

The Texas Commission on Environmental Quality (TCEQ or commission) adopts the amendments to §§332.3, 332.8, 332.31, 332.37, 332.41, and 332.47. Sections 332.3, 332.41, and 332.47 are adopted *with changes* to the proposed text as published in the August 22, 2003 issue of the *Texas Register* (28 TexReg 6726). Sections 332.8, 332.31, and 332.37 are adopted *without changes* and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

This rulemaking implements the requirements of House Bill 1791, 78th Legislature, 2003, and House Bill 7, 78th Legislature, 2003, Third Called Session, which require facilities that are composting grease trap waste to be permitted by the commission, where they are currently only required to be authorized by a registration. Existing operating facilities will be required to obtain a permit. Owners and operators for pending registration applications will be required to obtain a permit rather than a registration. All proposed facilities will be required to apply for a permit. For existing facilities to continue operating, they must submit a timely application for a permit that is declared administratively complete by the commission by June 1, 2004.

SECTION BY SECTION DISCUSSION

Administrative and grammatical changes are adopted throughout the sections to be consistent with Texas Register requirements.

Adopted new §332.3(a)(3), Applicability, adds operations that commercially compost grease trap waste to the list of compost operations that are subject to permit requirements, and provides a definition of grease trap waste.

Adopted new §332.3(a)(3)(A) adds that proposed operations that compost grease trap waste in any amount are subject to permit requirements.

New §332.3(a)(3)(B) is adopted with change to add that existing facilities that are composting grease trap waste under a current registration may continue operating if they submit a timely application for a permit that is declared administratively complete by June 1, 2004.

Adopted §332.3(b) deletes paragraph (4) to remove operations that compost grease trap waste from the list of compost operations that are subject to registration requirements and subsequent paragraphs (5) - (7) have been renumbered.

Adopted §332.8(d)(2), Air Quality Requirements, deletes grease trap waste from the list of wastes subject to air quality requirements for facilities that are subject to registration requirements. These air quality requirements for composting grease trap waste are moved to the amended section with air quality requirements for facilities subject to permits.

Adopted §332.8(e)(2) adds grease trap waste to the list of wastes subject to air quality requirements for facilities that are subject to permit requirements.

Adopted §332.31(a), Definition of and Requirements for Registered Facilities, deletes paragraph (4) to remove operations that compost grease trap waste from the list of operations that are subject to registration requirements and subsequent paragraphs (5) - (7) have been renumbered.

Adopted §332.37(2), Operational Requirements, deletes grease trap waste from the list of wastes subject to groundwater protection requirements for facilities that are subject to registration requirements. These groundwater protection requirements are moved to the amended section with groundwater protection requirements for facilities subject to permits. The paragraph also replaces the word “shall” with the word “must” as appropriate.

Section 332.41(a)(3), Definition, Requirements, and Application Processing for a Permit Facility, is adopted with change to add operations that commercially compost grease trap waste to the list of compost operations that are subject to permit requirements.

Section 332.41(c) is adopted with change to reflect that all permit applications are subject to the standards and requirements as set forth in: 30 TAC Chapter 39, Subchapters H and I, concerning Public Notice; 30 TAC Chapter 50, Subchapters E - G, concerning Action on Applications and Other Authorizations; and 30 TAC Chapter 55, Subchapters D - F, concerning Requests for Reconsideration and Contested Case Hearings; Public Notice.

Adopted §332.47, Permit Application Preparation, replaces the word “shall” with the word “must” or “will” as appropriate.

Section 332.47(6)(C)(ii)(II) is adopted with change to require sample collection within 60 days of permit issuance for existing operations.

Section 332.47(6)(C)(ii)(II)(-c-) is adopted with change to require that an original and two copies of groundwater monitoring results be submitted to the executive director.

Section 332.47(6)(C)(ii)(II) is adopted with change to add items (-d-) and (-e-) to provide for the establishment of an alternative list of groundwater monitoring constituents.

Section 332.47(9) is adopted with change to require that financial assurance be provided within 60 days of a permit being issued for facilities operating under an existing registration.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rules in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rules are not subject to §2001.0225 because they do not meet the criteria for a “major environmental rule” as defined in that statute.

A “major environmental rule” means a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state.

The specific intent of the rules is to more closely regulate the commercial composting of grease trap waste to improve environmental protection. It is estimated that only three existing and two proposed facilities will be affected by these rules. Therefore, it is not anticipated that the rules will adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The commission concludes that these rules do not meet the definition of a major environmental rule.

Furthermore, even if the rules did meet the definition of a major environmental rule, the rules are not subject to Texas Government Code, §2001.0225, because they do not meet any of the four applicable requirements specified in §2001.0225(a). Section 2001.0225(a) applies to a rule adopted by an agency, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law.

In this case, the rules do not meet any of these requirements. First, there are no applicable federal standards that these rules would address. Second, the rules do not exceed an express requirement of state law, but instead implement the statutory requirement for permitting grease trap waste composters. Third, there is no delegation agreement that would be exceeded by these rules because none relates to this subject matter area. Fourth, the commission adopts these rules under the rulemaking direction of: House Bill 1791, 78th Legislature, 2003, amending Texas Health and Safety Code, §361.428; House

Bill 7, Article 8, §8.02, 78th Legislature, 2003, Third Called Session; and not solely under the commission's general powers. Written comments on the draft regulatory impact analysis determination were solicited; no comments were received on the draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission evaluated these rules and performed an assessment of whether the rules constitute a takings under Texas Government Code, Chapter 2007. The specific purpose of the rules is to more closely regulate the commercial composting of grease trap waste to improve environmental protection. The rules would substantially advance this stated purpose by requiring that grease trap waste can only be composted at a permitted facility instead of a registered facility.

Promulgation and enforcement of these rules would be neither a statutory nor a constitutional takings of private real property because the rules do not affect real property.

In particular there are no burdens imposed on private real property, and the rules would improve the commission's ability to ensure proper management of grease trap waste composting operations.

Because the regulation does not affect real property, it does not burden, restrict, or limit an owner's right to property or reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulation. Therefore, these rules will not constitute a takings under Texas Government Code, Chapter 2007.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the rules and found the rules are identified in the Coastal Coordination Act Implementation Rules, 31 TAC §505.11(b)(2), relating to rules subject to the Texas Coastal Management Program (CMP) and will, therefore, require that goals and policies of the CMP be considered during the rulemaking process.

The commission reviewed these rules for consistency with the CMP goals and policies in accordance with the regulations of the Coastal Coordination Council. The commission determined that the rules concern requirements for a person commercially composting grease trap waste to obtain a permit instead of a registration, which is administrative and procedural in nature; does not impact any CMP goals and policies; will have no substantive effect on commission actions subject to the CMP; and promulgation and enforcement of the rules will not violate (exceed) any standards identified in the applicable CMP goals and policies. Therefore, these rules are consistent with CMP goals and policies. Written comments on the consistency of this rulemaking with the CMP were solicited; no comments were received on the consistency of this rulemaking with the CMP.

