The Texas Commission on Environmental Quality (TCEQ, agency, or commission) adopts amendments to §§332.2 - 332.4, 332.6, 332.8, 332.22, 332.23, 332.32, 332.33, 332.35 - 332.37, 332.41 - 332.45, 332.47, 332.61, 332.71, 332.72, and 332.75.

Sections 332.2, 332.22, 332.35, 332.47, 332.71, and 332.75 are adopted with changes to the proposed text as published in the July 30, 2021, issue of the *Texas Register* (46 TexReg 4562), and, therefore, the rules will be republished. The amendments to §§332.3, 332.4, 332.6, 332.8, 332.23, 332.32, 332.33, 332.36, 332.37, 332.41 - 332.45, 332.61, and 332.72 are adopted without changes to the proposed text and will not be republished.

Background and Summary of the Factual Basis for the Adopted Rules

The purpose of this rulemaking is to amend existing rules for an applicant of a compost Notice of Intent (NOI) to clarify who should be listed as a landowner that receives notice of the planned facility. These adopted rules will provide clarity on the information an applicant must submit for a compost NOI. Currently, §332.22(b) uses the phrase "affected landowners" regarding who an applicant must list on its compost NOI, which creates confusion and ambiguity on which landowners should be listed. Under these amended rules, the facility is to be designated as all contiguous land, structures, other appurtenances, and improvements on land used for receiving and storing organic materials and processing them into useable final products. An applicant must include a map depicting the facility and the land bordering the facility. The applicant must provide a list of the owners of the property bordering the facility

so that the chief clerk can mail notice of the planned facility to the owners of the property bordering the facility.

This rulemaking will also incorporate applicability, fees, and reporting requirements from 30 Texas Administrative Code (TAC) Chapter 330, Subchapter P, into sections for registered and permitted compost facilities.

Additional clarifications and corrections to obsolete references and typographical errors throughout Chapter 332 are included to ensure clarity, readability, and provide overall effectiveness of these rules.

Section by Section Discussion

Subchapter A: General Information

§332.2, Definitions

The commission adopts amendments to §332.2 to revise definitions that need clarification, remove obsolete links, or update grammar to ensure clarity, readability, and the overall effectiveness of these rules.

The commission adopts amendments to paragraphs 45, 46, 47, 59, 60, 62, and 63 for proper alphabetization.

The commission adopts amendments to add missing commas to §332.2(6), (9), (10), (19), (26), (27), (28), (31), (33), (47), (54), (56), (58), (59), and (64).

The commission adopts amendments to replace the word "which" with "that" in §332.2(6), (13), (14), (15), (22), (27), (29), (32), (37), (48), and (58) and replacing the word "which" with "when" in §332.2(25).

The commission adopts amendments to §332.2(11), (17), and (40), to update the name of this agency or to replace the abbreviation "TNRCC" with "agency." The commission also adopts amendments to §332.2(17) to replace a gendered term with a non-gendered term.

The commission adopts amendments to delete a space in §332.2(12) between the words "top" and "soil."

The commission adopts amendments to §332.2(15), (29), and (53), to correct incorrect citations and clarify wording.

The commission proposed revising §332.2(18) to clarify the exact boundary where a compost facility is located. In response to comments, the commission amended §332.2(18), such that facility is defined as all contiguous land, structures, other appurtenances, and improvements on land used for receiving and storing organic materials and processing them into useable final products. The amendments to this definition make the use of facility consistent with the definition used in other solid waste chapters by including contiguous property, which is considered property under

the control of a common owner.

The commission adopts amendments to revise the last sentence of §332.2(33) to expand the list of what does not constitute as mulch.

Finally, the commission adopts amendments to revise §332.2(48) to delete the word "Protection" from the name Resource Conservation and Recovery Act.

§332.3, Applicability

The commission amends §332.3(d) by revising the last sentence to clarify that operations under §332.3(d)(1) and (3) are subject to the requirements of an NOI recycling facility.

§332.4, General Requirements

The commission amends §332.4(2) to replace the obsolete citation of §330.2 with §330.3. The commission adopts the deletion of the words "relating to" and the associated title in the introductory paragraph of §332.4, and §332.4(1) and (2) to bring these sections up to *Texas Register* standards.

§332.6, Compost and Mulch Operations Located at Municipal Solid Waste Facilities

The commission amends §332.6(a) by updating the obsolete citation title from "Municipal Solid Waste Class 1 Modifications" to the current name "Municipal Solid Waste Permit and Registration Modifications." The commission also adopts

amendments by adding a comma to §332.6(a).

§332.8, Air Quality Requirements

The commission adopts amendments by deleting a superfluous comma in §332.8(a)(4) and replacing the word "which" with "that" in §332.8(a)(1) - (3), (a)(6) and (7), (b)(4), (c), (c)(5), (d)(5), (e)(5) and (6). The commission also adopts amendments by eliminating a superfluous comma and adding the words "and that" to §332.8(a)(2). Finally, the commission adopts amendments by replacing the word "insure" with "ensure" in §332.8(c)(3), (d)(2), and (e)(2).

Subchapter B: Operations Requiring A Notification

§332.22, Notification

The commission amends §332.22(a) by revising the agency name and previous compost form with "and submitting forms provided by the executive director." In response to comments, the commission revised the proposed amendments to §332.22(b) regarding the landowner mailing list used for mailing public notice. The proposed changes to §332.22(b) deleted the words "adjacent" and "affected" and replaced them with "adjoining property." However, under adopted amendments to §332.22(b), as discussed in the Response to Comments, the notification requirements have been changed to provide additional clarification regarding those landowners that are required to be notified of the composting operation. Adopted §332.22(b) requires that an applicant provide a map showing the boundaries of the facility and the land bordering the facility. The list of landowners who own land bordering the facility must

be determined by current county tax rolls or other reliable sources at the time the application is filed. The applicant must provide the source of information for developing the list. The chief clerk will mail notice of the planned facility to the persons on the list of property owners provided by the applicant.

§332.23, Operational Requirements

The commission amends §332.23(2)(A) and (B) to replace "Centigrade" with "Celsius." The commission also adopts amendments by replacing "CFR" with "Code of Federal Regulations" in paragraph (3).

Subchapter C: Operations Requiring a Registration

§332.32, Certification by Engineer, Approval by Land Owner, and Inspection

The commission amends the title of §332.32 by replacing "Land Owner" with "Landowner." The commission amends §332.32(a) by replacing the obsolete term "registered professional engineer" with "licensed professional engineer" and replacing "Texas-registered" with "Texas-licensed." The commission adopts amendments by reworking the compound sentence at the end of §332.32(a) and splitting the sentence to read more cohesively. Finally, the commission also adopts amendments replacing a reference to "TNRCC" in §332.32(c) with "agency" to update the change in agency name.

§332.33, Required Forms, Applications, Reports, and Request to Use the Sludge Byproduct of Paper Production

The commission adopts amendments replacing the colon in §332.33(a) with a period.

The commission adopts amendments replacing references to "TNRCC" in §332.33(a)(1) with "agency" to update the change in agency name. The commission also adopts amendments revising §332.33(a)(1) to eliminate references to a specific form and replacing it with a generalized requirement for the applicant to submit a necessary part of their application. For §332.33(a)(3) and (4), the commission adopts amendments include the reporting and fee requirements already found in 30 TAC Chapter 330, Subchapter P (Fees and Reporting) for municipal solid waste facilities that are required for composting facilities. The commission adopts amendments replacing and reorganizing §332.33(a)(3) by dividing the reports required by the commission into Final Products and Received Materials. The final product will have semiannual and annual reports, with report language copied from the previous §332.33(a)(3) and (a)(4). The received materials will have the same requirements as the reports in the adopted §332.43(2)(B). The commission also adopts amendments adding §332.33(a)(4), which will add fee language—including fee rates, measurement options, fee calculation, due date, payment method, penalties, and exemptions—copied exactly from Chapter 330, Subchapter P that are relevant to compost facilities. Next, the commission adopts amendments revising §332.33(b)(3) by replacing gendered terms with non-gendered terms. Finally, the commission eliminates a superfluous comma in §332.33(b)(4).

§332.35, Registration Application Processing

The commission adopts amendments by eliminating a superfluous comma in §332.35(b)(2) and adding a missing comma in §332.35(c). The commission also adopts amendments revising §332.35(c) by replacing gendered terms with non-gendered

terms. Since the proposal and in response to comments, the commission has amended the language in §332.35(b)(1), §332.35(b)(2), and §332.35(d) by replacing the term "adjacent landowner" with "landowners identified in the landowner list."

§332.36, Location Standards

The commission adopts amendments by revising §332.36(6) by deleting the space between "set" and "back." The commission amends §332.36(7) to correct for an obsolete citation. Information regarding the Edwards Aquifer recharge zone is now in 30 TAC Chapter 213.

§332.37, Operational Requirements

The commission amends §332.37(2) to correct a spacing typo in 1×10^{-7}. The commission amends §332.37(10) by defining CERCLA as "Comprehensive Environmental Response, Compensation, and Liability Act of 1980." The commission amends §332.37(11)(A) to correct the incorrect citation of "§332.72(d)(2)(A) and (D)" to "§332.72(d)(2)(A) and (C)." The commission also adopts amendments by replacing the word "which" with "that" in §332.37(11)(B). Finally, in §332.37(12), the commission adopts amending the name and training requirements of a certified compost operator to a licensed municipal solid waste supervisor with specialized compost training because of the changes in the municipal solid waste licensing rules in 30 TAC Chapter 30, Subchapter F first adopted in 2001.

Subchapter D: Operations Requiring A Permit

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

The commission amends the current title of §332.41 to "Requirements, and Application Processing for a Permitted Facility." The commission adopts amendments by the first sentence of §332.41(a) as this section does not supply definitions for the chapter. The commission also amends §332.41(c) to correct an internal contradiction. Section 332.41(c) states that all permit applications are subject to the notice requirements in Chapter 39, Subchapters H and I; however, §39.403 states that compost permit applications are exempt from requirements in Chapter 39, Subchapters H - M. Finally, the commission amends §332.41(c) to accurately correct the title of 30 TAC Chapter 55 as "Requests for Reconsideration and Contested Case Hearings; Public Comment."

