

The Texas Commission on Environmental Quality (commission) adopts the amendments to §332.34 and §332.47. Sections 332.34 and 332.47 are adopted *without change* to the proposed text as published in the April 23, 2004 issue of the *Texas Register* (29 TexReg 3930), and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

This rulemaking implements the requirements of House Bill (HB) 1823, 78th Legislature, 2003, which amends Texas Health and Safety Code (THSC), §361.119, to require that owners and operators of recycling facilities, including composting or mulching facilities, have sufficient financial assurance in place. The financial assurance must be conditioned on satisfactorily operating and closing the facility, consistent with the requirements of THSC, §361.085, for a solid waste facility other than a facility for the disposal of hazardous waste. HB 1823 applies to an owner or operator of a recycling facility at which combustible material is stored outdoors or that poses a significant risk to public health and safety as determined by the commission. The legislation also exempts a facility that is owned, operated, or affiliated with a person who has a permit to dispose of municipal solid waste from rules adopted under this section of law.

Corresponding rulemakings published in the Adopted Rules Section of this issue of the *Texas Register* include changes to 30 TAC Chapter 37, Financial Assurance; Chapter 328, Waste Minimization and Recycling; Chapter 330, Municipal Solid Waste; and Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste.

SECTION BY SECTION DISCUSSION

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

The adopted amendment to §332.34, Registration Application, adds, in new paragraph (15), a financial assurance requirement to the application process for registered composting facilities and provides cross-references to establish consistency in the commission's rules.

The adopted amendment to §332.47, Permit Application Preparation, modifies, in paragraph (9), a cross-reference for financial assurance requirements for permitted composting facilities to establish consistency in the commission's rules. The pay-in trust mechanism will not be allowed since determination of the payment amount requires a known permit life and no permit life will be specified in applicable permits.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

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

A "major environmental rule" means a rule the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material

way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state.

The specific intent of the adopted rules is to require the owner or operator of an affected recycling facility to have sufficient financial assurance to properly close a facility. These rules will apply to recycling facilities that store combustible material outdoors and recycling facilities that pose a significant risk to public health and safety. Therefore, it is not anticipated that the adopted rules will adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The commission concludes that these adopted rules do not meet the definition of a major environmental rule.

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

In this case, the adopted rules do not meet any of these requirements. First, there are no applicable federal standards that these rules would address. Second, the adopted rules do not exceed an express requirement of state law, but instead implement the statutory requirement of THSC, §361.119. Third, there is no delegation agreement that would be exceeded by these adopted rules because none relate to this subject matter. Fourth, the commission adopts these rules under the rulemaking direction of HB 1823, amending THSC, §361.119, and not solely under the commission's general powers.

Written comments on the draft regulatory impact analysis determination were solicited during proposal. No comments were received on the draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission evaluated these adopted rules and performed an assessment of whether the adopted rules constitute a taking under Texas Government Code, Chapter 2007. The specific purpose of the adopted rules is to require the owner or operator of an affected recycling facility to have sufficient financial assurance to properly close a facility. These rules will apply to recycling facilities that store combustible material outdoors and recycling facilities that pose a significant risk to public health and safety. The adopted rules would substantially advance this stated purpose by requiring that regulated facilities obtain adequate financial assurance to properly close a facility.

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

In particular, there are no burdens imposed on private real property, and the adopted rules would improve the commission's ability to ensure proper closure of certain recycling facilities. Because the regulation does not affect real property, it does not burden, restrict, or limit an owner's right to property or reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulation. Therefore, these adopted rules will not constitute a taking under Texas Government Code, Chapter 2007.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

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

The commission reviewed this rulemaking for consistency with the CMP goals and policies in accordance with the regulations of the Coastal Coordination Council and determined that the adopted rulemaking is consistent with CMP goals and policies because the rulemaking is an administrative action that requires financial mechanisms to pay for closure activities; will not have direct or significant adverse effect on any coastal natural resource areas; will not have a substantive effect on commission actions subject to the CMP; and promulgation and enforcement of the adopted rules will not violate (exceed) any standards identified in the applicable CMP goals and policies.

