

**SUBCHAPTER T: PERMITTING STANDARDS FOR OWNERS AND OPERATORS OF  
COMMERCIAL INDUSTRIAL NONHAZARDOUS WASTE LANDFILL FACILITIES**  
**§§335.580 - 335.594**  
**Effective October 29, 2009**

**§335.580. Purpose and Applicability.**

(a) The purpose of this subchapter is to establish minimum standards for facilities subject to this subchapter under subsection (b) of this section. Nothing in this subchapter shall be construed to restrict the commission's authority to implement §335.4 of this title (relating to General Prohibitions) and the provisions of Texas Water Code, Chapter 26.

(b) This subchapter applies to the following types of facilities at which nonhazardous industrial waste is stored, processed, or disposed:

(1) any new commercial industrial nonhazardous waste landfill facility; and

(2) any existing commercial industrial nonhazardous waste landfill facility with an areal or capacity expansion of the commercial industrial nonhazardous waste landfill.

(c) This subchapter does not apply to municipal solid waste facilities at which nonhazardous industrial waste is managed.

Adopted February 25, 2004

Effective March 21, 2004

**§335.581. Definitions.**

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly requires otherwise.

(1) **Commercial industrial nonhazardous waste landfill (CINWL) facility** - A landfill facility that accepts, for disposal and for a charge, nonhazardous industrial waste. This definition does not apply to municipal solid waste facilities at which nonhazardous industrial waste is managed in accordance with Chapter 330 of this title (relating to Municipal Solid Waste).

(2) **New commercial industrial nonhazardous waste landfill (CINWL) facility** - A CINWL facility which is not an "existing CINWL facility" and for which an application was filed on or after June 20, 2003, or for which an application was pending on June 20, 2003.

(3) **Existing commercial industrial nonhazardous waste landfill (CINWL) facility** - A CINWL facility for which a permit was issued prior to June 20, 2003.

(4) **Regional aquifer** - Any aquifer identified as a major or minor aquifer by the Texas Water Development Board.

Adopted February 25, 2004

Effective March 21, 2004

**§335.582. Prohibited Wastes.**

The following wastes shall not be disposed:

(1) municipal solid waste, as defined in §330.3 of this title (relating to Definitions), but only in amounts such that the total volume of municipal solid waste accepted does not exceed 20%, unless specifically authorized by the facility permit, of the total amount of waste (not including municipal solid waste) accepted during the current or previous year. The amount of waste may be determined by volume or weight, but the same unit of measure shall be used for each year, unless a variance is authorized by the executive director;

(2) hazardous waste, as defined in §335.1 of this title (relating to Definitions), except as provided in §335.590(25) of this title (relating to Operational and Design Standards);

(3) polychlorinated biphenyl compounds (PCBs), as defined by the United States Environmental Protection Agency (EPA) in regulations issued pursuant to the Toxic Substance Control Act under Title 40 Code of Federal Regulations (CFR) Part 761 unless authorized by the EPA;

(4) putrescible waste, as defined in §330.3 of this title, unless the requirements of §330.151 of this title (relating to Disease Vector Control) and §330.545 of this title (relating to Airport Safety), and this subchapter are met;

(5) explosive material, as defined by the Department of Transportation in 49 CFR Part 173;

(6) radioactive or nuclear materials regulated under Texas Health and Safety Code, Chapter 401, or rules of the commission, the Texas Department of State Health Services, the Texas Railroad Commission, or any other applicable rules of state or federal authorities;

(7) medical waste, as defined in §330.3 of this title;

(8) liquid waste, as defined in §330.3 of this title;

(9) wastes identified in §330.15(e)(1) - (5) of this title (relating to General Prohibitions), except as allowed under that section; and

(10) wastes identified in §330.171(c)(3) and (4) of this title (relating to Disposal of Special Wastes), except as allowed under that section.