§332.42, Certification by Engineer, Ownership or Control of Land, and Inspection

The commission adopts amendments by replacing the obsolete term "registered professional engineer" in §332.42(a) with "licensed professional engineer" and replacing "Texas-registered" with "Texas-licensed." The commission adopts amendments by reworking the compound sentence at end of §332.42(a) and splitting the sentence to read more cohesively. The commission also adopts amendments by replacing "TNRCC" in §332.42(c) with "agency" to update the change in agency name.

§332.43, Required Forms, Applications, and Reports

The commission amends §332.43(1) to eliminate references to a specific form and "TNRCC" and replace it with a generalized requirement for the applicant to submit a

permit application. Additionally, for §332.43(2) and (3), the commission adopts amendments by including reporting and fee requirements already found in Chapter 330, Subchapter P for Municipal Solid Waste Facilities that are required for composting facilities. The commission adopts amendments by replacing and reorganizing §332.43(2) by dividing the reports required by the commission into Final Products and Received Materials. The final product will have monthly and annual reports with language copied from the previous §332.43(2) and (3) and will be integrated into the adopted §332.43(2)(A)(i) and (ii). The received materials will be broken down into quarterly and annual reports. These reports will include the amount of source-separated material processed to compost or mulch product, and the annual reports will include a summary of the quarterly totals and yearly total and year-end status of the facility. The commission amends §332.43(2)(B)(viii), which adds electronic mailing options. Finally, the commission amends §332.43(3), which will add fee language--including fee rates, measurement options, fee calculation, due date, payment method, penalties, and exemptions—copied exactly from Chapter 330, Subchapter P that are relevant to compost facilities.

§332.44, Location Standards

The commission adopts amendments revising §332.44(6) by deleting the space between "set" and "back." The commission amends §332.44(7) to correct for an obsolete citation. Information regarding the Edwards Aquifer recharge zone is now in 30 TAC Chapter 213.

§332.45, Operational Requirements

The commission adopts amendments revising §332.45(1) by defining NPDES as "National Pollutant Discharge Elimination System." The commission adopts amendments by replacing the word "insure" with "ensure" in §332.45(3). The commission adopts amendments by eliminating superfluous commas found in §332.45(4) and (6) and adding a missing comma to §332.45(7). The commission also adopts amendments revising §332.45(10) by defining CFR as "Code of Federal Regulations." The commission adopts amendments by replacing the word "which" with "that" in §332.45(11) and replacing references to "TNRCC" in §332.45(12) with "agency" to update the change in agency name. Finally, in §332.45(12), the commission amends the name and training requirements of a certified compost operator to a licensed municipal solid waste supervisor with specialized compost training because of the changes in the municipal solid waste licensing rules in 30 TAC Chapter 30, Subchapter F, first adopted in 2001.

§332.47, Permit Application Preparation

The commission amends §332.47 by revising the opening paragraph to eliminate references to "Compost Form Number 3" and replacing it with a generalized requirement to submit the permit application form provided by the commission. The commission also amends the opening paragraph of §332.47 to correct the obsolete citation of "22 TAC §131.166" to "22 TAC §137.33." The commission adopts amendments by deleting language in the introductory paragraph of §332.47 that requires an applicant to submit site develop plans as a bound document in a three-ring

binder. The commission adopts amendments by replacing the word "which" with "that" in §332.47(6)(A)(v)(I) and (C)(i). The commission adopts amendments by deleting the abbreviation "DHT" in §332.47(6)(A)(iv)(II), as it is no longer a relevant term in this chapter and retaining the abbreviation for USGS. The commission adopts amendments abbreviating "United States Geological Survey" in §332.47(6)(A)(iv)(II), as it has been previously defined in the sentence. The commission adopts amendments revising §332.47(6)(B)(i)(I) by adding the specific institution where the Geologic Atlas of Texas can be obtained. Additionally, the commission amends §332.47(6)(C)(i) and (6)(C)(ii)(II)(-b-) to fix spacing and subscripting typos. The commission adopts amendments by replacing "MSL" with "measured in Mean Sea Level (MSL)" in §332.47(6)(C)(ii)(II)(-b-) and (-c-). Finally, the commission adopts amendments replacing the obsolete term "registered professional engineer" throughout §322.47 with "licensed professional engineer."

Subchapter F: Household Hazardous Waste Collection

§332.61, General Requirements and Applicability

The commission amends §332.61(c) to correct the title of 30 TAC Chapter 335, Subchapter N from "Household Materials Which Could Be Classified as Hazardous Waste" to "Household Hazardous Wastes."

Subchapter G: End-Product Standards

§332.71, Sampling and Analysis Requirements for Final Product

The commission adopts amendments by eliminating a superfluous comma in

§332.71(a), replacing the word "which" with "that" in §332.71(b), (g), and (g)(2), eliminating a space between "which" and "ever" in §332.71(b)(6), and adding a missing comma in §332.71(c), (g)(1), and (j)(1)(B). The commission adopts amendments by updating the name "Quality Assurance Program Plan" in §332.71(b)(6) to "Quality Assurance Project Plan." The commission adopts defining "PCBs" in §332.71(b)(6) as "Polychlorinated biphenyls." The commission also adopts amendments by replacing references to "TNRCC" and "Texas Natural Resource Conservation Commission" throughout §332.71 with "agency" to update the change in agency name. Finally, the commission adopts amendments by eliminating html-related code in §332.71(d)(1)(C)(i) and (ii), so only the plain language chemical names remain in the rule.

§332.72, Final Product Grades

The commission adopts amendments by replacing references to "TNRCC" or "Texas Natural Resource Conservation Commission" in §332.72(c) with "agency" to update the change in agency name. The commission adopts amendments by updating the name "Quality Assurance Program Plan" in §332.72(c) to "Quality Assurance Project Plan." The commission also adopts amendments by replacing the word "which" with "that" in §332.72(d)(1)(C), (2)(B), and (C), (e), and (f). Finally, the commission adopts amendments by adding a comma to §332.72(d)(2)(D).

§332.75, Out of State Production

The commission amends §332.75 to correct the reference to the title of §332.74 (Compost Labelling Requirements).

Final Regulatory Impact Determination

The commission reviewed the rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225 and determined that the action is not subject to Texas Government Code, §2001.0025, because it does not meet the definition of a "Major environmental rule" as defined in that statute. A "Major environmental rule" is a rule with the specific intent of protecting the environment or reducing risks to human health from environmental exposure and one that may adversely affect the economy, a sector in the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state in a material way.

The rulemaking will not meet the statutory definition of a "Major environmental rule," because it is not the specific intent of the rulemaking to protect the environment or reduce risks to human health from environmental exposure. Instead, the primary purpose of the rulemaking adoption is to amend rules for clarity and to correct obsolete references and typographical errors throughout Chapter 332. These changes are not anticipated to adversely affect 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 in a material way, since none of the adopted changes are substantive.

The rulemaking also does not meet any of the four applicability requirements listed in

Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225 only applies to a major environmental rule, 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. As previously mentioned, since the adopted changes are solely intended to amend Chapter 332 for clarity and accuracy, no substantive changes to any obligations under Chapter 332 will be made. Accordingly, the rulemaking does not exceed a standard set by federal law, an express requirement of state law, or a requirement of a delegation agreement. Finally, these changes will be adopted in accordance with specific state laws that direct the agency to establish standards and guidelines for composting facilities and will not be adopted solely under the general powers of the agency.

The commission invited public comment regarding the draft regulatory impact analysis determination during the public comment period. No comments were received for the regulatory impact analysis.

Takings Impact Assessment

The commission evaluated this rulemaking and performed an analysis of whether the rulemaking constitutes a taking under Texas Government Code, Chapter 2007. The

commission's preliminary assessment indicates Texas Government Code, Chapter 2007 will not apply.

Under Texas Government Code, §2007.002(5), a taking means: (A) a governmental action that affects private real property, in whole or in part or temporarily or permanently, in a manner that requires the governmental entity to compensate the private real property owner as provided by the Fifth and Fourteenth Amendments to the United States Constitution or Section 17 or 19, Article I, Texas Constitution; or (B) a governmental action that: (i) affects an owner's private real property that is the subject of the governmental action, in whole or in part or temporarily or permanently, in a manner that restricts or limits the owner's right to the property that will otherwise exist in the absence of the governmental action; and (ii) is the producing cause of a reduction of at least 25% in the market value of the affected private real property, determined by comparing the market value of the property as if the governmental action is not in effect and the market value of the property determined as if the governmental action is in effect.

Promulgation and enforcement of the rulemaking will be neither a statutory nor a constitutional taking of private real property. The primary purpose of the rulemaking is to correct obsolete references and typographical errors throughout Chapter 332 and to amend it for clarity. The rulemaking will not affect a landowner's rights in private real property, because this rulemaking adoption will not burden, restrict, or limit the owner's right to property, nor will it reduce the value of any private real property by

25% or more beyond that which would otherwise exist in the absence of the regulations. Therefore, these adopted rules will not constitute a taking under Texas Government Code, Chapter 2007.

Consistency with the Coastal Management Program

The commission reviewed the adopted rules and found that they are neither identified in Coastal Coordination Act implementation rules, 31 TAC §505.11(b)(2) or (4), nor will they affect any action/authorization identified in Coastal Coordination Act implementation rules, 31 TAC §505.11(a)(6). Therefore, the adopted rules will not be subject to the Texas Coastal Management Program (CMP).

The commission invited public comment regarding the consistency with the CMP during the public comment period. No comments were received regarding the CMP.

Public Comment

The commission held a virtual public hearing on August 23, 2021. The comment period closed on August 30, 2021. The commission received comments from the TCEQ Office of Public Interest Counsel (OPIC), Risa Weinberger & Associates, Inc (RWA), and Solid Waste Services for the City of Corpus Christi (SWS). All three commenters were in support of the rule revisions and all comments suggested further revisions to the proposed rules.

Response to Comments

Comment

OPIC expressed concerns that the proposed definition of facility in §332.2(18) is ambiguous. OPIC recommended that the term be revised for consistency with other TCEQ programs by defining "Facility" to include all contiguous property so that public notice of the application will be mailed to the landowners adjacent to the facility.