PUBLIC COMMENT

The comment period closed on September 22, 2003. Comments were received from Aqua-Zyme Services, Inc. (AZS); Darling Restaurant Services (DRS); Fritz, Byrne, Head & Harrison, L.L.P. (FBHH); J.W. Massey (JWM); Liquid Environmental Solutions (LES); National Hospitality Services, L.P. dba Quality Vacuum Company (QVC); Texas Disposal Systems (TDS); Wholearth Organic Composting (WOC); Representative Eddie Rodriguez; and six individuals. Nine commenters generally supported the rulemaking, and six commenters opposed the rulemaking.

JWM and QVC requested that a public hearing be held on the proposed rule. However, the commission did not receive a sufficient number of requests to mandate the opportunity for a public hearing, as set forth in Texas Government Code, §2001.029(b), and did not hold a hearing on the proposal.

RESPONSE TO COMMENTS

Comment

Representative Rodriguez, LES, TDS, and six individuals commented that they supported the adoption of these rules.

Response

The commission appreciates these comments in support of the rulemaking.

Comment

FBHH commented that the statutory requirement that existing registered grease trap composting facilities submit an application for a permit not later than 30 days following commission notification, and the requirement that existing registered facilities receive a permit by June 1, 2004, to continue composting grease trap waste, place an unreasonable burden on the applicant to meet the permit application requirements, and on the commission to process an application and issue a permit by the June 1, 2004 deadline. FBHH stated that the proposed rules should differentiate between applications submitted by existing registered facilities and applicants for new facilities, and that provisions for an expedited permitting process should be provided in the rule for the registered operational grease trap composting facilities.

Response

In regard to the rule not allowing adequate time for applicants to file applications and obtain permits, the commission will follow the schedule mandated by House Bill 7, 78th Legislature, 2003, Third Called Session, which amended House Bill 1791, 78th Legislature, 2003. The rules have been amended to reflect changes made in House Bill 7 which authorize existing registered facilities to continue composting grease trap waste if they submit a timely application for a permit, and the application is declared administratively complete by June 1, 2004. These changes provide some relief for the deadline to file an application, since the deadline for the commission to provide notice triggering the 30-day period to file an application was changed from November 1, 2003 to December 1, 2003. The commission will process applications in a timely manner so that existing operations will be able to continue operating.

In regard to the deadline for an existing facility to obtain a permit, House Bill 7 made a significant change by deleting the deadline for obtaining a permit and substituting that applications must be administratively complete by June 1, 2004. This legislative change provides a reasonable amount of time to have an application declared administratively complete, and the revised schedule is reflected in §332.3(a)(3)(B). Removing the deadline for existing facilities to obtain a permit also alleviates the need for the commission to create an expedited permitting process as requested by the commenter. In response to the comment regarding the need to distinguish between applications for new facilities and existing facilities, the commission has made several changes reflecting different treatment for existing and new facilities by requiring that financial assurance

be provided within 60 days of a permit being issued for facilities operating under an existing registration.

Comment

FBHH commented that the procedural notice requirements in the proposed rule, which require notice of administrative completeness and three separate notices of technical completeness, will prevent the commission from meeting the statutory requirements that it begin issuing permits under the new rule by January 1, 2004, and prevent applications received from existing registered facilities from being processed and a permit issued by June 1, 2004, so those facilities may remain in operation. FBHH stated that a truncated notice process should be included in the rule.

Response

As discussed in the preceding Response, House Bill 7, 78th Legislature, 2003, Third Called Session, which amended House Bill 1791, 78th Legislature, 2003, extended the deadline for an existing facility to file an application for a permit, removed the deadline for obtaining a permit, and substituted that applications must be administratively complete by June 1, 2004. House Bill 7 also changed the date for the commission to begin issuing permits from January 1, 2004 to September 1, 2005. In response to the comment that three separate notices of technical completeness are required, the commission has revised the notice procedures in §332.41(c), to conform with the standards and requirements set forth in Chapters 39, 50, and 55. This will establish notice requirements for composting permits that are consistent with notice requirements for other permits issued by the commission. The timing of these processing and notice procedures

will be manageable in light of the changes made by House Bill 7, including removing the deadline for obtaining a permit.

Comment

AZS and DRS, commented that the term “grease trap waste” is not defined in existing commission rules or the proposed rule and, with TDS, suggested that the term be defined.

Response

The commission agrees that a definition should be included in the rule and has revised §332.3(a)(3) to include a definition of grease trap waste.

Comment

AZS, DRS, JWM, and QVC commented that grease trap waste which has been de-watered or otherwise processed to remove liquids has been materially altered and that these materials should be allowed as composting feedstock at registered, rather than permitted, facilities. DRS commented that after de-watering, the remaining solids are “Positively-sorted organic material” as defined in §332.2(46).

Response

The commission does not agree that the waste solids resulting from de-watering meet the definition of positively-sorted organic materials, which are defined in §332.2(46) as “sorted or pulled . . . from mixed municipal solid waste prior to the initiation of processing,” or that removing liquids from grease trap waste or mixing grease trap waste with other waste streams

justifies excluding such material from being regulated as grease trap waste. The commission has revised the rule to provide a definition of grease trap waste in §332.3(a)(3) that includes “...solids resulting from de-watering process.”

Comment

QVC commented that preventing registered composting facilities from accepting grease trap waste will reduce the number of options available to transporters, thereby restricting competition and increasing costs. DRS commented that the inability to utilize registered composters will jeopardize the 10% recycling option necessary to maintain its liquid waste processor registration, and that it defeats previous TCEQ’s efforts to encourage recycling of reusable materials and to reduce the volume of recyclable waste going to landfills.

Response

The commission understands there is a potential impact to other segments of the industry, but the commission is responsible for implementing the requirements of House Bill 7, 78th Legislature, 2003, Third Called Session, which amended House Bill 1791, 78th Legislature, 2003. The commission will implement the legislature’s directive to begin requiring permits for these facilities in an effort to provide more protection to persons who could be affected by these facilities. The commission also believes that the rules provide a reasonable process for existing registered facilities to continue operating while seeking a permit and that there will be little or no reduction in the number of grease trap waste composting facilities. The commission has not revised the rule in response to these comments.

Comment

FBHH commented that House Bill 1791, 78th Legislature, 2003, does not require these permits to be subject to the notice and hearing provisions of Texas Water Code, Chapter 5, Subchapter M, and that applications under Chapter 332 are specifically excluded from the public notice provisions in Chapter 39; therefore, the reference to a hearing in §332.41(c)(1)(B) is unnecessary and should be deleted.

