

**SUBCHAPTER T: USE OF LAND OVER CLOSED
MUNICIPAL SOLID WASTE LANDFILLS
§§330.951 - 330.964
Effective March 27, 2006**

§330.951. Definitions.

Unless otherwise noted, all terms contained in this section are defined by their plain meaning. This section contains definitions that are applicable only to this subchapter and that supersede definitions in §330.3 of this title (relating to Definitions) where those terms appear in this subchapter. As used in this subchapter, words in the singular include the plural and words in the plural include the singular. The following words and terms, when used in this subchapter, have the following meanings.

- (1) **Alteration**--Minor changes and standard redesign activities common in residential and commercial structures, such as moving walls and doors, that will not affect the foundation or increase the horizontal extent of the foundation.
- (2) **Authorization**--A written approval issued by the executive director that, by its conditions, may allow the disturbance of the integrity of the final cover.
- (3) **Closed municipal solid waste landfill**--A permitted or previously permitted municipal solid waste landfill, a municipal solid waste landfill which has never been permitted, or a dumping area as defined in this section, which stopped receiving waste and completed the closure activities.
- (4) **Closure plan**--A plan addressing the placement of a final cap on a closed municipal solid waste landfill where waste is exposed or the existing cap is inadequate.
- (5) **Construction**--The inception of an activity that provides improvements necessary for the utilization of an enclosed structure.
- (6) **Develop and/or development**--Any activity on or related to real property that is intended to lead to the construction or alteration of an enclosed structure for the use and/or occupation of people for an industrial, commercial, or public purpose or to the construction of residences for three or more families, including subdivisions that will include single-family homes and duplexes.
- (7) **Development permit**--A written permit issued by the executive director that, by its conditions, may authorize a person or persons to develop an enclosed structure over a closed municipal solid waste landfill unit. The development permit does not supersede local building and development permits, but is an additional permit.
- (8) **Dumping area**--An non-permitted area of land or an excavation with unknown boundaries or which have had the boundaries determined through subsequent investigation that has received only municipal solid waste or municipal solid waste combined with other solid wastes, including but not limited to, construction/demolition waste, commercial solid waste, nonhazardous

sludge, conditionally exempt small-quantity generator hazardous waste, and industrial solid waste, and that is not a land treatment unit, surface impoundment, injection well, or waste pile as those terms are defined in §330.3 of this title (relating to Definitions).

(9) **Enclosed structure or structure**--Any permanent structure that is intended to be or has the potential of being used or occupied by people for an industrial, commercial, public, or residential purpose.

(10) **Essential improvements**--All improvements and appurtenances including, but not limited to, the excavations for the structure, installation of utilities, on-site wastewater disposal facilities, grading and drainage improvements, access drives and parking lots, foundation, security, fencing, landscape plantings, and irrigation systems necessary for the utilization of an enclosed structure.

(11) **Existing structure**--Any enclosed structure that began development prior to September 1, 1993.

(12) **Permitted development**--An enclosed structure or group of enclosed structures that have been issued a development permit.

(13) **Post-closure care**--The period of time beginning with the professional engineer certification of completing final closure activities as accepted by the executive director in accordance with §§330.453(f), 330.455(c), or 330.457(f)(5) of this title (relating to Closure and Post-Closure) and ending with the professional engineer certification of completion of post-closure care maintenance as accepted by the executive director in accordance with §330.463 of this title (relating to Post-Closure Care Requirements). Monitoring and maintenance activities are required during the post-closure care period in accordance with §330.463 of this title.

(14) **Post-closure care landfills**--A municipal solid waste landfill facility that has received a municipal solid waste permit under §330.7 of this title (relating to Permit Required) and is currently in the post-closure care period as defined in this section.

(15) **Registration**--A document issued by the executive director regarding submitted information for an existing enclosed structure built over a closed municipal solid waste landfill unit that does not require a development permit.

(16) **Site operating plan**--A prepared document that provides guidance for operations and procedures necessary to maintain human safety and environmental protection at the development, permitted development, or existing structure in a manner consistent with the development permit and the commission's regulations.

(17) **Structures gas monitoring plan**--A document prepared by a licensed professional engineer that provides procedures to ensure the detection of landfill gases and the prevention of migration of landfill gases into enclosed structures.

§330.952. Applicability and Exemptions.

(a) Applicability. The requirements in this subchapter apply to:

(1) persons owning, leasing, or developing property overlying a closed municipal solid waste landfill as defined by §330.951 of this title (relating to Definitions), except as noted in subsection (b) of this section; and

(2) persons developing a tract of land greater than one acre, except as noted in subsection (b) of this section;

(b) Exemptions. The following persons shall be exempt from certain requirements of this subchapter.

(1) An owner of property constructing a single-family or double-family home, other than a developer of a housing subdivision, shall be exempt from §330.953 of this title (relating to Soil Test Required before Development), §330.954 of this title (relating to Development Permit, Development Authorization, and Registration Requirements, Procedures, and Processing), and §330.961 of this title (relating to Operational Requirements for an Enclosed Structure Over a Closed Municipal Solid Waste Landfill Unit or a Municipal Solid Waste Landfill in Post-Closure Care).

(2) An owner of an existing structure built over a closed municipal solid waste landfill unit and that is a single-family or double-family home shall be exempt from §330.954 of this title and/or §330.959 of this title (relating to Contents of Registration Application for an Existing Structure Built Over a Closed Municipal Solid Waste Landfill Unit) and §330.961 of this title.