Response

The commission agrees with the comment and has revised the definition of "Facility" in §332.2(18) to clarify the exact boundaries of a compost facility. The adopted language clarifies that a compost facility extends to the edge of the real property that the compost operations are situated on or within and includes all contiguous tracts of land owned in common by the real property owner. Under amended §332.2(18), facility is defined as all contiguous land, structures, other appurtenances, and improvements on land used for receiving and storing organic materials and processing them into useable final products. The changes adopted are not intended to change the landowners that were required by the proposed rule to receive notification but serve to better convey those landowners needing notification. This additional clarification also makes the use of the term facility consistent with the use in other waste programs, such as 30 TAC §305.2(14) and §330.3(52).

Comment

OPIC expressed concerns that the proposed revisions to the notice requirements for notification tier facilities in §332.22(b) were still ambiguous and left open to broad interpretation. OPIC recommended revisions to §332.22(b) to require the applicant provide a map of the tract of land owned or under the control of the applicant and the tracts of land bordering the tract owned or controlled by the applicant. OPIC further recommended that the applicant provide a list of the names and addresses of the persons owning the tracts of land bordering the tract owned by or under the control of the applicant. OPIC suggested stating that the chief clerk mails the notice of the planned facility to the list of property owners provided by the applicant

Response

The commission agrees that additional changes to the proposed notice requirements will clarify the property owners that are intended to receive notification of composting facility applications. The commission has revised proposed §332.22(b) to include the requirements in Compost Form No. 1 (TCEQ-00651) for the applicant to provide a map depicting facility boundaries and the land bordering the facility. The revisions in response to this comment also specify that the applicant must include a list of the names and addresses of the owners of the land bordering the facility and that the chief clerk will mail notice of the planned facility to the list of property owners provided by the applicant. With the adopted revisions to the amended definition of facility in §332.2(18) and the revised application notification requirements in §332.22(b), the commission intends that the

designated facility includes all of the contiguous property under common ownership, that the owners of property bordering the facility be included on a list provided in the application, and that the chief clerk mail notice of the planned facility to the owners of the property bordering the facility.

Comment

RWA and SWS commented that the notice requirements for registration tier facilities in §332.35 should be revised to match the notice requirements for notification tier facilities in §332.22(b). RWA commented that a definition of "adjoining landowners" should be added to the rules.

Response

The commission has removed the term "adjacent landowner" from proposed §332.35 and revised the section to use language similar to language used in §332.22(b). This change in terminology makes consistent the landowners required to be notified in §332.35 with the landowner notification requirements adopted in §332.22(b). The commission made changes to the proposed revisions in §332.22(b) in response to comment to establish the resources needed to determine the landowners bordering the facility property, require submission of a facility map, and indicate that the clarify that chief clerk mail notice to the owners of the property bordering the facility. These same revisions were not made to proposed §332.35 because the structure of the notification requirements for registration tier applicants is different and those requirements are already specified in existing

§332.34. Regarding the addition of a definition for "adjoining landowners," the commission does not agree that it is necessary because that term is not used in the amended rules.

SUBCHAPTER A: GENERAL INFORMATION

§§332.2 - 332.4, 332.6, 332.8

Statutory Authority

The amendments are adopted under the authority of Texas Water Code, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its powers, duties and responsibilities; Texas Solid Waste Disposal Act; Texas Health and Safety Code (THSC), §§361.011, 361.017, and 361.024, which provides the commission with the authority to adopt rules necessary to carry out its powers and duties under THSC, Chapter 361; THSC, §361.428, which provides the commission with the authority to adopt rules establishing standards and guidelines for composting facilities; and THSC, §361.013, which provides the commission with the authority to charge fees for solid waste disposal and transportation.

The adopted amendments implement THSC, Chapter 361.

§332.2. Definitions.

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

(1) Agricultural materials--Litter, manure, bedding, feed material, vegetative material, and dead animal carcasses from agricultural operations.

(2) Agricultural operations--Operations involved in the production of agricultural materials.

(3) Air contaminant--Particulate matter, radioactive material, dust, fumes, gas, mist, smoke, vapor, or odor or any combination thereof produced by processes other than natural. Water vapor shall not be considered an air contaminant.

(4) All-weather roads--A roadway that has been designed to withstand the maximum load imposed by vehicles entering and exiting the facility during all types of weather conditions.

(5) Anaerobic composting--The controlled biological decomposition of organic materials through microbial activity which occurs in the absence of free oxygen. Anaerobic composting does not include the stockpiling of organic materials.

(6) Backyard operations--The composting, land application, and mulching of non-industrial organic material, such as grass clippings, leaves, brush, clean wood material, or vegetative food material, generated by a homeowner, tenant of a single or multi-family residential or apartment complex, or a commercial or institutional complex where the composting, land application or mulching occurs on the dwelling property and the final product is utilized on the same property. Backyard operations

include [includes] neighborhood composting demonstration sites that [which] generate less than 50 cubic yards of final product per year.

(7) Batch (or Sampling batch)--The lot of produced compost represented by one analytical sample (3,000 cubic yards or 5,000 cubic yards depending on facility type).

(8) Beneficial reuse--Any agricultural, horticultural, reclamation, or similar use of compost as a soil amendment, mulch, or component of a medium for plant growth, when used in accordance with generally accepted practice and where applicable is in compliance with the final product standards established by this chapter. Simply offering a product for use does not constitute beneficial reuse. Beneficial reuse does not include placement in a disposal facility, use as daily cover in a disposal facility, or utilization for energy recovery.

(9) Bulking Agent--An ingredient in a mixture of composting materials included to improve structure and porosity (which improve convective air flow and reduce settling and compaction) and/or to lower moisture content. Bulking agents may include but are not limited to: compost, straw, wood chips, saw dust, or shredded brush.

(10) Clean wood material--Wood or wood materials, including stumps, roots, or vegetation with intact rootball, sawdust, pallets, and manufacturing rejects.

Clean wood material does not include wood that has been treated, coated or painted by materials such as, but not limited to, paints, varnishes, wood preservatives, or other chemical products. Clean wood material also does not include demolition material, where the material is contaminated by materials such as, but not limited to, paint or other chemicals, glass, electrical wiring, metal, and sheetrock.

(11) Commission--The Texas Commission on Environmental Quality [The Texas Natural Resource Conservation Commission and its successors].

(12) Compost--The stabilized product of the decomposition process that is used or distributed for use as a soil amendment, artificial topsoil [top soil], growing medium amendment, or other similar uses.

(13) Composting or functionally aerobic composting--The controlled, biological decomposition of organic materials through microbial activity that [which] occurs in the presence of free oxygen. Composting or functionally aerobic composting does not include the stockpiling of organic materials.

(14) Cured compost (CC)--A highly stabilized product that [which] results from exposing mature compost to a prolonged period of humification and mineralization.

(15) Dairy material--Products that [which] have a Standard of Identity defined in 21 Code of Federal Regulations Part 131 [the Code of Federal Regulations, Title 21 §131].

(16) Distribute--To sell, offer for sale, expose for sale, consign for sale, barter, exchange, transfer possession or title, or otherwise supply.

(17) Executive director--The Executive Director of the Texas Commission on Environmental Quality [Texas Natural Resource Conservation Commission] or their [his] duly authorized representative.

(18) Facility-- All contiguous land, structures, other appurtenances, and improvements on land used for receiving and storing organic materials and processing them into useable final products. ~~All structures, other appurtenances, and improvements within the property boundaries of the land on which a permit, registration, or notification tier operation is located that is used for receiving and storage of organic materials and processing them into useable final products.~~

(19) Feedstock--Any material used for land application or as a basis for the manufacture of compost, mulch, or other useable final product.

(20) Final Product--Composted material meeting testing requirements of §332.71 of this title (relating to Sampling and Analysis Requirements for Final Product) and awaiting distribution or disposal.

(21) Fish feedstocks--Fish, shellfish, or seafood and by-products of these materials whether raw, processed, or cooked. Fish feedstocks does not include oils and/or greases that are derived from these same materials.

(22) Foreign matter--Inorganic and organic constituents that [which] are not readily decomposed, including metals, glass, plastics, and rubber, but not including sand, dirt, and other similar materials.

(23) Grab sample--A single sample collected from one identifiable location.

(24) Grease--See the definition of Oil in this section.

(25) Hours of operation--Those hours when [which] the facility is open to receive feedstock, incorporate feedstock into the process, retrieve product from the process, and/or ship product.

(26) Land application--The spreading of yard trimmings, manure, clean wood material, and/or vegetative food materials onto the surface of the land or the incorporation of these materials within three feet of the surface.

(27) Leachate--Liquid that [which] has come in contact with or percolated through materials being stockpiled, processed, or awaiting removal and that [which] has extracted, dissolved, or suspended materials. Leachate also includes condensate from gases resulting from the composting process.

(28) Manure--Animal excreta and residual materials that have been used for bedding, sanitary, or feeding purposes for such animals.

(29) Mature compost--Mature compost is the stabilized product of composting that [which] has achieved the appropriate level of pathogen reduction (see definitions of "PFRP" and "PSRP" in this section) [(i.e., PFRP or PSRP)] and is beneficial to plant growth, and meets the requirements of Table 2 of §332.72 of this title (relating to Final Product Grades).

(30) Maturity--A measure of the lack of biological activity in freshly aerated materials, resulting from the decomposition of the incoming feedstock during the active composting period.

(31) Meat feedstocks--Meat and meat by-products whether raw, processed, or cooked including whole animal carcasses, poultry, and eggs. Meat feedstocks does not include oils and/or greases that are derived from these same materials.

(32) Mixed municipal solid waste--Garbage, refuse, and other solid waste from residential, commercial, industrial non-hazardous, and community activities that [which] is generated and collected in aggregate.

(33) Mulch--Ground, coarse, woody yard trimmings, and clean wood material. Mulch is normally used around plants and trees to retain moisture and suppress weed growth, and is intended for use on top of soil or other growing media rather than being incorporated into the soil or growing media. Mulch does not include wood from trees or other plants that have [has] been systemically killed using herbicides.

(34) Municipal sewage sludge--Solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

(35) Nuisance--Nuisances as set forth in the Texas Health and Safety Code, Chapter 341, the Texas Water Code, Chapter 26, and §101.4 of this title (relating to Nuisance).

(36) Oil--Any material rendered from vegetative material, dairy material, meat or [and] fish feedstocks[,] that is soluble in trichlorotrifluoroethane. It includes other material extracted by the solvent from an acidified sample and not volatilized during the test. Oil and greases do not include grease trap waste.