Written comments on the consistency of this rulemaking were solicited during proposal. No comments were received on the consistency determination.

PUBLIC COMMENT

A public hearing was held on May 20, 2004. The comment period closed on May 24, 2004.

Comments were received from Abitibi Consolidated (AC); Austin Wood Recycling (AWR); the Compost Advisory Council of the Recycling Alliance of Texas (CACRAT); Harris County Pollution Control (HCPC); Safe Tire Disposal Corp of Texas (STDCT); Silver Creek Materials, Inc. (SCM); and one individual. Oral comments were received from CACRAT, HCPC, and one individual at the hearing. The seven commenters either opposed parts of the rulemaking or supported the rulemaking with suggested changes.

RESPONSE TO COMMENTS

AC commented that it supports the commission's efforts to encourage legitimate recycling operations, but is concerned by the lack of criteria for determining the definition of "a recycling facility that stores combustible materials outdoors." AC commented that it believes that temporary staging or storing outdoors prior to movement inside for processing was not intended to be covered by the financial assurance requirement mandated by the legislation, but that the legislation was concerned with outdoor storage of large volumes of material for extended periods of time. AC recommended that criteria be established for a minimum amount of material and/or minimum closure cost for the financial assurance requirement to apply, as well as an exemption for temporary outdoor staging or storage of materials.

The commission appreciates AC's comment that it supports the commission's efforts to encourage recycling operations.

The commission agrees that the legislation required financial assurance only for materials that are "combustible" and "stored outdoors." The commission amended the rule in §328.5(c)(2)(A), §330.282(a)(2)(A), and §335.24(j)(2)(A) to include the words "combustible" and "stored outdoors" in response to this comment.

The commission does not agree that establishing criteria for a minimum amount of material and/or a minimum closure cost for the financial assurance requirements would be consistent with implementation of the statutory requirements of THSC, §361.119, because the statute does not provide for any exemptions. No changes were made in response to this comment.

The commission amended the rules in §§328.5(c)(1), 330.282(a)(1), and 335.24(j)(1) to allow the executive director to approve exceptions to the closure cost estimate requirements. Executive director discretion is provided to avoid applying these requirements in circumstances where this will result in unreasonable and unduly burdensome requirements for recyclers.

AWR commented that it was opposed to the financial assurance requirements of the rulemaking, specifically the requirement of an independent third-party cost closure estimate. AWR also commented that the rulemaking would place an undue financial burden on its business, possibly forcing its closure, and urged the commission to modify the rule language as suggested by CACRAT.

The commission finds that the requirement for financial assurance based on third-party closure of a facility is appropriate as a safeguard against the possible abandonment of a facility. No changes were made in response to this comment.

Regarding AWR's comment that the rulemaking would impose an undue financial burden, the commission amended the rules in §§328.5(c)(2)(A) and (C), 330.282(a)(2)(A) and (C), and 335.24(j)(2)(A) and (C) consistent with CACRAT's comments, substituting the term "disposition" for the term "disposal." This will allow financial assurance for facility closure to consider disposition strategies other than disposal of all materials, and reduce the burden of financial assurance for facilities that can demonstrate that certain materials stored on site can be managed by a means other than disposal. The commission would not require closure cost estimates to include disposal costs for materials which are demonstrated to be products. For materials that are not demonstrated to be either products or manageable by other means, closure cost estimates must be based on disposal costs.

The commission amended the rules in §§328.5(c)(1), 330.282(a)(1), and 335.24(j)(1) to allow the executive director to approve exceptions to the closure cost estimate requirements. Executive director discretion is provided to avoid applying these requirements in circumstances where this will result in unreasonable and unduly burdensome requirements for recyclers.