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§330.953. Soil Test Required before Development.

(a) A person may not undertake the development of a tract of land that is greater than one acre in area unless the person conducts a soil test prior to or during development and construction. The soil test is intended to determine if a landfill exists on the property planned for development.

(b) A soil test under this section shall be conducted by a licensed professional engineer.

(c) The licensed professional engineer must choose one of the following tests.

(1) Test I. The licensed engineer shall observe all subsurface disturbances, undertaken for whatever reason, during development through the completion of the foundation. A subsurface investigation prior to construction is not required by Test I.

(2) Test II. A subsurface investigation undertaken for the purpose of finding a closed municipal solid waste landfill unit. The investigation must incorporate a sufficient number of borings or excavations, the number of which shall be determined on a site-specific basis by the licensed professional engineer. Each boring or excavation shall be to a minimum depth of ten feet.

(3) Test III. A subsurface investigation conducted at the development site for geotechnical or environmental purposes, or a housing and urban development test for a homeowner's warranty.

(d) In accordance with Texas Health and Safety Code, §361.538(c), any engineer who conducts a soil test and determines that part of the tract overlies a closed municipal solid waste landfill shall notify the following persons of that determination within 30 days of the completion of the test:

- (1) each owner and each lessee of the tract;
- (2) the executive director;
- (3) local government officials with the authority to disapprove the application for development; and
- (4) the regional council of governments.

(e) The responsible engineer shall affix his seal, signature, and date of execution to the soil test results as required by the Texas Engineering Practice Act, §15c, and in accordance with 22 TAC §131.166 (relating to Engineer's Seal).

(f) All soil test excavations where waste is removed shall be backfilled and compacted with clean high-plasticity or low-plasticity clay. The excavation shall be backfilled to exceed the existing grade and provide positive drainage.

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§330.954. Development Permit, Development Authorization, and Registration Requirements, Procedures, and Processing.

(a) Permit required for development over a closed municipal solid waste (MSW) landfill unit.

(1) No person may commence or continue physical construction of an enclosed structure over a closed MSW landfill as defined in §330.951 of this title (relating to Definitions) without first submitting a development permit application in accordance with §330.956 of this title (relating to Application for Proposed or Existing Constructions Over a Closed Municipal Solid Waste Landfill Unit, General Requirements) and receiving a development permit issued by the executive director, except as noted in paragraph (7) of this subsection. The permit issued by the executive director under this subchapter is a development permit and not a permit for the management of solid waste. A permit application for a development permit shall comply with those requirements in this subchapter. A permit application to manage MSW shall comply with the applicable sections of Chapter 281 and Chapter 305 of this title (relating to Applications Processing and Consolidated Permits), and Subchapters A - M of this chapter.

(2) A development permit is required for construction of an enclosed structure over a closed MSW landfill that had received a permit under §330.7 of this title (relating to Permit Required) and had its permit revoked at the end of the post-closure care period in accordance with §305.67 of this title (relating to Revocation and Suspension upon Request or Consent) or for construction of an enclosed structure over a non-permitted closed MSW landfill. The exact waste boundary may be determined through soil boring tests in accordance with §330.953 of this title (relating to Soil Test Required before Development), or through alternative investigation methods approved by the executive director.

(3) A development permit for construction of an enclosed structure is required for an entire property that includes a closed MSW landfill with unknown boundaries as defined in §330.951 of this title.

(4) The permit application under this subchapter must be received at least 45 days prior to the proposed commencement of construction over the closed MSW landfill unit.

(5) If a person directs an engineer to conduct Soil Test I, and the soil test reveals the existence of a closed MSW landfill unit after the commencement of construction, construction of the enclosed structure being built over the waste area shall cease immediately, and a permit application shall be submitted and a development permit issued before construction of the enclosed structure over the waste area unit can resume. The person may proceed with construction and development of other facilities, including those items listed in the definition of essential improvements.

(6) If a person directs an engineer to conduct either Soil Test II or Soil Test III and the engineer discovers a closed MSW landfill unit as a result of the test, the person shall submit a permit application. Development of an enclosed structure over the closed landfill unit cannot begin until a development permit is issued.

(7) If a person directs an engineer to conduct either Soil Test II or Soil Test III and the engineer does not detect a closed MSW landfill unit as a result of the test, but subsequently discovers a closed MSW landfill unit during the development, the person is not required to submit a permit application but must meet the provisions of §330.959 of this title (relating to Contents of Registration Application for an Existing Structure Built Over a Closed Municipal Solid Waste Landfill Unit).

(8) As part of the application, the owner shall provide the name and physical and mailing addresses of a public building with normal operating hours such as library, city hall, or county courthouse where the application can be viewed by the general public. The facilities where the permit can be viewed shall be in compliance with all applicable requirements of the Americans with Disabilities Act. The application shall also include an adjacent landowner list.

(b) Review and approval of permit application.

(1) Notice of the opportunity to request a public meeting for an application shall be provided not later than 45 days of the executive director's receipt of the application in accordance with the procedures contained in §39.501(c) of this title (relating to Application for Municipal Solid Waste Permit). The owner or operator and the commission shall hold a public meeting in the local area, prior

to facility authorization, if a public meeting is required based on the criteria contained in §55.154(c) of this title (relating to Public Meetings). This section does not require the commission to respond to comments, and it does not create an opportunity for a contested case hearing. The purpose of the public meeting is for the public to provide input for consideration by the commission, and for the applicant and commission staff to provide information to the public.