(37) One hundred-year floodplain--Any land area that [which] is subject to a 1.0% or greater chance of flooding in any given year from any source.

(38) Operator--The person(s) responsible for operating the facility or part of a facility.

(39) Quality Assurance/Quality Control (QAQC) plan--A written plan to describe standard operating procedures used to sample, prepare, store, and test final product, and report test results. The plan outlines quality assurance criteria, as well as quality control procedures, needed to meet the operational specifications of this chapter.

(40) Quality Assurance Program Plan (QAPP)--A QAQC plan prepared by the agency [TNRCC] that may be substituted for the QAQC plan.

(41) Paper--A material made from plant fibers (such as, but not limited to wood pulp, rice hulls, and kenaf). The sludge byproduct resulting from the production of paper may be approved as a feedstock pursuant to §332.33(b) of this title (relating to Required Forms, Applications, Reports, and Request To Use the Sludge Byproduct of Paper Production).

(42) Permit--A written document issued by the commission that, by its conditions, may authorize the owner or operator to construct, install, modify, or operate a facility or operation in accordance with specific limitations.

(43) Person--Any individual, partnership, corporation, association, governmental subdivision, or public or private organization of any character.

(44) PFRP--The process to further reduce pathogens as described in 40 Code of Federal Regulations Part 503, Appendix B.

(45) [(46)] Positively-sorted organic material--Positively-sorted organic material includes materials such as, but not limited to, yard trimmings, clean wood materials, manure, vegetative material, paper, and meat and fish feedstocks that are

sorted or pulled out as targeted compostable organic materials from mixed municipal solid waste prior to the initiation of processing.

(46) [(47)] Processing--Actions that are taken to land apply feedstocks or convert feedstock materials into finished compost, mulch, or a useable final product. Processing does not include the stockpiling of materials.

(47) [(45)] PSRP--The process to significantly reduce pathogens as described in 40 Code of Federal Regulations Part 503, Appendix B.

(48) Recyclable material--For purposes of this chapter, a recyclable material is a material that has been recovered or diverted from the solid waste stream for purposes of reuse, recycling, or reclamation, a substantial portion of which is consistently used in the manufacture of products that [which] may otherwise be produced from raw or virgin materials. Recyclable material is not solid waste unless the material is deemed to be hazardous solid waste by the administrator of the United States Environmental Protection Agency, whereupon it shall be regulated accordingly unless it is otherwise exempted in whole or in part from regulation under the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery [Protection] Act. If, however, recyclable materials may become solid waste at such time, if any, as it is abandoned or disposed of rather than recycled, whereupon it will be solid waste with respect only to the party actually abandoning or disposing of the material.

(49) Recycling--A process by which materials that have served their intended use or are scrapped, discarded, used, surplus, or obsolete are collected, separated, or processed and returned to use in the form of raw materials in the production of new products. Recycling includes the composting process if the compost material is put to beneficial reuse as defined in this section.

(50) Residence--A single-family or multi-family dwelling.

(51) Run-off--Any rainwater, leachate, or other liquid that drains over land from any part of a facility.

(52) Run-on--Any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

(53) Semi-mature compost (SMC)--Organic matter that has been through the thermophilic stage and achieved the appropriate level of pathogen reduction (see definitions of "PFRP" and "PSRP" in this section) [(i.e., PFRP or PSRP)]. It has undergone partial decomposition but it is not yet stabilized into mature compost. Semi-mature compost shall not be packaged, as uncontrolled microbial transformations will occur.

(54) Solid waste--Garbage; rubbish; refuse; sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility; and

other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, municipal, commercial, mining, and agricultural operations from community and institutional activities.

(55) Source-separated--Set apart from waste after use or consumption by the user or consumer.

(56) Source-separated organic material--Organic materials from residential, commercial, industrial, and other community activities, that at the point of generation have been separated, collected, and transported separately from non-organic materials, or transported in the same vehicle as non-organic materials but in separate compartments. Source-separated organic material may include materials such as, but not limited to, yard trimmings, clean wood materials, manure, vegetative material, and paper. Yard trimmings and clean wood material collected with whitegoods, as in brush and bulky item collections, will be considered source-separated organic materials for the purposes of these rules.

(57) Stockpile--A collection of materials that is either awaiting processing or removal.

(58) Unauthorized material--Material that [which] is not authorized to be processed in a particular type of composting, mulching, or land application facility.

(59) [(60)] Vector--An agent, such as an insect, snake, rodent, bird, or animal capable of mechanically or biologically transferring a pathogen from one organism to another.

(60) [(59)] Vegetative material--Fruit, vegetable, or grain material whether raw, processed, liquid, solid, or cooked. Vegetative material does not include oils and/or greases that are derived from these same materials.

(61) Voucher--Provides the same information as required on a label to persons receiving compost distributed in bulk.

(62) [(63)] Wet weight--The weight of the material as used, not a weight that has been adjusted by subtracting the weight of water within the feedstock.

(63) [(62)] Wetlands--Those areas defined as wetlands in the Texas Water Code, Chapter 26.

(64) White goods--Discarded large household appliances such as refrigerators, stoves, washing machines, or dishwashers.

(65) Yard trimmings--Leaves, grass clippings, yard and garden debris, and brush, including clean woody vegetative material not greater than six inches in

diameter, that results from landscaping maintenance and land-clearing operations. Yard trimmings does not include stumps, roots, or shrubs with intact root balls.

§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 a Notice of Intent to Recycle [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).

§332.4. General Requirements.

All composting facilities and backyard operations shall comply with all of the following general requirements. Violations of these requirements are subject to enforcement by the commission and may result in the assessment of civil or administrative penalties pursuant to Texas Water Code, Chapter 7 ([relating to] Enforcement).

(1) Compliance with Texas Water Code. The activities that are subject to this chapter shall be conducted in a manner that prevents the discharge of material to or the pollution of surface water or groundwater in accordance with the provisions of the Texas Water Code, Chapter 26 ([relating to] Water Quality Control).

(2) Nuisance conditions. The composting, mulching, and land application of material shall be conducted in a sanitary manner that shall prevent the creation of nuisance conditions as defined in §330.3 [§330.2] of this title (relating to Definitions) and as prohibited by the Texas Health and Safety Code, Chapters 341 and 382 ([relating to] Minimum Standards of Sanitation and Health Protection Measures; and Clean Air Act), the Texas Water Code, Chapter 26 ([relating to] Water Quality Control), §101.4 of this title (relating to Nuisance), and any other applicable regulations or statutes.

(3) Discharge to surface water or groundwater. The discharge of material to or the pollution of surface water or groundwater as a result of the beneficial use or reuse and recycling of material is prohibited.

(4) Compliance with federal laws. Facility operations shall be conducted in accordance with all applicable federal laws and regulations.

(5) Compliance with state laws. Facility operations shall be conducted in accordance with all applicable laws and regulations of the State of Texas.

(6) Facility operations. Facility operations shall not be conducted in a manner which causes endangerment of human health and welfare, or the environment.

(7) Operations on a municipal solid waste landfill unit. No composting activities shall be conducted within the permitted boundaries of a municipal solid waste landfill without prior approval by the executive director as required by §305.70 of this title (relating to Municipal Solid Waste Permit and Registration Modifications).

(8) Operational requirement. Operations shall be conducted in such a manner to ensure that no unauthorized or prohibited materials are processed at the facility. All unauthorized or prohibited materials received by the facility shall be disposed of at an authorized facility in a timely manner.

(9) Leachate. Leachate from landfills and mixed municipal solid waste composting operations shall not be used on any composting process, except mixed municipal solid waste composting, and shall not be added after the designation of an end-product grade unless the product is reanalyzed to determine end-product quality.

(10) Nonhazardous industrial solid waste. This chapter applies to the composting, mulching, and land application of only the following nonhazardous industrial solid waste when the composting occurs on property that does not qualify for the exemption from the requirement of an industrial solid waste permit pursuant to §335.2(d) of this title (relating to Permit Required):

(A) dead animal carcasses;

(B) clean wood material;

(C) vegetative material;

(D) paper;

(E) manure (including paunch manure);

(F) meat feedstocks;

(G) fish feedstocks;

(H) dairy material feedstocks;

(I) yard trimmings; and

(J) oils and greases.

(11) Industrial and hazardous waste. Any of the materials listed in paragraph (10) of this section that are not managed in accordance with the requirements of this chapter, all hazardous wastes, and any nonhazardous industrial solid wastes not listed in paragraph (10) of this section shall be managed in accordance with Chapter 335 of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste).

(12) Chemicals of concern. 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.

§332.6. Compost and Mulch Operations Located at Municipal Solid Waste Facilities.

(a) Facilities that compost or mulch materials considered to be exempt, notification, or registered facilities in §332.3 of this title (relating to Applicability) may be located at municipal solid waste permitted facilities. The owner shall prepare and submit a modification request in accordance with the provisions of §305.70 of this title (relating to Municipal Solid Waste Permit and Registration [Class 1] Modifications) unless the municipal solid waste facility permit authorizes compost or mulch operations. If the municipal solid waste facility permit authorizes compost operations, the compost operation shall be conducted in accordance with the facility permit.

(b) Facilities considered to be permitted facilities in §332.3 of this title (relating to Applicability) may be located at municipal solid waste permitted facilities. The owner shall prepare and submit an application for a major permit amendment in accordance with the provisions of §305.62 of this title (relating to Amendment) and shall submit the information required by §332.47 of this title (relating to Permit Application Preparation) and shall fully comply with the provisions of §332.41 of this title (relating to Permit Required).

§332.8. Air Quality Requirements.

(a) General requirements.

(1) Any composting or mulching operation that [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 that [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 that [which] would otherwise be required to obtain air quality authorization under Chapter 116 of this title and that [, 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 that [which] is a new major source or any modification that [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 that [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 that [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 that [which] off-load materials from grinders at a point that [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 that [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 ensure [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 that [which] off-load materials from grinders at a point that [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 ensure [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 that [which] off-load materials from grinders at a point that [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 ensure [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 that [which] off-load materials from grinders at a point that [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 that [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 B: OPERATIONS REQUIRING A NOTIFICATION

§332.22, §332.23

Statutory Authority

The amendments are adopted under the authority of Texas Water Code, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its powers, duties and responsibilities; Texas Solid Waste Disposal Act, Texas Health and Safety Code (THSC), §§361.011, 361.017, and 361.024, which provide the commission with the authority to adopt rules necessary to carry out its powers and duties under THSC, Chapter 361; THSC, §361.428, which provides the commission with the authority to adopt rules establishing standards and guidelines for composting facilities; and THSC, §361.013, which provides the commission with the authority to charge fees for solid waste disposal and transportation.