CACRAT commented that it is not opposed to financial assurance as a requirement for recyclers, including mulching and composting businesses; however, CACRAT believes that the benefits of financial assurance can be gained without threatening the economic viability of these operations. Specifically, CACRAT finds the requirement to calculate facility closure costs based on the disposal of all materials on site an unnecessary burden that would fall only on legitimate recyclers, since facilities that store more than incidental amounts of materials with no economically feasible means of being recycled are unauthorized solid waste facilities, subject to enforcement under the THSC and §330.4(f). CACRAT suggested substituting the words “disposition ... in compliance with all applicable laws and regulations” for the terms “disposal.”

The commission amended the rules in §§328.5(c)(2)(A) and (C), 330.282(a)(2)(A) and (C), and 335.24(j)(2)(A) and (C) consistent with CACRAT’s comments, substituting the term “disposition” for the term “disposal.” This will allow financial assurance for facility closure to consider disposition strategies other than disposal of all materials, and reduce the burden of financial assurance for facilities that can demonstrate that certain materials stored on site can be managed by a means other than disposal. The commission would not require closure cost estimates to include disposal costs for materials which are demonstrated to be products. For materials that are not demonstrated to be either products or manageable by other means, closure cost estimates must be based on disposal costs.

The commission responds that one of the means of enforcement of this rule will come in the form of citizen complaints to the commission concerning potential “sham” recycling and composting operations. No changes were made in response to this comment.

HCPC commented that it believes that the rule meets the requirements of HB 1823 and would provide HCPC with another compliance enforcement tool. HCPC agreed with the recommendation to modify language to substitute the word “disposal” with “disposition.” HCPC requested that the rule allow the executive director discretion based on: 1) compliance history; 2) property/equipment ownership versus property/equipment renting; and 3) the status of materials-stream and long-term commitment to the recycling industry. HCPC also requested that the rule require that mechanisms of financial assurance related to existing facilities be submitted to the commission within 120 days after adoption of the rules. Finally, HCPC supported CACRAT’s comments related to the undue burden of including disposal costs in cost closure estimates, as well as the problems of enforcement against “sham” recyclers.

The commission appreciates HCPC’s comment that the rule would provide HCPC with another enforcement tool. No changes were made in response to this comment.

The commission acknowledges the need for timely implementation of these financial assurance requirements and amended the rules in response to this comment. Section 37.921 is amended to require owners or operators to submit an originally signed financial assurance mechanism to the executive director. For new facilities, owners or operators shall submit the originally signed financial assurance mechanism prior to receipt of materials or as otherwise approved by the

executive director. For facilities in existence upon the effective date of this rule, owners or operators shall submit the originally signed financial assurance mechanism within 60 days of executive director approval of the closure cost estimate as required in Chapters 328, 330, or 335 or within 180 days of the effective date of the rule, whichever occurs first; or as otherwise approved by the executive director. The commission determined that 180 days are needed to allow sufficient time for facilities to develop and submit closure cost estimates and obtain and submit financial assurance mechanisms; and for the commission to review and approve closure cost estimates.

Section 328.5(c)(1) and §335.24(j)(1) have also been amended to require existing facilities to submit a closure cost estimate within 60 days of the effective date of the rule. Section 328.5(c)(1) has been amended to require new facilities subject to Chapter 328 to submit a closure cost estimate at least 90 days prior to receipt of materials. Section 335.24(j)(1) has been amended to require new facilities subject to Chapter 335 to submit a closure cost estimate with a notification in accordance with §335.6. The commission made these changes to allow sufficient time for the development, submittal, review, and approval of closure cost estimates and to allow sufficient time for recyclers to obtain and submit financial assurance mechanisms.

In order to minimize the regulatory burden imposed on recycling facilities and to streamline the commission's review of cost estimates, the commission intends to develop a simple cost-estimate formula that can be used to calculate a closure cost estimate. The word "detailed" has been deleted from §328.5(c)(1), §330.282(a)(1), and §335.24(j)(1) to allow facilities to use a simple cost-

estimate formula. The commission anticipates that the facilities subject to the requirements of these rules will have the option of using the cost-estimate formula or developing a detailed site-specific closure cost estimate.