(2) The commission shall notify the owner by mail of the date and time of the meeting

(3) The commission shall require the applicant to publish notice of the meeting in a newspaper that is generally circulated in each county in which the property proposed for development is located. The published notice must appear at least once a week for the two weeks before the date of the meeting. The commission shall also notify all individuals on the list of adjacent landowners at least 15 days prior to the meeting. The notice shall list the location, date, and time of the public meeting, and the location of the public building where the development permit application can be viewed.

(4) The executive director's staff will conduct the public meeting at the designated location. The owner will make a presentation of the application, the executive director's staff will describe the development permit, and public comment will be received. The public meeting is not an evidentiary proceeding.

(5) On or before the fifth day following the public meeting:

(A) the executive director will either approve or deny the development permit application. The executive director shall base the decision on whether the application meets each of the requirements of §330.956 of this title and §330.957 of this title (relating to Contents of the Development Permit and Workplan Application). A decision denying the permit shall state the deficiencies that were cause for the denial and any modifications necessary to correct those deficiencies; and

(B) a person may submit in writing to the chief clerk a request to be notified of the executive director's decision on the application.

(6) The date on which the executive director issues the order shall be construed as the date on which notice of the decision is mailed to the owner and to each person that requested notification of the executive director's decision in accordance with paragraph (5)(B) of this subsection.

(7) Petition for review of executive director's decision.

(A) The owner or a person may file a petition for review not later than the tenth day after the date the executive director issues the order. The owner or person that files a petition shall file the petition with the chief clerk, and shall mail a copy of the petition to the owner and to each person that requested notification of the executive director's decision in accordance with paragraph (5)(B) of this subsection.

(B) If a petition for review is filed, the commission shall act on the petition for review within 35 days after issuance of the executive director's order or at the next scheduled commission meeting, whichever is later. The commission may affirm or reverse the order issued by the executive director.

(C) A commission order ruling on a petition for review is final and effective on the date issued.

(8) If no petition for review is filed ten days after the executive director issues a decision, the decision is final and effective on the 11th day after the date the decision was issued.

(9) If the actual cost of reviewing the permit is not equal to the application fee, the owner will be presented with either a refund or an invoice in accordance with subsection (a)(7) of this section. If an invoice is submitted, a development permit will not be issued until the invoice is paid.

(10) An owner who is denied a development permit may submit a new application to the executive director.

(c) Requirements for development over a closed MSW landfill in post-closure care.

(1) For an MSW landfill that is covered by an existing permit for the management of solid waste received under §330.7 of this title and is currently in post-closure care, no person may commence physical construction of an enclosed structure without submitting a permit modification application for the closure plan and post-closure plan of the existing permit in accordance with §305.70(j)(6) of this title (relating to Municipal Solid Waste Permit and Registration Modifications), or a permit amendment application in accordance with §305.62 of this title (relating to Amendment), and a workplan including those items listed in §330.957 of this title, and receiving the approval from the executive director.

(2) For an MSW landfill that is covered by an existing permit for the management of solid waste received under §330.7 of this title and is currently in post-closure care, no person may commence with any type of non-enclosed structures, which will result in the disturbance, in any way, of the final cover without submitting a permit modification application for the closure plan and post-closure plan of the existing permit in accordance with §305.70(j)(6) of this title or a permit amendment application in accordance with §305.62 of this title, and a workplan including those items listed in §330.960 of this title (relating to Contents of Authorization Request to Disturb Final Cover Over a Closed Municipal Solid Waste Landfill for Non-enclosed Structures), and receiving the approval from the executive director.

(3) The executive director shall issue a decision to approve or deny the permit modification/amendment application. The executive director shall base the decision on whether the application meets each of the requirements of §305.70(j)(6) or §305.62 of this title, respectively, and of §330.957 or §330.960 of this title, respectively. A decision denying the permit modification/amendment shall state the deficiencies that were cause for the denial and any modifications necessary to correct those deficiencies.

(d) Registration for existing structures.

(1) The owner or lessee of an existing structure that existed or began development prior to September 1, 1993, and is built over a closed MSW landfill unit, shall submit a registration application to the executive director. The registration application shall be submitted to the executive director and shall include those items listed in §330.959 of this title. This paragraph is not intended to require that owners and lessees of enclosed structures initiate investigations for closed MSW landfills.

(2) A registration issued by the executive director under this subchapter is not a registration for the management of solid waste. A registration application for an existing structure shall comply with those requirements in this subchapter. A registration application to manage MSW shall comply with the applicable sections of Chapter 281 and Chapter 305 of this title and Subchapters A - M of this chapter.

(3) The owner shall submit the registration within 180 days from the determination that the structure overlies a closed MSW landfill.

(4) Upon receipt of written approval of the structures gas monitoring plan or approval with modifications to the plan from the executive director, the owner or lessee of the existing structure shall implement the plan in accordance with its approved schedule.

(e) Authorization to disturb final cover for non-enclosed structures.

(1) The integrity of the final cover of a closed MSW landfill shall not knowingly be violated, disturbed, altered, removed, or interrupted in any way without the prior authorization of the executive director, except where soil tests are being performed in accordance with §330.953 of this title.