Adopted October 7, 2009

Effective October 29, 2009

**§335.583. Permit Procedures.**

(a) The following requirements applicable to municipal solid waste facilities apply to permit applications for facilities subject to this subchapter:

(1) §330.53 of this title (relating to Pre-application Review);

(2) §330.57 of this title (relating to Permit and Registration Applications for Municipal Solid Waste Facilities), except that the references and requirements relating to a land-use only public hearing do not apply;

(3) §330.59 of this title (relating to Contents of Part I of the Application) except §330.63(j) of this title, concerning cost estimate for closure and post-closure care shall not apply;

(4) §330.61 of this title (relating to Contents of Part II of the Application);

(5) §330.63 of this title (relating to Contents of Part III of the Application), except that the requirement in §330.61(b)(1)(A) of this title, concerning an estimate of the population or population equivalent served at the site does not apply;

(6) §330.65 of this title (relating to Contents of Part IV of the Application);

(7) §330.219(a) of this title (relating to Recordkeeping and Reporting Requirements);

(8) §330.67 of this title (relating to Property Rights); and

(9) §330.73 of this title (relating to Additional Standard Permit and Registration Conditions for Municipal Solid Waste Facilities), except that the reference to "§305.70 of this title (relating to Municipal Solid Waste Permit and Registration Modifications)" does not apply and "§305.69 of this title (relating to Solid Waste Permit Modification at the Request of the Permittee)" applies instead.

(b) In addition to the requirements in subsection (a) of this section, the permit application must include information to demonstrate compliance with the following requirements:

(1) §335.584(b) of this title (relating to Location Restrictions);

(2) §335.585 of this title (relating to General Inspection Requirements);

(3) §335.586 of this title (relating to Personnel Training);

(4) §335.587 of this title (relating to Waste Analysis);

(5) §335.588 of this title (relating to General Requirements for Ignitable, Reactive, or Incompatible Wastes); and

(6) §335.589 of this title (relating to Contingency Plan).

Adopted October 7, 2009

Effective October 29, 2009

**§335.584. Location Restrictions.**

(a) The following location restrictions applicable to municipal solid waste facilities apply to facilities subject to this subchapter:

- (1) §330.547 of this title (relating to Floodplains);
- (2) §330.553 of this title (relating to Wetlands);
- (3) §330.555 of this title (relating to Fault Areas);
- (4) §330.557 of this title (relating to Seismic Impact Zones); and
- (5) §330.559 of this title (relating to Unstable Areas).

(b) In addition to the location restrictions in subsection (a) of this section, a new commercial industrial nonhazardous waste landfill facility, or an areal or capacity expansion of an existing commercial industrial nonhazardous waste landfill unit, may not be located:

(1) in areas where underlying soil unit(s) within five feet of the base of the containment structure, which includes the sides and bottom of the containment structure, have a Unified Soil Classification of GW (well-graded gravel), GP (poorly-graded gravel), GM (silty gravel), GC (clayey gravel), SW (well-graded sand), SP (poorly-graded sand), or SM (silty sand), or a hydraulic conductivity greater than  $1 \times 10^{-5}$  cm/sec, unless:

(A) it is in an area where the average annual evaporation exceeds average annual rainfall by more than 40 inches; or

(B) the soil unit is not sufficiently thick and laterally continuous to provide a significant pathway for waste migration;

(2) in areas overlying a regional aquifer unless the regional aquifer is separated from the base of the containment structure, which includes the sides and bottom of the containment structure, by a minimum of ten feet of material with a hydraulic conductivity towards the aquifer not greater than  $10^{-7}$  centimeters per second (cm/sec), or a thicker interval of more permeable material that provides equivalent or greater retardation to pollutant migration;

(3) on a barrier island or peninsula; or

(4) within 1,000 feet of an area subject to active coastal shoreline erosion, if the area is protected by a barrier island or peninsula, unless the design, construction, and operational features of the facility will prevent adverse effects resulting from storm surge and erosion or scouring by water. On coastal shorelines that are subject to active shoreline erosion and which are unprotected by a barrier island or peninsula, a separation distance from the shoreline to the facility must be at least 5,000 feet unless the design, construction, and operational features of the facility will prevent adverse effects resulting from storm surge and erosion or scouring by water.