In addition, the commission amended §328.5(c)(1) and §335.24(j)(1) to make the language in these rule sections more consistent with the corresponding requirements for closure cost estimates already included in §330.282(a)(1).

Regarding HCPC's comment that the rulemaking would place an undue financial burden on recycling facilities, the commission amended the rules in §§328.5(c)(2)(A) and (C), 330.282(a)(2)(A) and (C), and 335.24(j)(2)(A) and (C) consistent with CACRAT's comments, substituting the term "disposition" for the term "disposal." This will allow financial assurance for facility closure to consider disposition strategies other than disposal of all materials, and reduce the burden of financial assurance for facilities that can demonstrate that certain materials stored on site can be managed by a means other than disposal. The commission would not require closure cost estimates to include disposal costs for materials which are demonstrated to be products. For materials that are not demonstrated to be either products or manageable by other means, closure cost estimates must be based on disposal costs.

Regarding the issue of enforcement, the commission responds that one of the means of enforcement of this rule will come in the form of citizen complaints to the commission concerning

potential “sham” recycling and composting operations. No changes were made in response to this comment.

STDCT commented that the rule is incomplete and biased because it grants exemptions to those facilities that are owned and operated by or affiliated with a person who has a permit to dispose of municipal solid waste. STDCT commented that the rules encompass vague and subjective terminology. Specifically, STDCT objected to the use of the term “satisfactorily operating and closing the facility...”. STDCT commented that HB 1823 directed the commission to adopt rules which will assure the proper cleanup and closure of facilities “in the event of abandonment or bankruptcy.” STDCT further commented that the rules negate the necessity for proof of abandonment or bankruptcy.

The commission is charged with implementing the requirements of HB 1823 to require financial assurance for the owners or operators of recycling facilities. The exemption for facilities owned, operated, or affiliated with a person who has a permit to dispose of municipal solid waste is a statutory exemption and the commission does not have the authority to change that exemption. No changes were made in response to this comment.

The commission responds that although the phrase “satisfactorily operating and closing the facility” is used in HB 1823, this phrase is not used in the rules. The rules establish specific requirements for the financial assurance needed to meet the statutory requirement of satisfactorily operating and closing a facility. No changes were made in response to this comment.

The commission responds that the enrolled version of HB 1823 does not use the phrase “in the event of abandonment or bankruptcy.” No changes were made in response to this comment.

SCM commented that it operates in compliance with the regulations in Chapters 328 and 332, keeping incoming materials clean and grinding them within a week of arrival. SCM stated that ground material is a true commodity and should be used as such, even in the event of facility closure. Specifically, SCM suggested that the commission require financial assurance only for unground material, allowing a facility to obtain financial assurance to cover either: 1) transportation and disposition of the material; or 2) on-site processing and on-site or off-site reuse. SCM further commented that the rules could increase the gap of profitability between public and private facilities, and suggested grandfathering facilities with five or more years of good compliance histories.

The commission appreciates the efforts of recyclers and composters to comply with its regulations. The commission amended the rules in §§328.5(c)(2)(A) and (C), 330.282(a)(2)(A) and (C), and 335.24(j)(2)(A) and (C), substituting the term “disposition” for the term “disposal.” This will allow financial assurance for facility closure to consider disposition strategies other than disposal of all materials, and reduce the burden of financial assurance for facilities that can demonstrate that certain materials stored on site can be managed by a means other than disposal. The commission would not require closure cost estimates to include disposal costs for materials which are demonstrated to be products. For materials that are not demonstrated to be either products or manageable by other means, closure cost estimates must be based on disposal costs.

The commission does not agree that grandfathering facilities with five or more years of good compliance histories would be consistent with implementation of the statutory requirements of THSC, §361.119, because the statute does not provide for any exemptions. No changes were made in response to this comment.

One individual commented regarding concerns about how the commission would enforce the rule against operators that did not notify the commission of their operations or operators that just abandoned their operations. The individual also stated that the rules would only hurt the legitimate composters and believed that there was a lack of enforcement against “sham” recyclers. The individual suggested that the rule could allow discretion by the executive director to assist legitimate composters that would be unduly burdened by the rulemaking which is intended to prevent “sham” recyclers.