(2) Penetrations of the final cover or liner systems will not be allowed without the prior authorization of the executive director. These include, but are not limited to, borings, piers, spread footings, foundations for light standards, fence posts, anchors, deadman anchors, manholes, on-site disposal systems, recreational facilities, and any other kind of non-enclosed structures.

(3) An authorization to disturb final cover issued by the executive director under this subchapter is not an authorization for the management of solid waste. An application for authorization shall comply with those requirements in this subchapter.

(4) The authorization request must be received at least 45 days prior to the proposed commencement of construction over the closed MSW landfill unit.

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§330.955. Miscellaneous.

(a) An enclosed area to be occupied by people under the natural grade of the land or under the grade of the final cover of the closed municipal solid waste (MSW) landfill will not be allowed.

(b) The executive director may require that additional soil layers or building pads be placed on the final cover prior to the initiation of any construction activity or structural improvements in order to protect the integrity and function of the final cover, any liner(s), any components of the containment system(s), or any monitoring system(s).

(c) The executive director may allow small amounts of solid waste removed from a closed MSW landfill (including residuals from a soil test) to be redeposited in the closed MSW landfill on a case-by-case basis. The workplan for developing land over a closed MSW landfill should describe the steps taken to ensure that removed waste will be appropriately covered or removed to an authorized waste management facility.

(d) Unauthorized pilings in or through the final cover of a closed MSW landfill are prohibited.

(e) Unauthorized borings or other penetrations of the final cover of a closed MSW landfill are prohibited.

(f) Any water that comes in contact with waste becomes contaminated water and has to be properly discharged in a manner that will not cause surface water or groundwater contamination.

(g) Locations where waste is removed shall be backfilled and compacted with clean high-plasticity or low-plasticity clay. The excavation shall be backfilled to exceed the existing grade and provide positive drainage.

(h) No waste shall be left exposed overnight.

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§330.956. Application for Proposed or Existing Constructions Over a Closed Municipal Solid Waste Landfill Unit, General Requirements.

(a) The application shall be submitted prior to the public meeting. The owner shall be required to comply with the design, construction, and operating procedures proposed in the application.

(b) The owner is responsible for providing the executive director data of sufficient completeness, accuracy, and clarity to provide assurance that operation of the facility will pose no reasonable probability of adverse effects to the health, welfare, or physical property of residents and occupants of the structures, and the environment. Failure to provide complete information as required by this subchapter may be cause for the executive director to return the application without further action. Submission of false information shall constitute grounds for denial or revocation of the development permit. The owner is responsible for determining and reporting to the executive director any site-specific conditions that require special design considerations. The proposed development shall be in compliance with all applicable state and federal laws.

(c) The owner shall submit an application following the requirements in §330.57(e) - (h) of this title (relating to Permit and Registration Applications for Municipal Solid Waste Facilities).

- (d) The maps submitted as a group shall show the following:
- (1) the prevailing wind direction with a wind rose;
 - (2) all known water wells within 500 feet of the proposed development permit boundary. The state well-numbering system designation for Texas Water Development Board "Located Wells," where applicable, shall be shown;
 - (3) area streams, ponds, lakes, and wetlands;
 - (4) the property boundary of the site;
 - (5) drainage, pipeline, and utility easements within or adjacent to the site; and
 - (6) schools, licensed day care facilities, hospitals and other health care facilities within 1,000 feet of the boundaries of the known fill area.

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§330.957. Contents of the Development Permit and Workplan Application.

(a) General requirements. The application shall follow the general requirements in §330.956 of this title (relating to Application for Proposed or Existing Constructions Over a Closed Municipal Solid Waste Landfill Unit, General Requirements).

(b) Certification.

(1) Following the language of Texas Health and Safety Code, §361.533, the licensed professional engineer preparing a development permit application shall include the following certification: Certification of No Potential Threat to Public Health or the Environment. "I, _____, P.E. # _____, certify that the proposed development is necessary to reduce a potential threat to public health or the environment, or that the proposed development will not increase or create a potential threat to public health or the environment. Further, I certify that the proposed development will/will not damage the integrity or function of any component of the Closed Municipal Solid Waste Landfill Unit, including, but not limited to, the final cover, containment systems, monitoring system, or liners. This certification includes all documentation of all studies and data on which I relied in making these determinations." (signed, sealed, and dated by the licensed professional engineer).

(2) For landfills in post-closure care, the owner or operator of the closed municipal solid waste (MSW) landfill unit shall submit to the executive director for review and approval a certification, signed by an independent licensed professional engineer and including all applicable documentation necessary to support the certification, demonstrating that:

(A) any proposed construction activities or structural improvements on the closed MSW landfill unit or waste management area shall not disturb the integrity and function of the final cover, any liner(s), all components of the containment system(s), and any monitoring system(s);

(B) the post-closure activities or improvements shall not increase or serve to create any potential threat to human health and the environment or that the proposed activities or improvements are necessary to reduce a potential threat to human health and the environment;

(C) any proposed modification or replacement of existing construction activities or structural improvements on any closed MSW landfill unit or waste management area that may disturb the integrity and function of any portion of the final cover, any liner(s), any components of the containment system(s), or any monitoring system(s) shall not increase nor serve to create any potential threat to human health and the environment; and

(D) other disturbances of a closed MSW landfill unit or waste management area if the owner or operator submits to the executive director for review and approval, a certification that demonstrates that the disturbance, including the removal of any waste, shall not cause harm to the integrity and function of the final cover, any liner(s), any components of the containment system(s), or any monitoring system(s) and shall not increase nor serve to create any potential threat to human health or the environment. This certification shall be signed by the owner or operator of the unit or facility and an independent licensed professional engineer and shall include all applicable documentation necessary for the certification.