The adopted amendments implement THSC, Chapter 361.

§332.22. Notification.

(a) The operator shall notify the executive director in writing of the existence of the facility 30 days prior to construction by completing and submitting forms provided by the executive director [TNRCC Compost Form Number 1, "Notice of Intent to Operate a Compost Facility," available from the commission].

(b) The applicant shall include a map depicting the approximate boundaries of the facility and all land bordering the facility. The applicant shall also include a list, attached to the map, of the names and addresses of the owners of the land bordering the facility such as can be determined from the current county tax rolls or other reliable sources at the time the application is filed. The applicant shall include the source of the information included in such list. The chief clerk shall mail notice of the planned facility to the list of property owners provided under this subsection. ~~The applicant shall include a list of [adjacent and] landowners with adjoining property and their addresses. Upon receipt of the notification, the chief clerk shall mail notice of the planned facility to the [affected] landowners with adjoining property.~~ The chief clerk shall also mail notice to other affected landowners as directed by the executive director.

§332.23. Operational Requirements.

Operation of the facility shall comply with all of the following operational requirements.

(1) 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.

(2) Pathogen reduction. One of the following protocols shall be used to reduce pathogens during composting:

(A) Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the composting materials shall be maintained at 55 degrees Celsius [Centigrade] or higher for three days; or

(B) Using the windrow composting method, the temperature of the composting materials shall be maintained at 55 degrees Celsius [Centigrade] or higher for 15 days or longer. During the period when the composting materials are maintained at 55 degrees Celsius [Centigrade] or higher, there shall be a minimum of five turnings of the windrow.

(3) Prohibited substances. Fungicides, herbicides, insecticides or other pesticides that contain constituents listed in 40 Code of Federal Regulations [CFR] Part 261, Appendix VIII-Hazardous Constituents or on the Hazardous Substance List as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) shall not be applied to or incorporated into feedstocks, in-process materials or processed materials.

(4) 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.

(5) The facility shall be subject to the requirements of §328.4 of this title (relating to Limitations on Storage of Recyclable Materials) and §328.5 of this title (relating to Reporting and Recordkeeping Requirements).

SUBCHAPTER C: OPERATIONS REQUIRING A REGISTRATION

§§332.32, 332.33, 332.35 - 332.37

Statutory Authority

The amendments are adopted under the authority of Texas Water Code, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its powers, duties and responsibilities; Texas Solid Waste Disposal Act, Texas Health and Safety Code (THSC), §§361.011, 361.017, and 361.024, which provide the commission with the authority to adopt rules necessary to carry out its powers and duties under THSC, Chapter 361; THSC, §361.428, which provides the commission with the authority to adopt rules establishing standards and guidelines for composting facilities; and THSC, §361.013, which provides the commission with the authority to charge fees for solid waste disposal and transportation.

The adopted amendments implement THSC, Chapter 361.

§332.32. Certification by Engineer, Approval by Landowner [Land Owner], and Inspection.

(a) Certification by licensed [registered] professional engineer. The operator shall obtain certification by a Texas-Licensed [Texas-Registered] Professional Engineer that the facility has been constructed as designed and is in general compliance with the regulations prior to accepting any feedstock at the facility that requires

registration [and maintaining that certification on-site for inspection by the commission]. The operator shall maintain that certification on-site for inspection by the commission.

(b) Ownership or control of property. The facility shall be located on property owned by the operator or the operator shall establish, using an affidavit form provided by the commission, signed by the owner and notarized, that the owner is aware of and consents to the operation prior to any receipt of feedstock or processing activities. A copy of the affidavit shall be kept on-site at all times.

(c) Inspection of facility. Prior to the initial acceptance of any feedstocks, the facility shall be inspected by the agency [TNRCC] to determine compliance with the registration.

§332.33. Required Forms, Applications, Reports, and Request to Use the Sludge Byproduct of Paper Production.

(a) The operator of the compost facility shall submit the following. [:]

(1) Registration application form [TNRCC Form Number 2]. The operator shall submit a registration application form [TNRCC Form Number 2, "Notice of Intent to Apply for a Compost Facility Registration or Permit,"] available from the executive director. [commission; and]

(2) Registration application. The registration application described in §332.34 of this title (relating to Registration Application).

(3) Reports.

(A) Final products.

(i) Semiannual reports. Facilities requiring registration must submit reports on final product testing to the executive director in compliance with §332.71(j)(1) of this title (relating to Sampling and Analysis Requirements for Final Product) on a semiannual basis.

(ii) Annual reports. The operator shall submit annual written reports. These reports shall at a minimum include input and output quantities, a description of the end-product distribution, and all results of any required laboratory testing. A copy of the annual report shall be kept on-site for a period of five years.

(B) Received materials. All registered facility operators shall follow the same reporting requirements for received materials as established in §332.43(2)(B) of this title (relating to Required Forms, Applications, and Reports).

[(3) Annual report. The operator shall submit annual written reports. These reports shall at a minimum include input and output quantities, a description of the end-product distribution, and all results of any required laboratory testing. A copy of the annual report shall be kept on-site for a period of five years.]

(4) Fees. Registered compost facilities shall follow the same fee requirements as permitted compost facilities established in §332.43(3) of this title.

[(4) Final product testing report. Facilities requiring registration must submit reports on final product testing to the executive director in compliance with §332.71(j)(1) of this title (relating to Sampling and Analysis Requirements for Final Product) on a semiannual basis.]

(b) In order to use the sludge byproduct of paper production as a composting feedstock, the operator must first receive permission from the executive director.

(1) The operator shall submit a request to the executive director to use the sludge byproduct as a feedstock. The request may also be submitted with a registration application.

(2) At a minimum, the request shall present all of the following:

(A) identification of the source of the sludge byproduct;

(B) a general description of the process that produces the sludge byproduct including the use of any elemental chlorine [chorine] bleaches used in the process;

(C) analytical results that identify concentrations for polychlorinated dibenzo-p-dioxins (CCDs) and polychlorinated dibenzofurans (CDFs); and

(D) a demonstration that the final product will not be harmful to human health or the environment.

(3) The executive director [or his designee] shall, after review of the request, determine approval or denial of [if he will approve or deny] the request.

(4) An operator that receives approval from the executive director to include the sludge byproduct of paper production as a composting feedstock[,] shall submit a new request to the executive director in accordance with this subsection if a significant change, such as a new source for the feedstock, is planned.

§332.35. Registration Application Processing.

(a) An application shall be submitted to the executive director. When an application is administratively complete, the executive director shall assign the application an identification number.

(b) Public Notice.

(1) When an application is administratively complete the chief clerk shall mail notice to landowners identified in the landowner list ~~adjacent landowners~~. The chief clerk also shall mail notice to other affected landowners as directed by the executive director.

(2) When an application is technically complete the chief clerk shall mail notice to landowners identified in the landowner list ~~adjacent landowners~~. The chief clerk shall also mail notice to other affected landowners as directed by the executive director. The applicant shall publish notice in the county in which the facility is located[,] and in adjacent counties. The published notice shall be published once a week for three weeks. The applicant should attempt to obtain publication in a Sunday edition of a newspaper. The notice shall explain the method for submitting a motion for reconsideration.

(3) Notice issued under paragraphs (1) or (2) of this subsection shall contain the following information:

(A) the identifying number given the application by the executive director;

(B) the type of registration sought under the application;

(C) the name and address of the applicant(s);

(D) the date on which the application was submitted; and

(E) a brief summary of the information included in the application.

(c) The executive director [or his designee] shall, after review of any application for registration of a compost facility, determine approval or denial of [if he will approve or deny] an application in whole or in part. The executive director shall base the [his] decision on whether the application meets the requirements of this subchapter and the requirements of §332.4 of this title (relating to General Requirements).

(d) At the same time that the executive director's decision is mailed to the applicant, a copy or copies of this decision shall also be mailed to all landowners identified in the landowner list ~~adjacent~~ and any affected landowners, residents, and businesses.

(e) The applicant or a person affected by the executive director's final approval of an application may file with the chief clerk a motion to overturn, under §50.139 of this title (relating to Motion to Overturn Executive Director's Decision).

§332.36. Location Standards.

Facilities shall meet all of the following locational criteria.

(1) One hundred-year [One-hundred year] floodplain. The facility shall be located outside of the 100-year floodplain unless the applicant can demonstrate that the facility is designed and will operate to prevent washout during a 100-year storm event, or obtains a Conditional Letter of Map Amendment (CLOMA) from the Federal Emergency Management Administration (FEMA) Administrator.

(2) Drainage. The facility shall not significantly alter existing drainage patterns.

(3) Wetlands. The facility shall not be located in wetlands.

(4) Water wells. The facility shall be located at least 500 feet from all public water wells and at least 150 feet from private water wells.

(5) Surface water. The facility shall be located at least 100 feet from creeks, rivers, intermittent streams, lakes, bayous, bays, estuaries, or other surface waters in the state.

(6) Setback [Set back] distance from facility boundary. The setback [set back] distance from the facility boundary to the areas for receiving, processing, or storing feedstock or final product shall be at least 50 feet.

(7) Edwards Aquifer recharge zone. If located over the Recharge Zone of the Edwards Aquifer, a facility is subject to Chapter 213 [313] of this title (relating to Edwards Aquifer). The Edwards Aquifer Recharge Zone is specifically that area delineated on maps in the office of the executive director.

§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 $\underline{1 \times 10^{-7}}$ [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 Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [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 in §332.72(d)(2)(A) and (C) [(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 that [which] are sold or distributed as set forth in §332.74 of this title (relating to Compost Labelling Requirements).

(12) Licensed municipal solid waste facility supervisor. The operator shall employ at least one licensed municipal solid waste supervisor who has completed a TCEQ-recognized or approved specialized compost training course. Supervisors of existing facilities who do not already hold a municipal solid waste facility supervisor license must obtain a license. A licensed municipal solid waste facility supervisor who has completed a TCEQ-recognized or approved specialized compost training course shall be on-site during the hours of operation.