Response

By requiring these facilities to obtain permits under House Bill 1791, 78th Legislature, 2003, the legislature has made these applications subject to the notice and hearing provisions of Texas Water Code, Chapter 5, Subchapter M. This change is reflected in revised §332.41(c), which makes these applications subject to the standards and requirements as set forth in Chapter 39, Subchapters H and I, concerning Public Notice; Chapter 50, Subchapters E - G, concerning Action on Applications and Other Authorizations; and Chapter 55, Subchapters D - F, concerning Requests for Reconsideration and Contested Case Hearings; Public Notice. These provisions of Chapters 39, 50, and 55 implement the requirements of Texas Water Code, Chapter 5, Subchapter M. In expressly making these applications subject to the notice provisions of Chapter 39, Subchapters H and I, the commission intended to make these applications subject to those provisions regardless of §39.403(c)(3), which provides that Chapter 39 does not apply to Chapter 332 applications. It may be appropriate to amend Chapter 39 in the future to reflect this change and to cross-reference the new notice provisions in Chapter 332.

Comment

FBHH commented that existing registered facilities previously have received authorization from the commission under existing siting criteria and that existing registered grease trap waste composting facilities should not be subject to application requirements in §332.47(4), concerning Land Use.

Response

The commission does not agree that the applicants were required to perform an evaluation of similar criteria for a registration application, and finds no basis for a deletion of the requirements relating to land use. Even if some land use information was provided in an application for a registration under Chapter 332, Subchapter C, the commission did not have any rules governing what information was required or provisions for public participation equal to those provided under Subchapter D. The commission has not revised the rule based on these comments.

Comment

FBHH commented that existing registered facilities previously have received authorization from the commission under relevant siting criteria and that existing registered grease trap waste composting facilities should not be subject to application requirements in §332.47(5), concerning Access.

Response

The commission agrees that the location standards are similar for registrations and permits and disagrees that the permit requirements for access (roadway information) have a comparable requirement for registrations. Regardless of whether an existing registration provided some or all of the information needed for a permit application, that information was not subject to a full

review in the permitting process with full public participation. The commission has not revised the rule based on these comments.

Comment

FBHH and WOC commented that prior approval of the soil boring plan, as required in §332.47(6)(B)(iv)(I), will place an unnecessary burden on the registered facilities trying to meet the required deadlines, and that the requirement for prior approval should be removed from the rule.

Response

Prior approval of a proposed boring plan is required to ensure that the number and depth of borings meets the regulatory requirements, that the distribution of borings appears to be appropriate to the proposed site, and to prevent the commission from having to require that the applicant perform additional borings at a later date. The commission will perform a timely review of any boring plan provided by an existing registered compost facility attempting to submit an application in accordance with the new rule. The commission has not revised the rule in response to these comments.

Comment

WOC commented that the application of groundwater protection requirements in §332.47(6)(C) to shallow surface infiltration and the monitoring of these zones are not justified by the environmental benefits, and that reference to these zones should be deleted from the rule.

Response

The groundwater protection plan in §332.47(6)(C) relates to both groundwater monitoring and to liner system requirements. The reference to shallow surface infiltration does not automatically require the monitoring of these zones, and is designed to ensure that the applicant evaluates and addresses any conditions that may provide a potential for off-site contaminant migration. This provision is also consistent with §330.5, which prohibits the discharge of waste into “waters in the state” which is defined in §330.2(164) to include groundwater percolating or otherwise. The commission has made no changes to the rule in response to these comments.

Comment

WOC commented that analysis of heavy metals as part of the groundwater sampling program required in §332.47(6)(C)(ii)(II)(-a-) is an inappropriate set of monitoring constituents for a grease trap waste composting operation, due to the nature of the waste stream. WOC recommended that this requirement be deleted.

Response

The groundwater monitoring lists in §332.47(6)(C)(ii)(II) were designed to monitor for contaminants from a broad range of wastes for any of the facilities that can be authorized under §332.41(a). The commission agrees that if the waste stream is restricted, the ability to waive the requirements for a constituent from the lists or propose an alternative monitoring list that is no less protective of the environment is appropriate, and has revised §332.47(6)(C)(ii)(II) to include these options.

Comment

FBHH commented that the groundwater sampling program requirement in §332.47(6)(C)(ii)(II) that samples be collected from each well prior to the acceptance of materials for processing should be revised to allow compliance by existing registered facilities that will be obtaining a permit.

Response

The commission agrees that the rule does not provide for an existing registered operation that has obtained a permit and has revised the rule to require sample collection within 60 days of permit issuance for existing operations.

SUBCHAPTER A: GENERAL INFORMATION

§332.3, §332.8

STATUTORY AUTHORITY

The amendments are adopted under Texas Health and Safety Code, §361.428, as amended by House Bill 1791, §1, 78th Legislature, 2003, and under House Bill 7, Article 8, §8.02, 78th Legislature, 2003, Third Called Session, which prohibit the commercial composting of grease trap waste without a permit; §361.011, which establishes the commission's jurisdiction over all aspects of the management of municipal solid waste with all powers necessary or convenient to carry out the responsibilities of that jurisdiction; §361.061, which authorizes the commission to issue permits governing the construction, operation, and maintenance of solid waste facilities used to store, process, or dispose of solid waste under this chapter; and §361.024, which provides the commission with rulemaking authority.

§332.3. Applicability.

(a) Permit required. The following compost operations are subject to the general requirements found in §332.4 of this title (relating to General Requirements), and the requirements set forth in Subchapters D - G of this chapter (relating to Operations Requiring a Permit; Source-Separated Recycling; Household Hazardous Waste Collection; and End-Product Standards), and the air quality requirements in §332.8 of this title (relating to Air Quality Requirements). These operations are required to obtain a permit from the commission under Chapters 305 and 281 of this title (relating to Consolidated Permits; and Applications Processing):

(1) operations that compost mixed municipal solid waste;

(2) operations that add any amount of mixed municipal solid waste as a feedstock in the composting process; and

(3) operations that commercially compost grease trap waste on or after September 1, 2003. Grease trap waste is material collected in and from an interceptor in the sanitary sewer service line of a commercial, institutional, or industrial food service or processing establishment, including the solids resulting from de-watering processes.

(A) All proposed operations that compost any amount of grease trap waste must apply for a permit and must have a permit prior to operating.

(B) Existing facilities that are composting grease trap waste under a current registration can continue to operate as authorized by that registration if:

(i) the person holding the registration submits an application for a permit under Subchapter D of this chapter not later than the 30th day after receiving notice from the commission of the requirement to submit an application under Texas Health and Safety Code, §361.428(d); and

(ii) the commission declares the application administratively complete on or before June 1, 2004.

