste Division to the industrial solid waste generator.

vi. Reports shall be submitted as provided in Subsection F.1.b.vi-ix of this Section.

b. Recordkeeping

i. The permit holder shall maintain all records specified in the application as necessary for the effective management of the facility and for preparing the required reports. These records shall be maintained for the life of the facility and shall be kept on file for at least three years after closure.

ii. Records kept by the permit holder shall include (but not be limited to):

(a). daily log;

(b). quality-assurance/quality-control records;

(c). inspections by the permit holder or operator;

- (d). monitoring, testing, or analytical data;
- (e). any other applicable or required data deemed necessary by the administrative authority; and
- (f). copy of the semi-annual soil waste mixtures tests and analyses of the results, with conclusions, submitted semi annually to the Solid Waste Division, or more frequently if deemed necessary by the administrative authority.
- (g). Test parameters shall consist of cation-exchange capacity, soil pH, total nitrogen, phosphorus, organic matter, salts (intrinsic to the waste), cumulative metals, and any others deemed necessary on a site- and waste- specific basis.
- (h). Annual reports of the analysis of all tests results on the soils; land-use, and crop information; calculated amounts of waste applied per acre; total amounts of nitrogen applied per acre; and cumulative metals loading per acre shall be submitted.

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

## G. Facility Operations

### 1. Facility Limitations

- a. The receipt of hazardous waste shall be strictly prohibited and prevented. Any other wastes that present special handling or disposal problems may be excluded by the administrative authority.
- b. Only waste with a demonstrated beneficial use may be applied.
- c. A comprehensive quality-assurance/quality-control plan shall be on place to ensure that incoming wastes are in conformance with the facility permit.

### 2. Facility Operational Plans

- a. The following standards apply to operational plans for beneficial-use facilities. Operational plans shall be provided which describe in specific detail how the waste will be managed. At a minimum, the plan shall address:
  - i. the sequence in which the waste will be applied; and
  - ii. the recordkeeping procedures to be employed to ensure that all pertinent activities are properly documented.
- b. The comprehensive operational plans for beneficial-use facilities shall also include a comprehensive operational management plan for the facility which indicates with calculations that the acreages and methods are adequate for treating the type and volumes of wastes anticipated. The plan shall include contingencies for variations.

### 3. Facility Operational Standards

- a. The following operational standards apply to beneficial-use facilities:

i. The maximum allowable lifetime metals loading shall be restricted to the following:

Maximum Allowable Metal Loading (lb/acre) * Soil Cation-Exchange Capacity (meq/100 g)			
Metal	<5	5-15	>15
Lead (Pb)	500	1,000	2,000
Zinc (Zn)	250	500	1,000
Copper (Cu)	125	250	500
Nickel (Ni)	125	250	500
Cadmium (Cd)	5	10	20
*Other metals not listed may be subject to restrictions based upon the metals content of the waste.			

ii. Surface application of liquid wastes shall not exceed two inches per week.

iii. Soils shall maintain a sufficiently high cation-exchange capacity (CEC) to absorb metallic elements in the solid waste by natural (pH range of soil) or artificial (additives) means. Soil in the zone of incorporation must be monitored to assess the effectiveness of ongoing treatment, management needs, and soil integrity.

iv. Nitrogen concentrations in the waste must be within the limits deemed acceptable, as determined by plant nitrogen uptake, and soil and waste analyses (which shall indicate the movement of all forms of nitrogen). The potential for nitrogen to enter the groundwaters shall be addressed.

v. Wastes shall be applied to the land surface or incorporated into the soil within three feet of the surface.

vi. A comprehensive quality-assurance/quality-control plan shall be in place to ensure that all incoming wastes are in conformance with the facility's permit and these regulations.

vii. Tests of soil/waste mixtures and an analysis of the results with conclusions shall be conducted semi annually or more frequently if deemed necessary by the administrative authority. Test parameters shall consist of cation-exchange capacity, soil pH, total nitrogen, phosphorus, organic matter, salts (intrinsic to the waste), cumulative metals, and others as deemed necessary by the administrative authority.

viii. The administrative authority may provide additional requirements as necessary on a site-specific basis depending on waste type and method of application.

b. The following operational standards apply to beneficial-use facilities that receive domestic sewage sludge and septic tank pumpings:

i. If spread on or incorporated into non-food-chain cropland, waste shall be treated by a process to significantly reduce pathogens (Appendix D) prior to application or incorporation, and public access shall be controlled for 12 months following the final application. Grazing by animals whose products are consumed by humans shall be prevented for at least 30 days.

ii. If spread on or incorporated into land used to grow crops for human consumption, the waste must be treated by a process to further reduce pathogens (Appendix E) before application or incorporation. If there is no contact between the waste and edible portions of the crop, or if crops are grown more than 18 months after application or incorporation, the conditions specified in Subsection G.3.b.i of this Section only apply.

iii. The administrative authority may provide additional requirements necessary on a site-specific basis, depending upon waste type, land use, and methods of application.

c. The following standards apply to land use requirements for beneficial-use facilities:

i. Food-chain Cropland

(a). The pH of the solid waste and soil mixture shall be maintained at or above 6.5.

(b). The annual application of cadmium from the waste shall not exceed 0.5 lb per acre.

(c). Cumulative application of cadmium from sewage sludge for soils with a background pH of less than 6.5 shall not exceed 5 lb per acre unless the pH of the sludge and soil mixture is adjusted and maintained at 6.5 or greater whenever food-chain crops are grown.

ii. Land Used for Animal Feed Only

(a). The pH of waste-soil mixture must be 6.5 or greater at the time of solid waste application or when the crop is planted, whichever occurs later; and this pH level must be maintained whenever food-chain crops are grown. Crops requiring a lower pH will be considered on a site-specific basis.

(b). An operating plan for the facility shall be filed with the administrative authority demonstrating how the animal feed will be distributed to preclude ingestion by humans and that describes the measures to be taken to safeguard against possible health hazards from the entry of cadmium or other heavy metals into the food chain, as may result from alternative land use.

(c). Solid waste with concentrations of polychlorinated biphenyls (PCBs) of 10 mg/kg or more shall not be allowed.

d. The following operational standards apply to waste testing:

i. Facilities which receive sewage sludge, domestic septage or incinerator ash shall require the waste be tested for TCLP constituents prior to acceptance of the waste and annually for two years following acceptance.

ii. Facilities which receive industrial solid waste (type I) shall require testing for TCLP constituents prior to acceptance of waste and annually thereafter, or documented process knowledge that the waste is not a characteristic or listed hazardous waste as defined in LAC 33:V.Subpart 1 or by federal regulations.

H. Facility Closure Requirements

1. All permit holders shall notify the administrative authority in writing at least 90 days before closure or intention to close or abandon any individual units within a facility and shall provide the following information:

a. date of planned closure; and

b. closure schedule

2. During the closure period the permit holder must continue to comply with any prohibitions or conditions concerning growth of food-chain crops.

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: \*\* (February 1993).