[(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 – 332.45, 332.47

Statutory Authority

The amendments are adopted under the authority of Texas Water Code, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its powers, duties and responsibilities; Texas Solid Waste Disposal Act, Texas Health and Safety Code (THSC), §§361.011, 361.017, and 361.024, which provide the commission with the authority to adopt rules necessary to carry out its powers and duties under THSC, Chapter 361; THSC, §361.428, which provides the commission with the authority to adopt rules establishing standards and guidelines for composting facilities; and THSC, §361.013, which provides the commission with the authority to charge fees for solid waste disposal and transportation.

The adopted amendments implement THSC, Chapter 361.

§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 Comment [Notice]). The requirements of this subsection supersede any inconsistent provisions in Chapter 39, Subchapter H of this title.

§332.42. Certification by Engineer, Ownership or Control of Land, and Inspection.

(a) Certification by licensed [registered] professional engineer. The operator shall obtain certification by a Texas-Licensed [Texas-Registered] Professional Engineer that the facility has been constructed as designed and in general compliance with the regulations prior to accepting any feedstock at the facility that requires a permit [and maintaining that certification on-site available for inspection by the commission]. The operator shall maintain that certification on-site for inspection by the commission.

(b) Ownership or control of property. The facility shall be located on property owned by the operator or the operator shall establish, using an affidavit form provided by the commission, signed by the owner and notarized, that the owner is aware of and consents to the operation prior to any receipt of feedstock or processing activities. A copy of the affidavit shall be kept on-site at all times.

(c) Inspection of facility. Prior to the initial acceptance of any feedstocks, the facility shall be inspected by the agency [TNRCC] to determine compliance with the permit.

§332.43. Required Forms, Applications, and Reports.

The operator shall submit all of the following.

(1) Permit application form [TNRCC Compost Form Number 2]. The operator shall submit [TNRCC Compost Form Number 2, "Notice of Intent to Apply for a Compost Facility Registration or Permit," and] a permit application, available from the executive director, and prepared in accordance with the requirements of §332.47 of this title (relating to Permit Application Preparation).

(2) Reports.

(A) Final products.

(i) Monthly reports. Facilities requiring permit must submit reports on final product testing to the executive director in compliance with §332.71(j)(1) of this title (relating to Sampling and Analysis Requirements for Final Product) on a monthly basis.

(ii) Annual reports. The operator shall submit annual written reports. These reports shall at a minimum include input and output quantities, a description of the end-product distribution, and all results of any required laboratory testing. A copy of the annual report shall be kept on-site for a period of five years.

(B) Received materials. All permitted facility operators are required to submit reports to the executive director covering the types and amounts of waste processed at the facility.

(i) Quarterly reports. Each processing facility shall report to the executive director the information requested on the report form for the reporting period including the amount of source-separated material processed to compost or mulch product.

(ii) Annual reports. Each processing facility shall report to the executive director a summary of the quarterly totals and yearly total, as well as the year-end status of the facility.

(iii) Report form. The report shall be on a form furnished by the executive director or reproduced from a form furnished by the executive director or by an electronic form or format furnished by the executive director.

(iv) Report information. In addition to a statement of the amount of waste received for processing, the report shall contain other information requested on the form, including the facility operator's name, address, and phone number; the permit number, permit application number; the facility type, size, and capacity; and other information the executive director may request.

(v) Reporting units. The amount of waste received for processing shall be reported in tons or in cubic yards as received (compacted or uncompacted) at the gate. If accounting of the waste is recorded in cubic yards, then separate accounting must be made for waste that comes to the facility in open vehicles or without compaction, and waste that comes to the facility in compactor vehicles. If scales are not utilized and accounting of the waste received is in cubic yards, gallons, or drums then those volumetric units may be converted to tons for reporting purposes, using the conversion factors set forth in subparagraphs (I) and (II) of this clause.

(I) General weight to volume conversion factors:

(-a-) one ton = 2,000 pounds;

(-b-) one gallon = 7.5 pounds (grease trap waste);

(-c-) one gallon = 8.5 pounds (wastewater treatment plant sludge or septage);

(-d-) one gallon = 9.0 pounds (grit trap waste); and

(-e-) one drum = 55 gallons.

(II) Volume to weight conversion factors for waste in transport vehicles:

(-a-) one cubic yard = 400 pounds (no compaction);

(-b-) one cubic yard = 666.66 pounds (medium compaction); and

(-c-) one cubic yard = 800 pounds (heavy compaction).

(vi) Use of population equivalent. In determining the amount of waste processed for disposal at a processing facility serving less than 5,000 people, the operator may use the number of tons calculated or derived from the population served by the facility in lieu of maintaining records of the waste deposited at the facility. The amount of waste shall be calculated on the basis of one ton per person per year. The report shall document the population served by the facility and reflect any changes since the previous report.

(vii) Report due date. The required quarterly received materials report shall be submitted to the executive director not later than 20 days following the end of the fiscal quarter for which the report is applicable. The fiscal year begins on September 1 and concludes on August 31.

(viii) Method of submission. The required report shall be delivered or mailed to the agency to the return address designated by the executive director in the billing statement distributed quarterly or shall be submitted electronically to the agency.

(ix) Penalties. Failure of the facility or process operator to submit the required report by the due date shall be sufficient cause for the commission to revoke the permit and authorization to process of waste. The commission may assess interest penalties for late payment of fees and may also assess penalties in accordance with Texas Water Code, §7.051 (Administrative Penalty) or take any other action authorized by law to secure compliance.

[(2) Annual report. The operator shall submit annual written reports. These reports shall at a minimum include input and output quantities, a description of the end-product distribution, and all results of any required laboratory testing. A copy of the annual report shall be kept on-site for a period of five years.]

(3) Fees. Each operator of a facility that processes Municipal Solid Waste is required to pay a fee to the agency for all waste received for processing. Source-separated material processed at a composting or mulch processing facility, including a composting or mulch processing facility located at a permitted landfill, is exempt from the fee requirements set forth and described in this section. The agency will credit any fee payment due under this section for any material received and processed to compost or mulch product at the facility. Any compost or mulch product that is produced at a composting or mulch processing facility that is used in the operation of the facility or is disposed of in a landfill or used as landfill daily cover is not exempt from the fee.

(A) Fee rates.

(i) Tons. For waste reported in tons, the fee rate is $0.47 per ton received.

(ii) Cubic yards (compacted). For waste reported in compacted cubic yards, the fee rate is $0.15 per cubic yard received.

(iii) Cubic yards (uncompacted). For waste reported in uncompacted cubic yards, the fee rate is $0.095 cent per cubic yard received.

(iv) If a facility operator chooses to report the amount of waste received utilizing the population equivalent method authorized in paragraph (2)(B)(vi) of this section, the fee shall be calculated by the executive director at an amount equal to $0.47 per ton.

(B) Measurement options. The volume or weight reported on the quarterly received materials report must be consistent throughout the report, and it must be consistent with the total amount of the waste received by a processing facility at the gate (measured in tons or cubic yards, or determined by the population equivalent method specified in paragraph (2)(B)(vi) of this section). The weight or volume of the waste received for processing shall be determined prior to processing of the waste. The recommended method for measuring and reporting waste received at the gate is in tons. The operator must accurately measure and report the number of tons or cubic yards of waste received.

(C) Fee calculation. The fee shall be calculated by the executive director using information obtained from the quarterly received materials report. The total tonnage or cubic yards reported to the executive director in the quarterly received materials report shall be derived from gate tickets (weight or volume) or invoices, except in the case of operators who are authorized to report utilizing the population equivalent method in paragraph (2)(B)(vi) of this section, and records of recycled materials or any other information deemed relevant by the executive director. A billing

statement will be generated quarterly by the executive director and forwarded to the applicable permittee or a designated representative.

(D) Fee due date. All solid waste fees shall be due within 30 days of the date the payment is requested.

(E) Method of payment. The required fee shall be submitted in the form of a check or money order made payable to the Texas Commission on Environmental Quality and delivered or mailed to the return address designated by the executive director in the billing statement distributed quarterly.

(F) Penalties. Failure of the facility or process operator to submit the required fee payment by the due date shall be sufficient cause for the commission to revoke the permit and authorization to process waste. The commission may assess interest penalties for late payment of fees and may also assess penalties in accordance with Texas Water Code, §7.051, or take any other action authorized by law to secure compliance.

(G) Exemptions. A fee will not be charged on solid waste resulting from a public entity's effort to protect the public health and safety of the community from the effects of a natural or man-made disaster or from structures that have been contributing to drug trafficking or other crimes if the disposal facility at which that

solid waste is offered for disposal has donated to a municipality, county, or other political subdivision the cost of disposing of that waste.

[(3) Final product testing report. Facilities requiring registration must submit reports on final product testing to the executive director in compliance with §332.71(j)(1) of this title (relating to Sampling and Analysis Requirements for Final Product) on a monthly basis.]

(4) Engineer's appointment. An engineer's appointment which consists of a letter from the applicant to the Executive Director identifying the engineer responsible for the submission of the plan, specifications, and any other technical data to be evaluated by the commission regarding the project.

§332.44. Location Standards.

Facilities shall meet all of the following locational criteria.

(1) One hundred-year [One-hundred year] floodplain. The facility shall be located outside of the 100-year floodplain unless the applicant can demonstrate that the facility is designed and will operate to prevent washout during a 100-year storm event, or obtains a Conditional Letter of Map Amendment (CLOMA) from the Federal Emergency Management Administration (FEMA) Administrator.

(2) Drainage. The facility shall not significantly alter existing drainage patterns.

(3) Wetlands. The facility shall not be located in wetlands.

(4) Water wells. The facility shall be located at least 500 feet from all public water wells and at least 150 feet from private water wells.

(5) Surface water. The facility shall be located at least 100 feet from creeks, rivers, intermittent streams, lakes, bayous, bays, estuaries, or other surface waters in the state.

(6) Setback [Set back] distance from facility boundary. The setback [set back] distance from the facility boundary to the areas for receiving, processing, or storing feedstock or final product shall be at least 50 feet.

(7) Edwards Aquifer Recharge Zone. If located over the Recharge Zone of the Edwards Aquifer, a facility is subject to Chapter 213 [313] of this title (relating to Edwards Aquifer). The Edwards Aquifer Recharge Zone is specifically that area delineated on maps in the office of the executive director.