(b) Registration required. The following compost operations are subject to the requirements found in §332.4 of this title, the requirements set forth in Subchapters C and G of this chapter (relating to Operations Requiring a Registration; and End-Product Standards), and the air quality requirements in §332.8 of this title:

(1) operations that compost municipal sewage sludge, except those facilities that compost municipal sewage sludge with mixed municipal solid waste;

(2) operations that compost positively-sorted organic materials from the municipal solid waste stream;

(3) operations that compost source-separated organic materials not exempted under subsection (d) of this section;

(4) operations that compost disposable diapers or paper products soiled by human excreta;

(5) operations that compost the sludge byproduct generated from the production of paper if the executive director determines that the feedstock is appropriate under §332.33 of this title (relating to Required Forms, Applications, Reports, and Request to Use the Sludge Byproduct of Paper Production); and

(6) operations that incorporate any of the materials set forth in paragraphs (1) - (5) of this subsection with source-separated yard trimmings, clean wood material, vegetative material, paper, manure, meat, fish, dairy, oil, grease materials, or dead animal carcasses.

(c) Operations requiring notification. The following operations are subject to all requirements set forth in Subchapter B of this chapter (relating to Operations Requiring a Notification), the general requirements found in §332.4 of this title, and the air quality requirements in §332.8 of this title:

(1) operations that compost any source-separated meat, fish, dead animal carcasses, oils, greases, or dairy materials; and

(2) operations that incorporate any of the materials set forth in paragraph (1) of this subsection with source-separated yard trimmings, clean wood material, vegetative material, paper, or manure.

(d) Operations exempt from facility notification, registration, and permit requirements. The following operations are subject to the general requirements found in §332.4 of this title, the air quality requirements in §332.8 of this title, and are exempt from notification, registration, and permit requirements found in Subchapters B - D of this chapter. Operations under paragraphs (1) and (3) of this subsection are subject to the requirements of an exempt recycling facility under §328.4 and §328.5 of this title (relating to Limitations on Storage of Recyclable Materials; and Reporting and Recordkeeping Requirements):

(1) operations that compost only materials listed in subparagraphs (A) and (B) of this paragraph:

(A) source-separated yard trimmings, clean wood material, vegetative material, paper, and manure;

(B) source-separated industrial materials listed in §332.4(10) of this title excluding those items listed in §332.4(10)(A), (F) - (H), and (J) of this title;

(2) agricultural operations that generate and compost agricultural materials on-site;

(3) mulching operations;

(4) land application of yard trimmings, clean wood materials, vegetative materials, and manure at rates below or equal to agronomic rates as determined by the Texas Agricultural Extension Service;

(5) application of paper that is applied to land for use as an erosion control or a soil amendment; and

(6) on-site composting of industrial solid waste at a facility that is in compliance with §335.2 of this title (relating to Permit Required) and §335.6 of this title (relating to Notification Requirements).

§332.8. Air Quality Requirements.

(a) General requirements.

(1) Any composting or mulching operation which has existing authority under the Texas Clean Air Act does not have to meet the air quality criteria of this subchapter. Under Texas Clean Air Act, §382.051, any new composting or mulching operation which meets all of the applicable requirements of this subchapter is entitled to an air quality standard permit authorization under this subchapter in lieu of the requirement to obtain an air quality permit under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification).

(2) Those composting or mulching operations which would otherwise be required to obtain air quality authorization under Chapter 116 of this title, which cannot satisfy all of the requirements of this subchapter, shall apply for and obtain air quality authorization under Chapter 116 of this title in addition to any notification, registration, or permit required in this subchapter.

(3) Any composting or mulching operation authorized under this chapter which is a new major source or any modification which constitutes a major modification under nonattainment review or prevention of significant deterioration review as amended by the Federal Clean Air Act amendments of 1990, and regulations promulgation thereunder, is subject to the requirements of Chapter 116 of this title, in addition to any notification, registration, or permit required in this chapter.

(4) Composting facilities that do not wish to comply with the requirements of this section, are required to apply for and obtain air quality authorization under Chapter 116 of this title. Once a person has applied for and obtained air quality authorization under Chapter 116 of this title, the person is exempt from the air quality requirements of this chapter.

(5) No person may concurrently hold an air quality permit issued under Chapter 116 of this title and an air quality standard permit authorized under this chapter for composting or mulching operations at the same site.

(6) Composting or mulching operations which have authorization under this chapter shall comply with the general requirements in §332.4 of this title (relating to General Requirements), and subsections (b), (c), (d), or (e) of this section.

(7) The operator of a composting or mulching operation operating under an air quality standard permit shall maintain on file at all times and make immediately available documentation which shows compliance with this section.

(b) Exempt operations. Composting and mulching operations that are considered exempt operations under §332.3(d) of this title (relating to Applicability), and that meet the following requirements are entitled to an air quality standard permit.

(1) If the total volume of materials to be mulched and/or composted, including in-process and processed materials at any time is greater than 2,000 cubic yards, the setback distance from

all property boundaries to the edge of the area receiving, processing, or storing feedstock or finished product must be at least 50 feet.

(2) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(3) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(4) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) If there are any changes to the composting or mulching operation that would reclassify it from an exempt operation to a notification, registration, or permit facility as authorized under §332.3 of this title, the operation shall obtain an air quality standard permit for a notification, registered, or permitted composting operation.

(c) Notification operations. Composting operations required to notify under §332.3(c) of this title which meet the following requirements are entitled to an air quality standard permit.

(1) The setback distance from all property boundaries to the edge of the area receiving, processing, or storing feedstock or finished product must be at least 50 feet.

(2) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(3) Prior to receiving any material with a high odor potential such as, but not limited to, dairy material feedstocks, meat, fish, and oil and grease feedstocks, the operator shall insure that there is an adequate volume of bulking material to blend with/cover the material, and shall begin processing the material in a manner that prevents nuisances.

(4) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(6) If there are any changes to the composting or mulching operation that would reclassify it from a notification operation to a registration or permit operation as authorized under §332.3 of this title, the operation shall obtain an air quality standard permit for a registered or permitted composting operation.

(d) Registered operations. Composting operations required to obtain a registration under §332.3(b) of this title that meet the following requirements are entitled to an air quality standard permit.

(1) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(2) Prior to receiving any material with a high odor potential such as, but not limited to, dairy material feedstocks, sewage sludge, meat, fish, and oil and grease feedstocks, the operator shall insure that there is an adequate volume of bulking material to blend with or cover the material, and shall begin processing the material in a manner that prevents nuisances.

(3) All material shall be conveyed mechanically, or if conveyed pneumatically, the conveying air shall be vented to the atmosphere through a fabric filter(s) having a maximum filtering velocity of 4.0 ft/min with mechanical cleaning or 7.0 ft/min with air cleaning.

(4) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(6) If there are any changes to the composting or mulching operation that would reclassify it from a registration operation to a permit operation as authorized under §332.3 of this title, the operation shall obtain an air quality standard permit for a permitted composting operation.

(e) Permit operations. Composting operations required to obtain a permit under §332.3(a) of this title that meet the following requirements are entitled to an air quality standard permit.