Adopted October 7, 2009

Effective October 29, 2009

**§335.585. General Inspection Requirements.**

(a) The owner or operator must inspect the facility for compliance with the site operating plan.

(b) The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

(1) The owner or operator must maintain the schedule at the facility.

(2) The schedule must identify the types of problems (e.g., malfunctions or deterioration) that are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, or eroding dike).

(3) The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipments and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies required in 40 Code of Federal Regulations §264.303 for hazardous waste landfills.

(c) The owner or operator must remedy any deterioration or malfunction of equipment or structures that the inspection reveals on a schedule that ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

(d) The owner or operator must record inspections in an inspection log or summary, and retain these records in accordance with the requirements of §335.113(d) of this title (relating to Reporting of Emergency Situations by Emergency Coordinator). At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

Adopted February 25, 2004

Effective March 21, 2004

**§335.586. Personnel Training.**

(a) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this subchapter. The owner or operator must ensure that this program includes all the elements described in the document required under subsection (d)(3) of this section.

(1) This program must be directed by a person trained in waste management procedures, and must include instruction that teaches facility personnel waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

(2) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

(A) procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

(B) communications or alarm systems;

(C) response to fires or explosions;

(D) response to ground-water contamination incidents; and

(E) shutdown of operations.

(b) Facility personnel must successfully complete the program required in subsection (a) of this section within six months after the effective date of these regulations or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements of subsection (a) of this section.

(c) Facility personnel must take part in an annual review of the initial training required in subsection (a) of this section.

(d) The owner or operator must maintain the following documents and records at the facility:

(1) the job title for each position at the facility related to waste management, and the name of the employee filling each job;

(2) a written job description for each position listed under paragraph (1) of this subsection. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;

(3) a written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under paragraph (1) of this subsection; and

(4) records that document that the training or job experience required under subsections (a) - (c) of this section has been given to, and completed by, facility personnel.

(e) Training records on current personnel must be kept until closure of the facility and training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

Adopted February 25, 2004

Effective March 21, 2004

**§335.587. Waste Analysis.**

(a) The following waste analysis requirements apply to owners and operators of facilities subject to this subchapter.

(1) Before treating, storing, or disposing of any waste, the owner or operator shall obtain a chemical and physical analysis of a representative sample of the waste. At a minimum, the analysis must contain all the information that must be known to treat, store, or dispose of the waste in accordance with this subchapter.

(A) A waste generator's records of analyses performed on the waste before the effective date of these regulations, or studies conducted on waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with this paragraph.

(B) The owner or operator may arrange for the generator of the waste to supply the information required by this paragraph. If the generator does not supply the information, and the owner or operator chooses to accept a waste, the owner or operator is responsible for obtaining the information required to comply with this section.

(2) The analysis may include data developed under Subchapter R of this chapter (relating to Waste Classification), and existing published or documented data on a waste or on such waste generated from similar processes.

(3) The analysis must be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis must be repeated:

(A) when the owner or operator is notified, or has reason to believe, that the process or operation generating the waste has changed; and

(B) when the results of the inspection required in paragraph (4) of this subsection indicate that the waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

(4) The owner or operator shall inspect and, if necessary, analyze each waste received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

(b) The owner or operator shall develop and follow a written waste analysis plan that describes the procedures which the owner or operator will carry out to comply with subsection (a) of this section. This plan must be submitted with the permit application. The owner or operator shall keep this plan at the facility. At a minimum, the plan must specify:

(1) the parameters for which each waste will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with subsection (a) of this section);

(2) the test methods which will be used to test for these parameters; and

(3) the sampling method that will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(A) one of the sampling methods described in Appendix I of Title 40 Code of Federal Regulations Part 261; or

(B) an equivalent sampling method approved by the executive director;

(4) the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date;

(5) the waste analyses that waste generators have agreed to supply; and

(6) where applicable, the methods that will be used to meet any additional waste analysis requirements in §335.588 of this title (relating to General Requirements for Ignitable, Reactive, or Incompatible Wastes).