(c) Existing conditions summary. The owner shall discuss any land use, environmental, or special issues that affect the facility. This shall include, but not be limited to:

- (1) condition of final cover;
- (2) waste characterization;
- (3) gas production; and
- (4) potential environmental impacts.

(d) Legal authority. The applicant shall provide verification of the applicant's legal status. Normally, this is a one-page certificate of incorporation issued by the Secretary of State.

(e) Evidence of competency. The names of the principals and supervisors of the applicant's organization relative to the development shall be provided.

(f) Notice of appointment. The applicant shall provide a notice of appointment identifying the applicant's engineer.

(g) Notice of coordination. The applicant shall provide notice of coordination with all local, state, and federal government officials and agencies.

(h) Legal description. The applicant shall provide legal description of the property in accordance with §330.59(d) of this title (relating to Contents of Part I of the Application).

(i) Site drawing. The applicant shall provide a site drawing, drawn to scale, that indicates the location of all waste disposal areas, existing and proposed structures, creeks, and ponds.

(j) Maps. All maps shall clearly show the boundaries of the tract of land under development and the actual fill areas.

(1) General location maps. These maps shall be all or a portion of county maps prepared by the Texas Department of Transportation (TxDOT). At least one general location map shall be at a scale of 1/2 inch equals one mile. If the TxDOT publishes more detailed maps of the proposed site area, the more detailed maps shall also be included. The latest published revision of all maps shall be used. In addition, the applicant shall provide maps as necessary to accurately show proximity of the site to surrounding features and structures.

(2) General topographic maps. These maps shall be United States Geological Survey 7-1/2 minute quadrangle sheets or equivalent. At least one general topographic map shall be at a scale of one inch equals 2,000 feet.

(k) General geology and soils statement. The application shall include a discussion in general terms of the geology and soils of the proposed facility, including any known pathways for leachate and landfill gas migration.

(l) Groundwater and surface water statement. The application shall include a description of the groundwater and surface water resources at or near the facility and how they will be impacted by the development.

(m) Foundation plans. The owner shall provide foundation plans, including geotechnical soil investigation and design reports.

(1) In order to prevent gas migration into buildings and other structures, structures shall be designed and constructed in accordance with the following criteria.

(A) A geomembrane or equivalent system with very low gas permeability shall be installed between the slab and the subgrade, and a permeable layer of a minimum thickness of 12 inches, composed of an open-graded, clean aggregate material, shall be installed between the geomembrane and the subgrade.

(B) A geotextile filter shall be utilized to prevent introduction of fine soil or other particulate matter into the permeable layer.

(C) A landfill gas ventilation or active collection system shall be installed consistent with the structures gas monitoring plan required by subsection (t) of this section.

(D) Perforated venting pipes or alternative venting methods approved by the executive director shall be installed within the permeable layer and shall be designed to operate without clogging.

(E) The venting gas devices shall be constructed to allow connection to an induced-draft exhaust system.

(F) Automatic methane gas sensors shall be installed within the venting pipe and/or permeable gas layer and inside the building or any other structure in order to trigger an audible alarm when methane gas concentrations greater than 20% of the lower explosive limit are detected.

(2) Alterations of existing structures are exempt from the requirements of paragraph (1) of this subsection.

(3) An owner who requests suspension of gas monitoring based upon the demonstration required by subsection (t)(1)(B) of this section, may submit to the executive director a request for a variance from the requirements of paragraph (1) of this subsection. The executive director shall base the decision on site-specific factors including, but not limited to, age of the MSW landfill, type of waste deposited in the MSW landfill, and testing methods utilized by the owner.

(n) Other plans. The application shall include the following plans:

(1) grading and drainage;

(2) irrigation systems; and

(3) a dimensional control plan of the facility relating all existing and/or proposed enclosed structures and essential improvements of the development and the locations of all required improvements and appurtenances to the legal description boundary of the facility and the limits of the waste disposal area, signed and sealed by a registered professional land surveyor.

(o) Soil tests. The owner shall provide all soil tests and/or other information relied upon to make the determination that the facility was used as an MSW disposal area as required by §330.953 of this title (relating to Soil Test Required before Development), including procedures performed to identify the limits of the waste disposal area.

(p) Certified copies of required notices. The owner shall provide certified copies of all notices having been made by the licensed professional engineer, by the owner, and by the lessor/lessee in accordance with §330.953 of this title, §330.962 of this title (relating to Notice to Real Property Records), §330.963 of this title (relating to Notice to Buyers, Lessees, and Occupants), and §330.964 of this title (relating to Lease Restrictions).

(q) Closure plan. The owner shall provide a closure plan for any part of the waste disposal area that will not have a structure built over it, including placement of the final cover.