(1) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(2) Prior to receiving any material with a high odor potential such as, but not limited to, dairy material feedstocks, sewage sludge, meat, fish, oil and grease feedstocks, grease trap waste, and municipal solid waste, the operator shall insure that there is an adequate volume of bulking material to blend with or cover the material, and shall begin processing the material in a manner that prevents nuisances.

(3) All material shall be conveyed mechanically, or if conveyed pneumatically, the conveying air shall be vented to the atmosphere through a fabric filter(s) having a maximum filtering velocity of 4.0 ft/min with mechanical cleaning or 7.0 ft/min with air cleaning.

(4) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(6) All activities which could result in increased odor emissions such as turning of compost piles shall be conducted in a manner that does not create nuisance conditions or shall only be conducted inside a building maintained under negative pressure and controlled with a chemical oxidation scrubbing system or bio filter system.

SUBCHAPTER C: OPERATIONS REQUIRING A REGISTRATION

§332.31, §332.37

STATUTORY AUTHORITY

The amendments are adopted under Texas Health and Safety Code, §361.428, as amended by House Bill 1791, §1, 78th Legislature, 2003, and under House Bill 7, Article 8, §8.02, 78th Legislature, 2003, Third Called Session, which prohibit the commercial composting of grease trap waste without a permit; §361.011, which establishes the commission's jurisdiction over all aspects of the management of municipal solid waste with all powers necessary or convenient to carry out the responsibilities of that jurisdiction; §361.061, which authorizes the commission to issue permits governing the construction, operation, and maintenance of solid waste facilities used to store, process, or dispose of solid waste under this chapter; and §361.024, which provides the commission with rulemaking authority.

§332.31. Definition of and Requirements for Registered Facilities.

(a) Definition of registered facilities. The following operations are subject to the requirements of this subchapter:

(1) operations that compost municipal sewage sludge, except those facilities that compost municipal sewage sludge with mixed municipal solid waste;

(2) operations that compost positively-sorted organic materials from the municipal solid waste stream;

(3) operations that compost source-separated organic materials not exempted under §332.3(d) of this title (relating to Applicability);

(4) operations that compost disposable diapers or paper products soiled by human excreta;

(5) operations that compost the sludge byproduct generated from the production of paper if the executive director determines that the feedstock is appropriate under §332.33 of this title (relating to Required Forms, Applications, Reports, and Request To Use the Sludge Byproduct of Paper Production); and

(6) operations that incorporate any of the materials set forth in paragraphs (1) - (5) of this subsection with source-separated yard trimmings, clean wood material, vegetative material, paper, manure, meat, fish, dairy, oil, grease materials, or dead animal carcasses.

(b) Requirements for registered facilities. The operations listed in subsection (a) of this section are subject to the requirements found in §332.4 of this title (relating to General Requirements), the requirements set forth in this subchapter, the requirements set forth in Subchapter G of this chapter (relating to End-Product Standards) and the air quality requirements set forth in §332.8 of this title (relating to Air Quality Requirements).

§332.37. Operational Requirements.

The operation of the facility must comply with all of the following operational requirements.

(1) Protection of surface water. The facility must be constructed, maintained, and operated to manage run-on and run-off during a 25-year, 24-hour rainfall event and must prevent discharge into waters in the state of feedstock material, including, but not limited to, in-process and/or processed materials. Any waters coming into contact with feedstock, in-process, and processed materials must be considered leachate. Leachate must be contained in retention facilities until reapplied on piles of feedstock, in-process, or unprocessed materials. The retention facilities must be lined and the liner must be constructed in compliance with paragraph (2) of this section. Leachate may be treated and processed at an authorized facility or as authorized by a Texas Pollutant Discharge Elimination System permit. The use of leachate in any processing must be conducted in a manner that does not contaminate the final product.

(2) Protection of groundwater. The facility must be designed, constructed, maintained, and operated to protect groundwater. Facilities that compost municipal sewage sludge, disposable diapers, and/or the sludge byproduct of paper mill production must install and maintain a liner system complying with the provisions of subparagraph (A), (B), or (C) of this paragraph. The liner system must be provided where receiving, mixing, composting, post-processing, screening, or storage areas would be in contact with the ground or in areas where leachate, contaminated materials, contaminated product, or contaminated water is stored or retained. The application must demonstrate the facility is designed to prevent contamination or degradation of the groundwater. For the purposes of these sections, protection of the groundwater includes the protection of perched water or shallow surface infiltration. The lined surface must be covered with a material designed to withstand normal traffic

from the composting operations. At a minimum, the lined surface must consist of soil, synthetic, or an alternative material that is equivalent to two feet of compacted clay with a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

(A) Soil liners shall have more than 30% passing a number 200 sieve, have a liquid limit greater than 30%, and a plasticity index greater than 15.

(B) Synthetic liners shall be a membrane with a minimum thickness of 20 mils.

(C) Alternative designs shall utilize an impermeable liner (such as concrete).

(3) Unauthorized and prohibited materials. The operator shall operate the facility in a manner that will preclude the entry of any unauthorized or prohibited materials from entering the composting process.

(4) Access. Access to the facility shall be controlled to prevent unauthorized disposal of unauthorized or prohibited material and scavenging. The facility shall be completely fenced with a gate that is locked when the facility is closed.

(5) Nuisance conditions. The facility shall be sited and operated in such a manner as to prevent the potential of nuisance conditions and fire hazards. Where nuisance conditions or fire hazards exist, the operator will immediately take action to abate such nuisances.

(6) Aerobic composting required. The facility shall utilize functionally aerobic composting methods, although an anaerobic composting phase may be utilized in the early stages of processing, if it is followed by a period of functionally aerobic composting.

(7) Site sign. The facility shall have a sign at the entrance indicating the type of facility, the registration number, hours of operation, and the allowable feedstocks.

(8) Access road. The facility access road shall be an all-weather road.

(9) Authorization required for significant changes. The operator shall obtain written permission from the commission before changing the processing method or other significant changes to the original registration application.

(10) Prohibited substances. Fungicides, herbicides, insecticides, or other pesticides that contain constituents listed in 40 Code of Federal Regulations Part 261, Appendix VIII-Hazardous Constituents or on the Hazardous Substance List as defined in the CERCLA shall not be applied to or incorporated into feedstocks, in-process materials, or processed materials.

(11) End-product standards.

(A) Facilities that compost municipal sewage sludge. For facilities that compost only municipal sewage sludge or compost municipal sewage sludge with any source-separated

materials, the operator shall comply with the provisions of Chapter 312 of this title (relating to Sludge Use, Disposal, and Transportation) and shall not exceed the foreign matter criteria contained §332.72(d)(2)(A) and (D) of this title (relating to Final Product Grades).

(B) All other registered facilities. The operator shall meet compost testing requirements set forth in §332.71 of this title (relating to Sampling and Analysis Requirements for Final Product), final product grades set forth in §332.72 of this title, and label all materials which are sold or distributed as set forth in §332.74 of this title (relating to Compost Labelling Requirements).