Adopted February 25, 2004

Effective March 21, 2004

**§335.588. General Requirements for Ignitable, Reactive, or Incompatible Wastes.**

(a) The owner or operator of a facility subject to this subchapter shall take precautions to prevent accidental ignition or reaction of wastes that are ignitable or reactive as defined in §335.505 of this title (relating to Class 1 Waste Determination). This waste must be separated and protected from sources of ignition or reaction including, but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled,

the owner or operator shall confine smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

(b) The owner or operator of a facility that treats, stores or disposes ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, shall take precautions to prevent reactions which:

- (1) generate extreme heat or pressure, fire or explosions, or violent reactions;
- (2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
- (3) produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- (4) damage the structural integrity of the device or facility; or
- (5) through other like means threaten human health or the environment.

(c) When required to comply with subsection (a) or (b) of this section, the owner or operator shall document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses as specified in §335.587 of this title (relating to Waste Analysis), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

Adopted February 25, 2004

Effective March 21, 2004

**§335.589. Contingency Plan.**

(a) Purpose and implementation of contingency plan.

(1) Each owner or operator of a facility subject to this subchapter shall have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of waste or constituents of such waste to air, soil, or surface water. The contingency plan must be submitted to the executive director with the permit application and, after modification or approval, will become a condition of any permit issued.

(2) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of waste or constituents of such waste that could threaten human health or the environment.

(b) Content of contingency plan.

(1) The contingency plan must describe the actions facility personnel must take to comply with subsections (a) and (f) of this section in response to fires, explosions, or any unplanned

sudden or non-sudden release of waste or constituents of such waste to air, soil, or surface water at the facility.

(2) If the owner or operator manages waste in tanks and has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with Title 40 Code of Federal Regulations (CFR) Part 112, 40 CFR Part 1510, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate waste management provisions that are sufficient to comply with the requirements of this part.

(3) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services.

(4) The plan must specify that the owner or operator will maintain a list of names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see subsection (e) of this section), and this list must be kept up-to-date and at the facility. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.

(5) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up-to-date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(6) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of waste or fires).

(c) Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:

(1) maintained at the facility; and

(2) submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

(d) Changes to the contingency plan. The contingency plan must be reviewed, and immediately updated, if necessary, whenever:

(1) the facility permit is revised;

(2) the plan fails in an emergency;

(3) the facility changes in its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of waste or constituents of such waste, or changes the response necessary in an emergency; or

(4) the list of emergency equipment changes.

(e) Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

(f) Emergency procedures.

(1) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) shall immediately:

(A) activate facility alarms or communication systems, where applicable, to notify all facility personnel; and

(B) notify appropriate state or local agencies with designated response roles if their help is needed.

(2) Whenever there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

(3) Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any waste surface water run-off from water or chemical agents used to control fire and heat-induced explosions).

(4) If the emergency coordinator determines that the facility has had a release, fire, or explosion that could threaten human health, or the environment, outside the facility and if the emergency coordinator's assessment indicates that evacuation of local areas may be advisable, the emergency coordinator shall immediately notify appropriate local authorities, and must be available to help appropriate officials decide whether local areas should be evacuated.

(5) The emergency coordinator shall immediately notify either the government official designated as the on-scene coordinator for that geographical area, (in the applicable regional contingency plan under 40 CFR Part 1510) or the National Response Center (using their 24-hour toll free number 1-800-424-8802). The report must include:

(A) name and telephone number of reporter;

(B) name and address of facility;

(C) time and type of incident (e.g., release, fire);

(D) name and quantity of material(s) involved, to the extent known;

(E) the extent of injuries, if any; and

(F) the possible hazards to human health, or the environment, outside the facility.

(6) During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

(7) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(8) Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. The owner or operator shall classify all recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility in accordance with Subchapter R of this chapter (relating to Waste Classification) and in accordance with all applicable requirements of Subchapter A of this chapter (relating to Industrial Solid Waste and Municipal Hazardous Waste in General).