§332.45. Operational Requirements.

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

(1) Protection of surface water. The facility shall be constructed, maintained, and operated to manage run-on and run-off during a 25-year, 24-hour rainfall event and shall 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 shall be considered leachate. Leachate shall be contained in retention facilities until it is reapplied on piles of feedstock, in-process, or unprocessed materials, or it is disposed or treated. The retention facilities shall be lined and the liner shall be constructed in compliance with §332.47(6)(C) of this title (relating to Permit Application Preparation). Leachate may be treated and processed at an authorized facility or as authorized by a National Pollutant Discharge Elimination System [an NPDES] permit. The use of leachate in any processing shall be conducted in a manner that does not contaminate the final product.

(2) Protection of groundwater. The facility shall be constructed, maintained, and operated to protect groundwater. As a minimum, groundwater protection shall be in accordance with the provisions of §332.47(6)(C) of this title.

(3) Unauthorized and prohibited materials. Delivery of unauthorized or prohibited materials shall be prevented. As a minimum there shall be one employee

on-site at all times inspecting each delivery of feedstock to ensure [insure] there is no unauthorized or prohibited material incorporated into the feedstock.

(4) Access. Access to the facility shall be controlled to prevent unauthorized disposal of unauthorized and prohibited materials[,] 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 permit number, hours of operation, and the allowable feedstocks.

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

(9) Amendment required for significant changes. The operator shall submit and obtain a permit amendment from the commission in compliance with Chapter 305 of this title (relating to Consolidated Permits) before changing the processing method or other significant changes to the original permit application.

(10) Prohibited substances. Fungicides, herbicides, insecticides, or other pesticides that contain constituents listed in 40 Code of Federal Regulations [CFR] Part 261, Appendix VIII-Hazardous Constituents or on the Hazardous Substance List as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) shall not be applied to or incorporated into feedstocks, in-process materials, or processed materials.

(11) End-product standards. 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 (relating to Final Product Grades), and label all materials that [which] are sold or distributed as set forth in §332.74 of this title (relating to Final Product Labelling Requirements).

(12) Licensed municipal solid waste facility supervisor. The operator shall employ at least one licensed municipal solid waste supervisor who has completed a TCEQ-recognized or approved specialized compost training course. Supervisors of existing facilities who do not already hold a municipal solid waste facility supervisor

license must obtain a license. A licensed municipal solid waste facility supervisor who has completed a TCEQ-recognized or approved specialized compost training course shall be on-site during the hours of operation.

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

(13) 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.

§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 a compost permit application form provided by the executive director [Compost Form Number 3]. The site development plan must be sealed by a Texas-licensed [registered] professional engineer in accordance with the provisions of 22 TAC §137.33 [§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 centers, 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 licensed [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 runoff 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 United States Geological Survey (USGS) [USGS/DHT] hydraulic equations compiled by the USGS [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 facility's proposed leachate disposal method.

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

(v) drainage maps and drainage plans shall be provided as follows:

(I) an off-site topographic drainage map showing all areas that [which] contribute to the facility's 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 ~~the~~ University of Texas at Austin's 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 that 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

that [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} [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 $\underline{CaCO_3}$, $\underline{\text{alkalinity as } CaCO_3}$, $\underline{\text{hardness as } CaCO_3}$, [$CaCo_3$, alkalinity as $CaCo_3$, hardness as $CaCo_3$,] pH, specific conductance, anion-cation

balance, groundwater elevation (measured in Mean Sea Level (MSL)) [(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 (measured in MSL) [(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 licensed [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, including 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 [the] 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. Financial assurance mechanisms must be established and maintained in accordance with Chapter 37, Subchapter J of this title (relating to Financial Assurance for Recycling Facilities). 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.

(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 1/2 mile of the facility boundaries along with an appropriately scaled map locating property owned by the landowners.

SUBCHAPTER F: HOUSEHOLD HAZARDOUS WASTE COLLECTION

§332.61

Statutory Authority

The amendments are adopted under the authority of Texas Water Code, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its powers, duties and responsibilities; Texas Solid Waste Disposal Act, Texas Health and Safety Code (THSC), §§361.011, 361.017, and 361.024, which provide the commission with the authority to adopt rules necessary to carry out its powers and duties under THSC, Chapter 361; THSC, §361.428, which provides the commission with the authority to adopt rules establishing standards and guidelines for composting facilities; and THSC, §361.013, which provides the commission with the authority to charge fees for solid waste disposal and transportation.

The adopted amendments implement THSC, Chapter 361.

§332.61. General Requirements and Applicability.

(a) A compost permittee shall not accept mixed municipal solid waste from a governmental entity until the commission determines that residents in that service area have reasonable access to household hazardous waste collection programs.

(b) Materials collected or accepted pursuant to this subchapter shall not be placed into the mixed municipal solid waste composting or mixed waste handling operations at a mixed municipal solid waste composting facility, but may be processed separately at such a facility for recycling.

(c) Any person who intends to conduct a collection event or intends to operate a permanent collection center shall comply with the requirements of Chapter 335, Subchapter N of this title (relating to Household [Materials Which Could Be Classified as] Hazardous Wastes [Waste]).

SUBCHAPTER G: END-PRODUCT STANDARDS

§§332.71, 332.72, 332.75

Statutory Authority

The amendments are adopted under the authority of Texas Water Code, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its powers, duties and responsibilities; Texas Solid Waste Disposal Act, Texas Health and Safety Code (THSC), §§361.011, 361.017, and 361.024, which provide the commission with the authority to adopt rules necessary to carry out its powers and duties under THSC, Chapter 361; THSC, §361.428, which provides the commission with the authority to adopt rules establishing standards and guidelines for composting facilities; and THSC, §361.013, which provides the commission with the authority to charge fees for solid waste disposal and transportation.

The adopted amendments implement THSC, Chapter 361.

§332.71. Sampling and Analysis Requirements for Final Product.

(a) Applicability. Facilities that receive a registration or permit under this chapter[,] are required to test final product in accordance with this section. Final product derived from municipal sewage sludge at registered facilities is not subject to the requirements of this section[,] but must comply with the requirements of Chapter 312 of this title (relating to Sludge Use, Disposal, and Transportation).

(b) Analytical methods. Facilities that [which] use analytical methods to characterize their final product must use methods described in the following publications.

(1) Chemical and physical analysis shall utilize:

(A) "*Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods*" (SW-846);

(B) "*Methods for Chemical Analysis of Water and Wastes*" (EPA-600); or

(C) "*Recommended Test Methods for the Examination of Composts and Composting*" (Compost Council, 1995).

(2) Analysis of pathogens shall utilize "*Standard Methods for the Examination of Water and Wastewater*" (Water Pollution Control Federation, latest edition).

(3) Analysis for foreign matter shall utilize "*Recommended Test Methods for the Examination of Composts and Composting*" (Composting Council, 1995).

(4) Analysis for salinity and pH shall utilize NCR (North Central Regional) Method 14 for Saturated Media Extract (SME) Method contained in "*Recommended Test Procedure for Greenhouse Growth Media*" North Central Regional Publication Number 221 (Revised), and "*Recommended Chemical Soil Test Procedures*", Bulletin Number 49 (Revised), October 1988, pages 34-37.

(5) Analysis of total, fixed and volatile solids shall utilize Method 2540 G (Total, Fixed, and Volatile Solids in Solid and Semi-solid Samples) as described in "*Standard Methods for the Examination of Water and Wastewater*" (Water Pollution Control Federation, latest edition).

(6) Analysis for maturity shall utilize the reduction of organic matter (ROM) calculation method, as described in the agency "Quality Assurance Project Plan" [TNRCC "Quality Assurance Program Plan"] (QAPP) or an agency [a TNRCC] approved Quality Assurance/Quality Control (QAQC) plan during the first 18 months of a facility's operation. Reduction in organic matter is calculated by measuring the volatile solids content at two points in the composting process: when compost feedstocks are initially mixed and when the compost is sampled for end-product testing for total metals and Polychlorinated biphenyls (PCBs) [PCBs]. For purposes of compost maturity analysis, the effect of the addition and removal of volatile solids and fixed solids to the compost shall be included in the ROM calculation procedure. After the completion of the maturity testing protocol described in subsection (d) of this section, [or] the facility

QAQC plan, or 18 months, whichever [which ever] comes first, the method recommended in the protocol and approved by the agency [TNRCC] shall be utilized.

(c) Sample collection. Sample collection, preservation, and analysis shall assure valid and representative results pursuant to an agency ~~Agency~~-approved QAQC plan.

(d) Maturity Testing Protocol.

(1) A maturity testing protocol shall be described in the facility QAQC. The protocol shall consist of the ROM method or a comparison of the interim ROM method to a minimum of three test methods with one test method selected from each of subparagraphs (A), (B), and (C) of this paragraph, together with any method in subparagraph (D) of this paragraph.

(A) Chemical analyses:

(i) carbon/nitrogen ratio;

(ii) water soluble ions;

(iii) water soluble organic matter;

(iv) cation exchange capacity;

(v) electrical conductivity;

(vi) crude fiber analysis;

(vii) humification analysis; or

(viii) ratios of the above measurements.

(B) Physical analyses.

(i) Dewar self-heating; or

(ii) color.

(C) Respiration analyses:

(i) $\underline{CO_2}$ [CO[sub]2[/sub]]; or

(ii) $\underline{O_2}$ [O[sub]2[/sub]].

(D) Other test methods proposed in the facility QAQC plan and approved by the agency [TNRCC].

(2) The test methods used in the maturity test protocol shall be based on methodologies published in peer reviewed scientific journals, the publication entitled "*Recommended Test Methods for the Examination of Composts and Composting*" (Compost Council, 1995), or other methods as approved by the agency [TNRCC].

(3) The completed maturity testing protocol shall lead to a recommended maturity testing method(s) capable of classifying compost into maturity grades described in §332.72 of this title (relating to Final Product Grades) and identifying materials which are stable but not mature. The maturity test protocol shall address seasonal variations in compost feedstock and shall be completed within 18 months of the start of a new compost feedstock mixture.

(4) The results of the protocol and recommendations shall be submitted to the agency [TNRCC] for review and approval. The basis of the agency [TNRCC] review and approval shall be the demonstration that the recommended method adequately classifies compost into maturity classes. The purpose of the agency [TNRCC] review and approval is not intended to provide detailed guidance to end users about the agricultural and horticultural compost uses.