(r) Operational requirements plan. The owner shall provide a plan discussing the necessary procedures and practices to be implemented and followed to ensure that the owner meets the provisions of §330.961 of this title (relating to Operational Requirements for an Enclosed Structure Over a Closed Municipal Solid Waste Landfill Unit or a Municipal Solid Waste Landfill in Post-Closure Care).

(s) Site operating plan. The owner shall provide a site operating plan, which at a minimum shall include specific guidance, procedures, instructions, and schedules for the following:

(1) a description, including size, type, and function, of the equipment to be utilized at the structure other than methane monitoring equipment;

(2) a detailed description of the procedures that the operating personnel shall follow to utilize the equipment; and

(3) a plan to implement and maintain the operational requirements of §330.961 of this title.

(t) Structures gas monitoring plan. The owner shall provide a structures gas monitoring plan in accordance with the following.

(1) General.

(A) The owner or lessee of a new enclosed structure built or installed over a closed MSW landfill unit shall ensure that the concentration of methane gas within the facility structure does not exceed 20% of the lower explosive limit for methane (1.0% by volume methane) in facility structures (excluding gas control or recovery system components) overlying the closed MSW landfill unit.

(i) Any new enclosed structures shall contain automatic methane gas sensors approved by the executive director and designed to trigger an audible alarm if the volumetric concentration of methane in the air is greater than 1.0% (20% of the lower explosive limit).

(ii) Any new enclosed structures built over a closed MSW landfill shall utilize a ventilation system or an active gas extraction and collection system.

(B) Landfill gas monitoring requirements for a development applying for a development permit under this subchapter may be suspended by the executive director if the owner can demonstrate that there is no potential for migration of the landfill gases listed in paragraph (2)(G) of this subsection. This demonstration shall be certified by a licensed professional engineer and approved by the executive director, and shall be based upon site-specific field-collected measurements, sampling, and analysis of physical, chemical, and biological processes.

(2) Requirements for structures gas monitoring plan. The owner or lessee shall submit a structures gas monitoring plan, designed by a licensed professional engineer, to the executive director for review and approval. The plan shall ensure detection of the presence of landfill gas entering on-site structures. All design drawings shall bear the licensed engineer's seal and signature. The plan shall include, but not be limited to, the following:

(A) a discussion of specific facility characteristics and potential migration pathways or barriers in the development of the plan, including, but not limited to:

area;

- (i) locations of buildings and structures relative to the waste disposal

- (ii) the nature and age of waste and its potential to generate landfill gas;

- (iii) routes of entry for the intrusion of landfill gas into structures;

- (iv) ignition sources within structures;

- (v) the location of any utility lines or pipelines that cross, are adjacent to, or are near the closed MSW landfill unit;

- (vi) number of people occupying the structures and duration of occupation; and

- (vii) depth of final cover over deposited waste;

(B) a narrative describing design characteristics of proposed structures related to landfill gas accumulation prevention, detection, and elimination including, but not limited to:

- (i) structural;

- (ii) electrical; and

- (iii) mechanical;

(C) a description of the ventilation system or active gas collection and destruction system to be utilized including engineering drawings and manufacturer's specification sheets. Active gas collection and destruction systems shall comply with applicable parts of §§115.152, 115.153, 115.155 - 115.157, and 115.159 of this title (relating to Control Requirements; Alternate Control Requirements; Approved Test Methods; Monitoring and Recordkeeping Requirements; Exemptions; and Counties and Compliance Schedule);

(D) a description of landfill gas monitoring equipment to be used in existing and proposed structures, complete with manufacturer's specification sheets;

(E) a detailed implementation schedule for the installation of landfill gas monitoring equipment;

(F) a sampling and analysis plan for determining landfill gas components, which includes provisions for:

- (i) sample withdrawal equipment and techniques;

and (ii) sampling protocol for field measurements of diluted gas emissions;

not be limited to: (iii) a quality assurance/quality control sampling plan to include, but

(I) field sampling;

(II) analytical methods;

(III) quality control samples and methods;

(IV) laboratory data reduction; and

(V) documentation required; and

(G) a complete analysis of the landfill gas to include, but not be limited to:

(i) a mass balance analysis for major components such as methane, other light hydrocarbons, carbon monoxide, and water vapor measured with fairly high precision (i.e., 5.0% - 10% relative error);

(ii) trace analyses for hydrogen sulfide, mercaptans, and ammonia; and

(iii) analysis for volatile organic compounds using an evacuated steel canister collection device (similar to United States Environmental Protection Agency Method T014) and gas chromatography/mass spectrometry detection system.

(u) Safety and evacuation plan. The owner shall provide a plan describing evacuation procedures and safety measures in the event the methane gas sensors sound the audible alarms.

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Effective March 27, 2006

§330.958. Construction Plans and Specifications.

Construction plans and specifications of the proposed or modified structure shall be prepared and maintained at the structure at all times during construction. After completion of construction, one set of as-built construction plans and specifications shall be maintained at the permitted development. Plans maintained at the structure shall be made available for inspection by executive director representatives.

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Effective March 27, 2006

§330.959. Contents of Registration Application for an Existing Structure Built Over a Closed Municipal Solid Waste Landfill Unit.

(a) The application shall follow the general requirements as set forth in §330.956 of this title (relating to Application for Proposed or Existing Constructions Over a Closed Municipal Solid Waste Landfill Unit, General Requirements).