(9) The emergency coordinator shall ensure that, in the affected area(s) of the facility:

(A) no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(B) all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(10) The owner or operator shall notify the executive director, and other appropriate state and local authorities, that the facility is in compliance with paragraph (8) of this subsection before operations are resumed in the affected area(s) of the facility.

(11) The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, the

owner or operator shall submit a written report on the incident to the executive director. The report must include:

- (A) name, address, and telephone number of the owner or operator;
- (B) name, address, and telephone number of the facility;
- (C) date, time, and type of incident (e.g., fire, explosion);
- (D) name and quantity of material(s) involved;
- (E) the extent of injuries, if any;
- (F) an assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- (G) estimated quantity and disposition of recovered material that resulted from the incident.

Adopted February 25, 2004

Effective March 21, 2004

**§335.590. Operational and Design Standards.**

The following requirements, including those applicable to municipal solid waste facilities, apply to owners and operators of facilities subject to this subchapter:

- (1) §330.121 of this title (relating to General);
- (2) §330.123 of this title (relating to Pre-operation Notice);
- (3) §330.125 of this title (relating to Recordkeeping Requirements), except that the requirements under §330.125(b)(3) of this title concerning recordkeeping for gas monitoring and remediation plans relating to explosive and other gases do not apply, except as determined necessary by the executive director;
- (4) §330.127 of this title (relating to Site Operating Plan);
- (5) §330.129 of this title (relating to Fire Protection);
- (6) §330.131 of this title (relating to Access Control);
- (7) §330.133(a) - (c) of this title (relating to Unloading of Waste);
- (8) §330.137 of this title (relating to Site Sign);
- (9) §330.139 of this title (relating to Control of Windblown Waste and Litter);

- (10) §330.141 of this title (relating to Easements and Buffer Zones);
- (11) §330.143(a) of this title (relating to Landfill Markers and Benchmark);
- (12) §330.149 of this title (relating to Odor Management Plan);
- (13) §330.153 of this title (relating to Site Access Roads);
- (14) §330.155 of this title (relating to Salvaging and Scavenging);
- (15) §330.157 of this title (relating to Endangered Species Protection);
- (16) §330.159 of this title (relating to Landfill Gas Control) as determined necessary by the executive director;
- (17) §330.161 of this title (relating to Oil, Gas, and Water Wells);
- (18) §330.163 of this title (relating to Compaction);
- (19) §330.165 of this title (relating to Landfill Cover);
- (20) §330.167 of this title (relating to Poned Water);
- (21) §330.175 of this title (relating to Visual Screening of Deposited Waste);
- (22) §330.207 of this title (relating to Contaminated Water Management);
- (23) the owner or operator shall have and follow procedures for the suppression and control of dust; and
- (24) the owner or operator shall ensure that each commercial industrial nonhazardous waste landfill unit meets the requirements of subparagraphs (A) - (F) of this paragraph.

(A) Design criteria.

(i) Landfill cells shall be designed and constructed in accordance with subclause (I) or (II) of this clause, and shall also be constructed in accordance with subclause (III) of this clause.

(I) a design that ensures that the concentration values for constituents listed in §330.419(a) of this title (relating to Constituents for Detection Monitoring) will not be exceeded in the uppermost aquifer at the point of compliance, as specified by the executive director under clause (iv) of this subparagraph; or

(II) a composite liner, as defined in clause (ii) of this subparagraph, and a leachate collection system that is designed and constructed in accordance with subparagraph (B) of this paragraph; and

(III) unless the executive director approves an engineered design that the applicant has demonstrated will provide equal or greater protection to human health and the environment, a landfill cell must be constructed where the base of the containment structure, which includes the sides and bottom of the containment structure, is at least five feet above the uppermost saturated soil unit having a Unified Soil Classification of GW (well-graded gravel), GP (poorly-graded gravel), GM (silty gravel), GC (clayey gravel), SW (well-graded sand), SP (poorly-graded sand), or SM (silty sand), or a hydraulic conductivity greater than  $1 \times 10^{-5}$  cm/sec, unless such saturated soil unit is not sufficiently thick and laterally continuous to provide a significant pathway for waste migration.