(12) Certified operator. The operator shall employ at least one TCEQ-certified compost operator within six months from the adoption of this rule, the initiation of operations at the compost facility, or the establishment of the compost certification program, whichever occurs later, and a TCEQ-certified compost operator shall routinely be available on-site during the hours of operation.

(13) Chemical release. The operator of a compost facility shall address the release of a chemical of concern from a compost facility to any environmental media under the requirements of Chapter 350 of this title (relating to Texas Risk Reduction Program) to perform the corrective action.

SUBCHAPTER D: OPERATIONS REQUIRING A PERMIT

§332.41, §332.47

STATUTORY AUTHORITY

The amendments are adopted under Texas Health and Safety Code, §361.428, as amended by House Bill 1791, §1, 78th Legislature, 2003, and under House Bill 7, Article 8, §8.02, 78th Legislature, 2003, Third Called Session, which prohibit the commercial composting of grease trap waste without a permit; §361.011, which establishes the commission's jurisdiction over all aspects of the management of municipal solid waste with all powers necessary or convenient to carry out the responsibilities of that jurisdiction; §361.061, which authorizes the commission to issue permits governing the construction, operation, and maintenance of solid waste facilities used to store, process, or dispose of solid waste under this chapter; and §361.024, which provides the commission with rulemaking authority.

§332.41. Definition, Requirements, and Application Processing for a Permit Facility.

(a) Definition of permitted facilities. The following operations are subject to the requirements of this subchapter:

(1) operations that compost mixed municipal solid waste not in accordance with §332.31 of this title (relating to Definition of and Requirements for Registered Facilities);

(2) operations that add any amount of mixed municipal solid waste as a feedstock in the composting process; and

(3) operations that commercially compost grease trap waste.

(b) Requirements for permitted facilities. The operations listed in subsection (a) of this section are subject to the general requirements found in §332.4 of this title (relating to General Requirements), and the requirements set forth in this subchapter, the requirements set forth in Subchapters E - G of this chapter (relating to Source-Separated Recycling; Household Hazardous Waste Collection; and End-Product Standards), and the air quality requirements set forth in §332.8 of this title (relating to Air Quality Requirements).

(c) Processing of application for a permitted facility. All permit applications are subject to the standards and requirements as set forth in Chapter 39, Subchapters H and I of this title (relating to Public Notice); Chapter 50, Subchapters E - G of this title (relating to Action on Applications and Other Authorizations); and Chapter 55, Subchapters D - F of this title (relating to Requests for Reconsideration and Contested Case Hearings; Public Notice).

§332.47. Permit Application Preparation.

To assist the commission in evaluating the technical merits of a compost facility, an applicant subject to this chapter shall submit a site development plan to the commission along with Compost Form Number 3. The site development plan must be sealed by a registered professional engineer in accordance with the provisions of 22 TAC §131.166 (relating to Engineers' Seals). If the site development plan is submitted in a three-ring binder or in a format that allows the removal or insertion

of individual pages, it will not be considered a bound document. The site development plan must contain all of the following information.

(1) Title page. A title page shall show the name of the project, the county (and city if applicable) in which the proposed project is located, the name of the applicant, the name of the engineer, the date the application was prepared, and the latest date the application was revised.

(2) Table of contents. A table of contents shall be included, which lists the main sections of the plan, any requested variances, and includes page numbers.

(3) Engineer's appointment. The site development plan shall contain an engineer's appointment, which consists of a letter from the applicant to the executive director identifying the consulting engineering firm responsible for the submission of the plan, specifications, and any other technical data to be evaluated by the commission regarding the project.

(4) Land use. To assist the executive director in evaluating the impact of the facility on the surrounding area, the applicant shall provide the following:

(A) a description of the zoning at the facility and within one mile of the facility. If the facility requires approval as a nonconforming use or a special use permit from the local government having jurisdiction, a copy of such approval shall be submitted with the application;

(B) a description of the character of the surrounding land uses within one mile of the proposed facility;

(C) proximity to residences and other uses (e.g., schools, churches, cemeteries, historic structures, historic sites, archaeologically significant sites, sites having exceptional aesthetic quality, parks, recreational sites, recreational facilities, licensed day care, etc.). Give the approximate number of residences and business establishments within one mile of the proposed facility including the distances and directions to the nearest residences and businesses;

(D) a discussion that shows the facility is compatible with the surrounding land uses; and

(E) a constructed land use map showing the land use, zoning, residences, businesses, schools, churches, cemeteries, historic structures, historic sites, archaeologically significant sites, sites having exceptional aesthetic quality, licensed day care centers, parks, recreational sites and recreational facilities within one mile of the facility, and wells within 500 feet of the facility.

(5) Access. To assist the executive director in evaluating the impact of the facility on the surrounding roadway system, the applicant shall provide the following:

(A) data on the roadways, within one mile of the facility, used to access the facility. The data shall include dimensions, surfacing, general condition, capacity and load limits;

(B) data on the volume of vehicular traffic on access roads within one mile of the proposed facility. The applicant shall include both existing and projected traffic during the life of the facility (for projected include both traffic generated by the facility and anticipated increase without the facility);

(C) an analysis of the impact the facility will have on the area roadway system, including a discussion on any mitigating measures (turning lanes, roadway improvements, intersection improvements, etc.) proposed with the project; and

(D) an access roadway map showing all area roadways within a mile of the facility. The data and analysis required in subparagraphs (A) - (C) of this paragraph shall be keyed to this map.

(6) Facility development. To assist the executive director in evaluating the impact of the facility on the environment, the applicant shall provide the following.

(A) Surface water protection plan. The surface water protection plan shall be prepared by a registered professional engineer. At a minimum, the applicant shall provide all of the following:

(i) a design for a run-on control system capable of preventing flow onto the facility during the peak discharge from at least a 25-year, 24-hour rainfall event;

(ii) a design for a run-off management system to collect and control at least the peak discharge from the facility generated by a 25-year, 24-hour rainfall event;

(iii) a design for a contaminated water collection system to collect and contain all leachate. If the design uses leachate for any processing, the applicant shall clearly demonstrate that such use will not result in contamination of the final product; and

(iv) drainage calculations as follows:

(I) Calculations for areas of 200 acres or less shall follow the rational method as specified in the Texas Department of Transportation Bridge Division Hydraulic Manual.

(II) Calculations for discharges from areas greater than 200 acres shall be computed by using USGS/DHT hydraulic equations compiled by the United States Geological Survey and the Texas Department of Transportation Bridge Division Hydraulic Manual, the HEC-1 and HEC-2 computer programs developed through the Hydrologic Engineering Center of the United States Army Corps of Engineers, or an equivalent or better method approved by the executive director.