(5) The compost maturity protocol does not need to be repeated unless a significantly new compost feedstock recipe is utilized.

(e) Documentation.

(1) Owners or operators of permitted or registered facilities shall record and maintain all of the following information regarding their activities of operation for three years after the final product is shipped off site or upon site closure:

(A) batch numbers identifying the final product sampling batch;

(B) the quantities, types, and sources of feedstocks received and the dates received;

(C) the quantity and final product grade assigned described in §332.72 of this title;

(D) the date of sampling; and

(E) all analytical data used to characterize the final product, including laboratory quality assurance/quality control data.

(2) The following records shall be maintained on-site permanently or until site closure:

(A) sampling plan and procedures;

(B) training and certification records of staff; and

(C) maturity protocol test results.

(3) Records shall be available for inspection by agency [TNRCC] representatives during normal business hours.

(4) The executive director may at any time request by registered or certified mail that a generator submit copies of all documentation listed in paragraph (1) of this subsection for auditing the final product grade. Documentation requested under this section shall be submitted within ten working days of receipt of the request.

(f) Sampling Frequencies.

(1) Registered facilities. For those facilities which are required to register, all final product on-site must be sampled and assigned a final product grade set forth in §332.72 of this title (relating to Final Product Grades) at a minimum rate of one sample for every 5,000 cubic yard batch of final product or annually, whichever is more frequent. Each sample will be a composite of nine grab samples as discussed in subsection (g) of this section.

(2) Permitted facilities. For facilities requiring a permit, all final product on-site must be sampled and assigned a final product grade set forth in §332.72 of this title at a minimum rate of one sample for every 3,000 cubic yard batch of final product or monthly whichever is more frequent. Each sample will be a composite of nine grab samples as discussed in subsection (g) of this section.

(3) Alternative testing frequency. One year after the initiation of final product testing in accordance with this section, an operator of a registered or permitted facility may submit to the executive director a request for an alternative testing frequency. The request shall include a minimum of 12 consecutive months of final product test results for the parameters set forth in subsection (h) of this section. The executive director will review the request and determine if an alternative frequency is appropriate.

(g) Sampling Requirements. For facilities subject to sampling and analysis, the operator shall utilize the protocol in the agency [TNRCC] QAPP or an agency [a TNRCC] approved facility QAQC plan shall be followed. The executive director may at any time request that split samples be provided to an agency representative. Specific sampling requirements that [which] must be satisfied include:

(1) Sampling from stockpiles. One third of the grab samples shall be taken from the base of the stockpile (at least 12 inches into the pile at ground level),

one third from the exposed surface, and one third from a depth of two feet from the exposed surface of the stockpile.

(2) Sampling from conveyors. Sampling times shall be selected randomly at frequencies that [which] provide the same number of subsamples per volume of finished product as is required in subsection (d) of this section.

(A) If samples are taken from a conveyor belt, the belt shall be stopped at that time. Sampling shall be done along the entire width and depth of the belt.

(B) If samples are taken as the material falls from the end of a conveyor, the conveyor does not need to be stopped. Free-falling samples need to be taken to minimize the bias created as larger particles segregate or heavier particles sink to the bottom as the belt moves. In order to minimize sampling bias, the sample container shall be moved in the shape of a "D" under the falling product to be sampled. The flat portion of the "D" shall be perpendicular to the beltline. The circular portion of the "D" shall be accomplished to return the sampling container to the starting point in a manner so that no product to be sampled is included.

(h) Analytical Requirements. Final product subject to the sampling requirements of this section will be tested for all of the following parameters. The executive director

may at any time request that additional parameters be tested. These parameters are intended to address public health and environmental protection.

(1) Total metals[,] to include:

(A) Arsenic;

(B) Cadmium;

(C) Chromium;

(D) Copper;

(E) Lead;

(F) Mercury;

(G) Molybdenum;

(H) Nickel;

(I) Selenium; and

(J) Zinc.

(2) Maturity/Stability by reduction in organic matter on an interim basis and by approved method of maturity/stability analysis after the completion of the maturity/stability method protocol as described in subsections (b) and (d) of this section.

(3) Weight percent of foreign matter, dry weight basis.

(4) pH by the saturated media extract method.

(5) Salinity by the saturated media extract electrical conductivity method.

(6) Pathogens:

(A) salmonella; and

(B) fecal coliform.

(7) Polychlorinated-biphenyls (PCBs)--required only for permitted facilities.

(i) Data Precision and Accuracy. Analytical data quality shall be established by EPA standard laboratory practices to ensure precision and accuracy.

(j) Reporting Requirements.

(1) Facilities requiring registration must report the following information to the executive director on a semiannual basis for each sampling batch of final product. Facilities requiring a permit must report similarly but on a monthly basis. Reports must include, but may not be limited to, all of the following information:

(A) batch numbers identifying the final product sampling batch;

(B) the quantities, types, and sources of feedstocks received and the dates received;

(C) the quantity of final product and final product standard code assigned;

(D) the final product grade or permit number of the disposal facility receiving the final product if it is not Grade 1 or Grade 2 Compost as established in §332.72 of this title (relating to Final Product Grades);

(E) all analytical results used to characterize the final product including laboratory quality assurance/quality control data and chain-of-custody documentation; and

(F) the date of sampling.

(2) Reports must be submitted to the executive director within two months after the reporting period ends.

§332.72. Final Product Grades.

(a) Applicability. Facilities that receive a registration or permit under this chapter are required to test final product in accordance with this section. Final product derived from municipal sewage sludge at registered facilities is not subject to the requirements of this section, but it must comply with the requirements of Chapter 312 of this title (relating to Sludge Use, Disposal, and Transportation).

(b) Grades. Compost material that has undergone the composting process and is ready for distribution shall be considered final product, and shall be classified with one of the following grade names:

(1) Grade 1 Compost;

(2) Grade 2 Compost;

(3) Waste Grade Compost.

(c) Final product testing. Final product shall be regularly tested pursuant to §332.71 of this title (relating to Sampling and Analysis Requirements for Final Product) to determine the product's grade. Testing of final product and interpretation of test results shall be conducted in accordance with the agency's [Texas Natural Resource Conservation Commission's] current Quality Assurance Project Plan [Quality Assurance Program Plan], or, in the case of facilities with agency [TNRCC] permits or registrations, the Quality Assurance Quality Control Plan specified in the facility's permit.

(d) Final product classification. Final product shall be classified according to the following classification system.

(1) Grade 1 Compost. To be considered Grade 1 Compost, the final product must meet all of the following criteria:

(A) Shall contain no foreign matter of a size or shape that can cause human or animal injury;

(B) Shall not exceed all Maximum Allowable Concentrations for Grade 1 Compost in Table 1 of this section;

Figure 1: 30 TAC §332.72(d)(1)(B) (No change.)

Table 1: Maximum Allowable Concentrations

PARAMETER	**Grade 1 Compost (mg/kg)**	**Grade 2 Compost (mg/kg)**
As	10	41
Cd	16	39
Cr (total)	180	1200
Cu	1020	1500
Pb	300	300
Hg	11	17
Mo	75	75
Ni	160	420
Se	36	36
Zn	2190	2800
PCBs	1	10

(C) Shall not contain foreign matter in quantities that [which] cumulatively are greater than 1.5% dry weight on a 4mm screen;

(D) Shall meet the requirements of cured compost as described in Table 2 of this section;

Figure 2: 30 TAC §332.72(d)(1)(D) (No change.)

Table 2: Maturity and Stability Standards.

METHOD	SEMI-MATURE COMPOST	MATURE COMPOST	CURED COMPOST
Reduction of Organic Matter (ROM) (%)	Between 20% and than 60% 40%	Between 40% and 60%	Greater
Other Methods	Maturity Protocol	Maturity Protocol	Maturity Protocol

(E) Shall meet the requirements for pathogen reduction for Grade 1 Compost as described in Table 3 of this section; and

Figure: 30 TAC §332.72(d)(1)(E) (No change.)

Table 3: Additional Final Product Standards.

PARAMETER	Grade 1 Compost	Grade 2 Compost
Salinity (mmhos/cm)[1]	10	10
pH[1]	5.0 to 8.5	5.0 to 8.5
Pathogens: Fecal Coliform	less than 1,000 MPN per gram of solid or meets PFRP	geometric mean density less than 2,000,000 MPN per gram of solids or meets PSRP
Salmonella	less than 3 MPN per 4 grams total solid or meets PFRP	No value

[1] A higher conductivity or pH outside the indicated range may be appropriate if the compost is specified for a special use.

(F) Shall meet the requirements for salinity and pH for Grade 1 Compost as described in Table 3 of this section.

(2) Grade 2 Compost:

(A) Shall contain no foreign matter of a size or shape that can cause human or animal injury;

(B) Shall not exceed all Maximum Allowable Concentrations for Grade 2 Compost in Table 1 of this section at a compost organic matter content that [which] is equivalent to a mature compost when maturity is determined by reduction in organic matter during the interim period or a maturity test that [which] is part of an approved maturity test protocol;

(C) Shall not contain foreign matter in quantities that [which] cumulatively are greater than 1.5% dry weight on a 4mm screen;

(D) Shall meet the requirements of semi-mature compost, mature compost, or cured compost as described in Table 2 of this section;

(E) Shall meet the requirements for pathogen reduction for Grade 2 Compost as described in Table 3 of this section; and

(F) Shall meet the requirements for salinity and pH for Grade 2 Compost as described in Table 3 of this section.

(3) Waste Grade Compost:

(A) Exceeds any one of the Maximum Allowable Concentrations for Grade 2 final product in Table 1 of this section; and

(B) Does not meet the other requirements of Grade 1 or Grade 2 Compost.

(e) Maturity adjustment. Compost that [which] is semi-mature or mature shall have the metal concentrations adjusted to reflect the metal concentration that [which] would occur if the compost met the criteria for a cured compost as described in Table 2, "Maturity and Stability Standards."

(f) Waste grade final product. Any material that [which] does not meet the final product standards shall be appropriately disposed at a permitted municipal solid waste facility.

§332.75. Out of State Production.

Any compost produced outside of the State of Texas, which is distributed within Texas, shall be labeled ~~labelled~~ pursuant to §332.74 of this title (relating to Compost [Final Product] Labelling Requirements).