(ii) For purposes of this section, "composite liner" means a system consisting of two components. The upper component shall consist of a minimum 30-mil (0.75 mm) flexible membrane liner and the lower component shall consist of at least a three-foot layer of compacted soil with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  cm/sec flexible membrane liner components consisting of high density polyethylene shall be at least 60-mil thick. The flexible membrane liner component must be installed in direct and uniform contact with the compacted soil component.

(iii) When approving a design that complies with clause (i)(I) of this subparagraph, the executive director may consider at least the following factors:

surrounding land;

(I) the hydrogeologic characteristics of the facility and

(II) the climatic factors of the area; and

leachate.

(III) the volume and physical and chemical characteristics of the

(iv) For purposes of this paragraph, the point of compliance is defined in §330.3 of this title (relating to Definitions). In determining the point of compliance, the executive director may consider at least the following factors:

surrounding land;

(I) the hydrogeologic characteristics of the facility and

leachate;

(II) the volume and physical and chemical characteristics of the

(III) the quantity, quality, and direction of flow of groundwater;

(IV) the proximity and withdrawal rate of the groundwater users;

(V) the availability of alternative drinking water supplies;

(VI) the existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently used or reasonably expected to be used for drinking water;

(VII) public health, safety, and welfare effects; and

(VIII) practicable capability of the owner or operator.

(B) Landfill cells shall have a leachate-collection system designed and constructed to maintain less than a 30-cm depth of leachate over the liner. The leachate-collection and leachate-removal system shall be:

(i) constructed of materials that are chemically resistant to the leachate expected to be generated;

(ii) of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the landfill; and

(iii) designed and operated to function through the scheduled closure and post-closure period of the landfill.

(C) Storm water run-on/run-off facilities such as berms and ditches shall be provided in accordance with §330.63 of this title (relating to Contents of Part III of the Application).

(D) The site shall have a groundwater monitoring system installed that is capable of detecting the migration of pollutants from the landfill and is sampled semiannually for the parameters specified in Chapter 330, Subchapter J of this title (relating to Groundwater Monitoring and Corrective Action).

(E) The final cover placed over the commercial industrial nonhazardous waste landfill unit shall consist of a minimum of 18 inches of uncontaminated topsoil overlying four feet of compacted clay-rich soil material meeting the requirements of §330.457 of this title (relating to Closure Requirements for Municipal Solid Waste Landfill Units That Receive Waste on or after October 9, 1993). The final cover over the aerial fill shall meet the requirements of §330.457 of this title and shall include a flexible membrane component.

(F) Nonhazardous waste may be placed above natural grade in commercial industrial nonhazardous waste landfill units provided the conditions in clauses (i) - (vi) of this subparagraph are met, except as provided in clause (vii) of this subparagraph:

(i) waste placed above grade shall be laterally contained by dikes that are constructed to:

(I) prevent washout, release, or exposure of waste;

- safety factor of 1.5;
- (II) be physically stable against slope failure, with a minimum
- from storms and floods;
- (III) prevent washout from hydrostatic and hydrodynamic forces
- (IV) prevent storm water from reaching the waste;
- (V) minimize release of leachate; and
- (VI) minimize long-term maintenance;
- crest of the dike;
- (ii) the liner required in paragraph (22) of this section shall extend to the
- below the crest of the dike;
- (iii) waste placed against the dike is placed no higher than three feet
- nonhazardous waste landfill units does not exceed 3% to the center of the unit;
- (iv) the slope of the wastes placed in the commercial industrial
- and
- (v) no waste is placed higher than the lowest elevation of the dike crest;
- (vi) a dike certification report is submitted with Attachment 10 of Part III  
of the permit application. The certification shall be in the following form:

"I (Texas Licensed Professional Engineer), Texas P.E. Registration Number \_\_\_\_\_, certify under penalty of law that I have personally examined and am familiar with the design and construction of the dikes that are a portion of (unit name) .