(III) Calculations for sizing containment facilities for leachate shall be determined by a mass balance based on the facilities proposed leachate disposal method.

(IV) Temporary and permanent erosion control measures shall be discussed;

(v) drainage maps and drainage plans as follows:

(I) an off-site topographic drainage map showing all areas which contribute to the facilities run-on. The map shall delineate the drainage basins and sub-basins, show the direction of flow, time of concentration, basin area, rainfall intensity, and flow rate. This map shall also show all creeks, rivers, intermittent streams, lakes, bayous, bays, estuaries, arroyos, and other surface waters in the state;

(II) a pre-construction on-site drainage map. The map shall delineate the drainage basins and sub-basins, show the direction of flow, time of concentration, basin area, rainfall intensity, and flow rate;

(III) a post-construction on-site drainage map. The map shall delineate the drainage basins and sub-basins, show the direction of flow, time of concentration, basin area, rainfall intensity, and flow rate;

(IV) a drainage facilities map. The map shall show all proposed drainage facilities (ditches, ponds, piping, inlets, outfalls, structures, etc.) and design parameters (velocities, cross-section areas, grades, flowline elevations, etc.). Complete cross-sections of all ditches and ponds shall be included;

(V) a profile drawing. The drawing shall include profiles of all ditches and pipes. Profiles shall include top of bank, flowline, hydraulic grade, and existing groundline. Ditches and swells shall have a minimum of one foot of freeboard;

(VI) a floodplain and wetlands map. The map shall show the location and lateral extent of all floodplains and wetlands on the site and on lands within 500 feet of the site; and

(VII) an erosion control map which indicates placement of erosion control features on the site.

(B) Geologic/hydrogeologic report. The geologic/hydrogeologic report shall be prepared by an engineer or qualified geologist/hydrogeologist. The applicant shall include discussion and information on all of the following:

(i) a description of the regional geology of the area. This section shall include:

(I) a geologic map of the region with text describing the stratigraphy and lithology of the map units. An appropriate section of a published map series such as the Geologic Atlas of Texas prepared by the Bureau of Economic Geology is acceptable;

(II) a description of the generalized stratigraphic column in the facility area from the base of the lowermost aquifer capable of providing usable groundwater, or from a depth of 1,000 feet, whichever is less, to the land surface. The geologic age, lithology, variation in lithology, thickness, depth geometry, hydraulic conductivity, and depositional history of each geologic unit should be described based upon available geologic information;

(ii) a description of the geologic processes active in the vicinity of the facility. This description shall include an identification of any faults and/or subsidence in the area of the facility;

(iii) a description of the regional aquifers in the vicinity of the facility based upon published and open-file sources. The section shall provide:

(I) aquifer names and their association with geologic units described in clause (i) of this subparagraph;

(II) a description of the composition of the aquifer(s);

(III) a description of the hydraulic properties of the aquifer(s);

(IV) identification of areas of recharge to the aquifers within five miles of the site; and

(V) the present use of groundwater withdrawn from aquifers in the vicinity of the facility;

(iv) subsurface investigation report. This report shall describe all borings drilled on-site to test soils and characterize groundwater and shall include a site map drawn to scale showing the surveyed locations and elevations of the boring. Boring logs shall include a detailed description of materials encountered including any discontinuities such as fractures, fissures, slickensides, lenses, or seams. Each boring shall be presented in the form of a log that contains, at a minimum, the boring number; surface elevation and location coordinates; and a columnar section with text showing the elevation of all contacts between soil and rock layers description of each layer using the Unified Soil Classification, color, degree of compaction, and moisture content. A key explaining the symbols used on the boring logs and the classification terminology for soil type, consistency, and structure shall be provided.

(I) A sufficient number of borings shall be performed to establish subsurface stratigraphy and to determine geotechnical properties of the soils and rocks beneath the facility. The number of borings necessary can only be determined after the general characteristics of a site are analyzed and will vary depending on the heterogeneity of subsurface materials. The minimum number of borings required for a site shall be three for sites of five acres or less, and for sites larger than five acres the required number of borings shall be three borings plus one boring for each additional five acres or fraction thereof. The boring plan shall be approved by the executive director prior to performing the bores.

(II) Borings shall be sufficiently deep to allow identification of the uppermost aquifer and underlying hydraulically interconnected aquifers. Boring shall penetrate the uppermost aquifer and all deeper hydraulically interconnected aquifers and be deep enough to identify the aquiclude at the lower boundary. All the borings shall be at least 30 feet deeper than the elevation of the deepest excavation on-site and in no case shall be less than 30 feet below the lowest elevation on-site. If no aquifers exist within 50 feet of the elevation of the deepest excavation, at least one test bore shall be drilled to the top of the first perennial aquifer beneath the site. In areas where it can be demonstrated that the uppermost aquifer is more than 300 feet below the deepest excavation, the applicant shall provide the demonstration to the executive director and the executive director shall have the authority to waive the requirement for the deep bore.

(III) All borings shall be conducted in accordance with established field exploration methods.

(IV) Installation, abandonment, and plugging of the boring shall be in accordance with the rules of the commission.

(V) The applicant shall prepare cross-sections utilizing the information from the boring and depicting the generalized strata at the facility.

(VI) The report shall contain a summary of the investigator's interpretations of the subsurface stratigraphy based upon the field investigation.

(v) groundwater investigation report. This report shall establish and present the groundwater flow characteristics at the site which shall include groundwater elevation, gradient, and direction of flow. The flow characteristics and most likely pathway(s) for pollutant migration shall be discussed in a narrative format and shown graphically on a piezometric contour map. The groundwater data shall be collected from piezometers installed at the site. The minimum number of piezometers required for the site shall be three for sites of five acres or less, for sites greater than five acres the total number of piezometer required shall be three piezometer plus one piezometer for each additional five acres or fraction thereof.

(C) Groundwater protection plan. The application shall demonstrate the facility is designed so as not to contaminate the groundwater and so as to protect the existing groundwater quality from degradation. For the purposes of these sections, protection of the groundwater includes the protection of perched water or shallow surface infiltration. As a minimum, groundwater protection shall consist of all of the following.

(i) Liner system. All feedstock receiving, mixing, composting, post-processing, screening, and storage areas shall be located on a surface which is adequately lined to control seepage. The lined surface shall be covered with a material designed to withstand normal traffic from the composting operations. At a minimum, the lined surface shall consist of soil, synthetic, or an alternative material that is equivalent to two feet of compacted clay with a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

(I) Soil liners shall have more than 30% passing a number 200 sieve, have a liquid limit greater than 30%, and a plasticity index greater than 15.

(II) Synthetic liners shall be a membrane with a minimum thickness of 20 mils.

(III) Alternative designs shall utilize an impermeable liner (such as concrete).

(ii) Groundwater monitor system. The groundwater monitoring system shall be designed and installed such that the system will reasonably assure detection of any contamination of the groundwater before it migrates beyond the boundaries of the site. The monitoring system shall be designed based upon the information obtained in the "Groundwater investigation report" required by subparagraph (B)(v) of this paragraph.