(b) The registration application shall consist of the following:

(1) a legal description as set forth in §330.957(e) of this title (relating to Contents of the Development Permit and Workplan Application);

(2) certified copies of all notices having been made by the owner and the lessor/lessee in accordance with §330.962 of this title (relating to Notice to Real Property Records), §330.963 of this title (relating to Notice to Buyers, Lessees, and Occupants), and §330.964 of this title (relating to Lease Restrictions);

(3) plans and drawings as set forth in §330.957(i), (j), and (n)(3) of this title;

(4) a site operating plan as set forth in §330.957(s) of this title;

(5) a structures gas monitoring plan:

(A) General.

(i) The owner or lessee of an existing structure built over a closed municipal solid waste landfill unit shall ensure that the concentration of methane gas generated by the landfill does not exceed 20% of the lower explosive limit for methane (1.0% by volume methane in air) in facility structures (excluding gas control or recovery system components). Any enclosed structures shall contain automatic methane gas sensors approved by the executive director and designed to trigger an audible alarm if the volumetric concentration of methane in the air is greater than 1.0%.

(ii) Landfill gas monitoring requirements for a registration under this section may be suspended by the executive director as provided for in §330.957(t)(1)(B) of this title.

(B) Requirements for structures gas monitoring plan. The owner or lessee shall submit a structures gas monitoring plan, designed by a licensed professional engineer, to the executive director for review and approval. The plan shall ensure detection of the presence of landfill gas entering on-site structures. All design drawings should bear the licensed engineer's seal and signature. The plan shall include, but not be limited to, the following:

(i) an analysis of specific facility characteristics and potential migration pathways or barriers as set forth in §330.957(t)(2)(A) of this title;

(ii) a facility drawing, drawn to scale, which indicates the location of all waste disposal areas, existing structures, creeks, and ponds;

(iii) a narrative describing modifications to the existing structures including, but not limited to, the following:

(I) structural;

(II) electrical;

(III) mechanical; and

(IV) landfill gas monitoring equipment including manufacturer's specification sheets and any gas ventilation or active gas extraction systems if the development utilizes such systems;

(iv) a detailed implementation schedule for the installation of landfill gas monitoring equipment;

(v) a sampling and analysis plan as set forth in §330.957(t)(2)(F) of this title; and

(vi) a landfill gas analysis as set forth in §330.957(t)(2)(G) of this title; and

(6) a safety and evacuation plan describing evacuation procedures and safety measures in the event the methane gas sensors sound the audible alarms.

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§330.960. Contents of Authorization Request to Disturb Final Cover Over a Closed Municipal Solid Waste Landfill for Non-enclosed Structures.

The owner of a property that includes a closed municipal solid waste landfill shall not disturb the final cover without prior written approval from the executive director. The authorization request shall include the following:

(1) a certification as set forth in §330.957(b) of this title (relating to Contents of the Development Permit and Workplan Application);

(2) the existing conditions summary as set forth in §330.957(c) of this title;

(3) proposed project description including location related to the closed landfill;

(4) description of the construction/investigation process including, but not limited to, work schedule and safety issues during construction;

(5) description of the procedures for water and/or methane monitoring and excavated material disposal during construction;

(6) maps and drawings, site drawing, and general location map to indicate the landfill location; and

(7) engineering plans, sealed and signed by a licensed professional engineer indicating the proposed project description and its location relative to the landfill.

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§330.961. Operational Requirements for an Enclosed Structure Over a Closed Municipal Solid Waste Landfill Unit or a Municipal Solid Waste Landfill in Post-Closure Care.

(a) General.

(1) The development permit or registration, the site operating plan, any closure plan, the structures gas monitoring plan, the safety and evacuation plan, and all other documents and plans required by this subchapter shall become operational requirements and shall be considered a part of the operating record of the development or structure. A copy of these documents shall be maintained on site in an office at the permitted/registered development.

(2) The owner, operator, or lessee shall retain the operating record for the life of the structure.

(3) Any deviation from the development permit/registration and incorporated plans or other related documents associated with the development permit or registration without approval of the executive director is a violation of this subchapter.

(4) The development permit or registration holder shall notify the executive director, and any local pollution agency with jurisdiction that has requested to be notified, of any incident involving the facility relative to the development permit or registration and provisions for the remediation of the incident.

(b) Landfill gas control. All landfill gases shall be monitored in accordance with the structures gas monitoring plan prepared as set forth in §330.957 of this title (relating to Contents of the Development Permit and Workplan Application) and §330.959 of this title (relating to Contents of Registration Application for an Existing Structure Built Over a Closed Municipal Solid Waste Landfill Unit).

(1) Landfill gas monitoring.

(A) The owner or lessee of a new structure to be built or an existing structure built over a closed municipal solid waste (MSW) landfill unit shall provide equipment for monitoring on-site structures, including, but not limited to, buildings, subsurface vaults, utilities, or any other areas where potential gas buildup would be of concern.

(B) Monitoring on-site structures may include, but is not limited to, periodic monitoring using either permanently installed monitoring probes or continuous monitoring systems.

(C) Structures located on top of the waste area shall be monitored on a continuous basis, and monitoring equipment shall be designed to trigger an audible alarm if the volumetric concentration of methane in the sampled air is greater than 1% within the venting pipe or permeable layer, and/or inside the structure. When practical, structures should be monitored after they have been closed overnight or for the weekend to allow for an accurate assessment of gas accumulation.