I further certify that I have evaluated the dike design and materials of construction using accepted engineering procedures, and have determined that the dike has structural integrity, and:

(I) Will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the unit; and

(II) Will not fail due to scouring or piping, without dependence on any liner system included in the unit construction.

(Signature)

Date: \_\_\_\_\_

(SEAL)"

(vii) a commercial industrial nonhazardous waste landfill is not subject to the requirements of clauses (ii) - (v) of this subparagraph provided that the owner or operator submits a demonstration that the standards of clause (i) of this subparagraph can be met without meeting the requirements of clauses (ii) - (v) of this subparagraph, the demonstration is approved in writing by the executive director, and the owner or operator enters the approval into the facility operating record.

(25) Hazardous waste from a conditionally exempt small quantity generator as defined in §335.78(a) of this title (relating to Special Requirements for Hazardous Waste Generated by Conditionally Exempt Small Quantity Generators), may be accepted for disposal in any commercial industrial nonhazardous waste landfill facility provided the amount of hazardous waste accepted from each conditionally exempt small quantity generator does not exceed 220 pounds (100 kilograms) a calendar month, and provided the landfill owner or operator is willing to accept the hazardous waste.

Adopted October 7, 2009

Effective October 29, 2009

**§335.591. Groundwater Protection Design and Operation.**

The following requirements applicable to municipal solid waste facilities apply to owners and operators of facilities subject to this subchapter:

- (1) §330.333 of this title (relating to Leachate Collection System);
- (2) §330.335 of this title (relating to Alternative Liner Design);
- (3) §330.337 of this title (relating to Special Liner Design Constraints);
- (4) §330.555 of this title (relating to Fault Areas);
- (5) §330.339 of this title (relating to Liner Quality Control Plan); and

(6) §330.341 of this title (relating to Soil Liner Evaluation Report and Geomembrane Liner Evaluation Report).

Adopted October 7, 2009

Effective October 29, 2009

**§335.592. Groundwater Monitoring and Corrective Action.**

The following requirements applicable to municipal solid waste and hazardous waste facilities apply to owners and operators of facilities subject to this subchapter:

- (1) §330.401 of this title (relating to Applicability);
- (2) §330.403 of this title (relating to Groundwater Monitoring Systems);
- (3) §330.405 of this title (relating to Groundwater Sampling and Analysis Requirements);

- (4) §330.407 of this title (relating to Detection Monitoring Program for Type I Landfills);
- (5) §330.409 of this title (relating to Assessment Monitoring Program);
- (6) §330.411 of this title (relating to Assessment of Corrective Measures);
- (7) §330.413 of this title (relating to Selection of Remedy);
- (8) §330.415 of this title (relating to Implementation of the Corrective Action Program);
- (9) §330.419 of this title (relating to Constituents for Detection Monitoring); and
- (10) §330.421 of this title (relating to Monitor Well Construction Specifications).

Adopted October 7, 2009

Effective October 29, 2009

**§335.593. Closure and Post-Closure Care Requirements.**

The owner or operator of a facility subject to this subchapter shall close the facility or any part of it in accordance with the requirements of §335.8 of this title (relating to Closure and Remediation). In addition to these requirements, the owner or operator shall meet the requirements for closure and post-closure of municipal solid waste facilities in §330.457 of this title (relating to Closure Requirements for Municipal Solid Waste Landfill Units that Receive Waste on or after October 9, 1993).

Adopted October 7, 2009

Effective October 29, 2009

**§335.594. Financial Assurance.**

The owner or operator of any landfill subject to this subchapter shall establish and maintain financial assurance for closure and post-closure care of the landfill in accordance with Chapter 37, Subchapter P of this title (relating to Financial Assurance for Hazardous and Nonhazardous Industrial Solid Waste Facilities).

Adopted February 25, 2004

Effective March 21, 2004