(I) Details of monitor well construction and placement of monitor wells shall be shown on the site plan.

(II) A groundwater sampling program shall provide four background groundwater samples of all monitor wells within 24 months from the date of the issuance of the permit. The background levels shall be established from samples collected from each well at least once during each of the four calendar quarters: January - March; April - June; July - September; and October - December. Samples from any monitor well shall not be collected for at least 45 days

following collection of a previous sample, unless a replacement sample is necessary. At least one sample per well shall be collected and submitted to a laboratory for analysis within 60 days of permit issuance for existing or previously registered operations, or prior to accepting any material for processing at a new facility. Background samples shall be analyzed for the parameters as follows:

(-a-) heavy metals, arsenic, copper, mercury, barium, iron, selenium, cadmium, lead, chromium, and zinc;

(-b-) other parameters: calcium, magnesium, sodium, carbonate, bicarbonate, sulphate, fluoride, nitrate (as N), total dissolved solids, phenolphthalein alkalinity as CaCO_3 , alkalinity as CaCO_3 , hardness as CaCO_3 , pH, specific conductance, anion-cation balance, groundwater elevation (MSL), and total organic carbon (TOC) (four replicates/sample); and

(-c-) after background values have been determined the following indicators shall be measured at a minimum of 12-month intervals: TOC (four replicates), iron, manganese, pH, chloride, groundwater elevation (MSL), and total dissolved solids. After completion of the analysis, an original and two copies shall be sent to the executive director and a copy shall be maintained on-site.

(-d-) The executive director may waive the requirement to monitor for any of the constituents listed in items (-a-) - (-c-) of this subclause in a permit, if it can be documented that these constituents are not reasonably expected to be in or derived from the bulking or feedstock materials. A change to the monitoring requirements may be incorporated into a permit

when issued or as a modification under §305.70 of this title (relating to Municipal Solid Waste Permit and Registration Modifications).

(-e-) The executive director may establish an alternative list of constituents for a permit, if the alternative constituents provide a reliable indication of a release to the groundwater. The executive director may also add inorganic or organic constituents to those to be tested if they are reasonably expected to be in or derived from the bulking or feedstock materials. A change to the monitoring requirements may be incorporated into a permit when issued or as a modification under §305.70 of this title.

(D) Facility plan and facility layout. The facility plan and facility layout must be prepared by a registered professional engineer. All proposed facilities, structures, and improvements must be clearly shown and annotated on this drawing. The plan must be drawn to standard engineering scale. Any necessary details or sections must be included. As a minimum, the plan must show property boundaries, fencing, internal roadways, tipping area, processing area, post-processing area, facility office, sanitary facilities, potable water facilities, storage areas, etc. If phasing is proposed for the facility, a separate facility plan for each phase is required.

(E) Process description. The process description shall be composed of a descriptive narrative along with a process diagram. The process description shall include all of the following.

(i) Feedstock identification. The applicant shall prepare a list of the materials intended for processing along with the anticipated volume to be processed. This section shall also contain an estimate of the daily quantity of material to be processed at the facility along with a description of the proposed process of screening for unauthorized materials.

(ii) Tipping process. Indicate what happens to the feedstock material from the point it enters the gate. Indicate how the material is handled in the tipping area, how long it remains in the tipping area, what equipment is used, how the material is evacuated from the tipping area, at what interval the tipping area is cleaned, and the process used to clean the tipping area.

(iii) Process. Indicate what happens to the material as it leaves the tipping area. Indicate how the material is incorporated into the process and what process or processes are used until it goes to the post-processing area. The narrative shall include water addition, processing rates, equipment, energy and mass balance calculations, and process monitoring method.

(iv) Post-processing. Provide a complete narrative on the post-processing, include post-processing times, identification and segregation of product, storage of product, quality assurance, and quality control.

(v) Product distribution. Provide a complete narrative on product distribution to include items such as: end product quantities, qualities, intended use, packaging, labeling, loading, and tracking bulk material.

(vi) Process diagram. Present a process diagram that displays graphically the narrative generated in response to clauses (i) - (v) of this subparagraph.

(7) Site operating plan. This document is to provide guidance from the design engineer to site management and operating personnel in sufficient detail to enable them to conduct day-to-day operations in a manner consistent with the engineer's design. As a minimum, the site operating plan shall include specific guidance or instructions on all of the following:

(A) the minimum number of personnel and their functions to be provided by the site operator in order to have adequate capability to conduct the operation in conformance with the design and operational standards;

(B) the minimum number and operational capacity of each type of equipment to be provided by the site operator in order to have adequate capability to conduct the operation in conformance with the design and operational standards;

(C) security, site access control, traffic control, and safety;

(D) control of dumping within designated areas, and screening for unprocessable or unauthorized material;

(E) fire prevention and control plan that shall comply with provisions of the local fire code, provision for fire-fighting equipment, and special training requirements for fire-fighting personnel;

(F) control of windblown material;

(G) vector control;

(H) quality assurance and quality control. As a minimum, the applicant shall provide testing and assurance in accordance with the provisions of §332.71 of this title (relating to Sampling and Analysis Requirements for Final Product);

(I) control of airborne emissions;

(J) minimizing odors;

(K) equipment failures and alternative disposal and storage plans in the event of equipment failure; and

(L) a description of the intended final use of materials.

(8) Legal description of the facility. The applicant shall submit an official metes and bounds description, and plat of the proposed facility. The description and plat shall be prepared and sealed by a registered surveyor.

(9) Financial assurance. The applicant shall prepare a closure plan acceptable to the executive director and provide evidence of financial assurance to the commission for the cost of closure. The closure plan at a minimum, shall include evacuation of all material on-site (feedstock, in process, and processed) to an authorized facility and disinfection of all leachate handling facilities, tipping area, processing area, and post-processing area and shall be based on the worst case closure scenario for the facility, including the assumption that all storage and processing areas are filled to capacity. The financial assurance may be demonstrated by using one or more of the following mechanisms: trust funds, surety bonds, letters of credit, insurance, financial test, and corporate guarantee. These mechanisms shall be prepared on forms approved by the executive director and shall be submitted to the commission 60 days prior to the receiving of any materials for processing, or within 60 days of a permit being issued for facilities operating under an existing registration. Financial assurance mechanisms prepared are subject to the requirements of Chapter 37 of this title (relating to Financial Assurance).

(10) Source-separated recycling and household hazardous waste collection. The applicant shall submit a plan to comply with the requirements of Subchapters E and F of this chapter (relating to Source-Separated Recycling; and Household Hazardous Waste Collection).

(11) Landowner list. The applicant shall include a list of landowners, residents, and businesses within one-half mile of the facility boundaries along with an appropriately scaled map locating property owned by the landowners.