(D) Areas of the structure where gas may accumulate should be monitored and include, but are not limited to, areas in, under, beneath, and around basements, crawl spaces, floor seams or cracks, and subsurface utility connections.

(E) Gas monitoring and control systems shall be modified as needed to reflect modifications to the structure.

(2) Reporting.

(A) All on-site structures shall be sampled for methane on a monthly basis. All monthly sampling results shall be placed in the operating record of the facility in accordance with §330.125(b)(3) of this title (relating to Recordkeeping Requirements) and be made available for inspection by the executive director, and any local pollution agency with jurisdiction that has requested to be notified, in accordance with §330.125(c) of this title. If methane gas levels exceeding the limits specified in paragraph (1) of this subsection are detected, the owner, operator, or lessee shall notify the executive director and take action in accordance with §330.371(c) of this title (relating to Landfill Gas Management).

(B) Sampling for specified trace gases may be required by the executive director when there is a possibility of acute or chronic exposure due to carcinogenic or toxic compounds.

(c) Air criteria.

(1) The closed MSW landfill is subject to commission jurisdiction concerning burning and air pollution control. The owner shall ensure that the closed MSW landfill does not violate any applicable requirement of the approved state implementation plan.

(2) Ventilation of the closed MSW landfill and any enclosed structures shall be provided in accordance with all appropriate commission rules.

(d) Pondered water. The ponding of water over waste in the closed MSW landfill unit, regardless of its origin, shall be prevented. Pondered water that occurs on a closed MSW landfill unit shall be eliminated as quickly as possible and the area in which the ponding occurred shall be filled in and regraded within seven days of the occurrence.

(e) Water pollution control. Surface drainage in and around the structure shall be controlled to minimize surface water running onto, into, and off the closed MSW landfill.

(f) Groundwater monitoring. Groundwater monitoring may be required by the executive director and shall be conducted in accordance with the requirements of Subchapter J of this title (relating to Groundwater Monitoring and Corrective Action).

(g) Conduits. All conduits intended for the transport or carrying of fluids over or within the closed MSW landfill shall be double-containment (split casings shall not be used). To the extent possible, all such utilities shall be in fill material placed over the upgraded final cover.

(h) Recordkeeping requirements.

(1) The owner or lessee shall promptly record and retain in the operating record the following information:

(A) all results from gas monitoring and any remediation plans pertaining to explosive and other gases;

(B) all unit design documentation for the placement of gas monitoring systems and leachate or gas condensate removal or disposal related to the closed MSW landfill unit;

(C) copies of all correspondence and responses relating to the development permit;

(D) all documents relating to the operation and maintenance of the building, facility, or monitoring systems as they relate to the development permit; and

(E) any other document(s) as specified by the approved development permit or by the executive director.

(2) The owner, operator, or lessee shall provide written notification to the executive director, and any local pollution agency with jurisdiction that has requested to be notified, for each occurrence that documents listed in subsection (h) of this section are placed into or added to the operating record. All information contained in the operating record shall be furnished upon request to the executive director and shall be made available at all reasonable times for inspection by the executive director or his representative.

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§330.962. Notice to Real Property Records.

(a) Owner of property. An owner of property that overlies a closed municipal solid waste (MSW) landfill shall prepare and file for record in the real property records in the county where the land is located a written notice stating:

(1) the former use of the land;

(2) the legal description of the tract of land that contains the closed MSW landfill, and at the owner's discretion, the portion of the tract of land that contains the closed MSW landfill;

(3) notice that restrictions on the development or lease of the land exist in Texas Health and Safety Code, Chapter 361, Subchapter R and this subchapter; and

(4) the name of the owner.

(b) Local government official. A local government official who receives notice under §330.953 of this title (relating to Soil Test Required before Development) that a closed MSW landfill exists on a tract of land shall prepare and file for record in the real property records in the county where the land is located a written notice stating:

(1) the legal description of the tract of land that contains the closed MSW landfill;

(2) the current owner of the tract;

(3) notice of the tract's former use as an MSW landfill unit; and

(4) notice that restrictions on the development or lease of the land exist in Texas Health and Safety Code, Chapter 361, Subchapter R and in this subchapter.

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§330.963. Notice to Buyers, Lessees, and Occupants.

(a) An owner of land that overlies a closed municipal solid waste (MSW) landfill shall prepare a written notice stating the former use of the facility, the legal description of property, notice of the restrictions on the development or lease of the land imposed by this subchapter and Texas Health and Safety Code, Chapter 361, Subchapter R and the name of the owner. The owner shall file for record the notice in the real property records of the county in which the property is located.

(b) An owner of land that overlies a closed MSW landfill shall notify each lessee and each occupant of a structure that overlies the unit of:

(1) the land's former use as a landfill; and

(2) the structural controls in place to minimize potential future danger posed by the closed MSW landfill.

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§330.964. Lease Restrictions.

This section is not intended to require that owners and lessees of property initiate investigations for closed municipal solid waste (MSW) landfills. A person may not lease or offer for lease property that overlies a closed MSW landfill unit unless:

(1) existing development on the land is in compliance with this subchapter; or

(2) the person gives notice to the prospective lessee of what is required to bring the property and any development on the property into compliance with this subchapter and the prohibitions or requirements for future development imposed by this subchapter and by any development permit issued for development of the property under this subchapter.

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