The commission responds that one of the means of enforcement of this rule will come in the form of citizen complaints to the commission concerning potential “sham” recycling and composting operations. No changes were made in response to this comment.

The commission amended the rules in §§328.5(c)(1), 330.282(a)(1), and 335.24(j)(1) to allow the executive director to approve exceptions to the closure cost estimate requirements. Executive director discretion is provided to avoid applying these requirements in circumstances where this will result in unreasonable and unduly burdensome requirements for recyclers.

SUBCHAPTER C: OPERATIONS REQUIRING A REGISTRATION

§332.34

STATUTORY AUTHORITY

The amendment is adopted under THSC, §361.119, as amended by HB 1823; and §361.017 and §361.024, which provide the commission with the authority to adopt rules necessary to carry out its power and duties under the Texas Solid Waste Disposal Act.

§332.34. Registration Application.

Registration applications for composting must include:

- (1) Title page. The title page shall show the name of the project, the name of the applicant, and the location by city and county.
- (2) Signature of the applicant. The signature of the applicant(s), checked against agency requirements, in accordance with §305.44 of this title (relating to Signatories to Applications).
- (3) Affidavit. A notarized affidavit from the applicant(s) verifying land ownership and landowner agreement to the proposed activity.

(4) Table of contents. The table of contents shall list and give the page numbers for the main sections of the application.

(5) Legal authority. The applicant shall provide verification of his/her legal status. Normally, this is a one-page certificate of incorporation issued by the Office of the Secretary of State.

(6) Evidence of competency. The applicant shall provide the following:

(A) the names of the principals and supervisors of the applicant's organization relative to the proposed compost operation; and

(B) the name, location, and permit or registration number of any compost operations or solid waste operations that it is operating or has operated in Texas.

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

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

(9) Legal description. The applicant shall provide the following:

(A) a legal description of the property and the county, book, and page number of the current ownership record from the county deed records; and

(B) a boundary metes and bounds drawing and description of the site signed and sealed by a registered professional land surveyor.

(10) Location description.

(A) Map. The applicant shall clearly show the boundaries of the planned facility on a map that is all or a portion of a county map prepared by Texas Department of Transportation (TxDOT). At a minimum, the map shall be at a scale of 1/2 inch equals one mile.

(B) Geographic coordinates. The applicant shall supply geographic coordinates for the southeast corner of the facility.

(11) Landowner list. The applicant shall include a list of adjacent landowners and their addresses along with an appropriately scaled map locating the property owned by these persons.

(12) Site operating plan. The applicant shall submit a 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. At a minimum, the site operating plan shall include specific guidance or instructions on all of the following:

(A) the process description, which must be composed of a descriptive narrative along with a process diagram. The process description shall include the items listed in clauses (i) - (vi) of this subparagraph.

(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 and prohibited 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 process, include post-processing times, identification and segregation of product, storage of product, quality assurance, and quality control.

(v) Product distribution. Provide a complete narrative on product distribution including items such as: end-product quantities, anticipated final grades, 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 paragraph;

(B) 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;

(C) 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;

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

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

(F) a fire prevention and suppression plan that complies with provisions of the local fire code, which shall also be sent to the local fire protection entity responsible for responding to a fire at the facility;

(G) control of windblown material;

(H) vector control;

(I) quality assurance and quality control.

(i) Municipal sewage sludge compost facilities. The operator shall comply with the provisions of Chapter 312 of this title (relating to Sludge Use, Disposal, and Transportation).

(ii) All other registered facilities. 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).

(J) equipment failures, including alternative plans in the event of an equipment failure; and

(K) a description of the anticipated final grade of the materials.

(13) Construction plans and specifications. The applicant shall submit facility construction plans and specifications. The facility plans and specifications shall reflect the provisions of this chapter to the maximum extent possible.

(14) Closure plan. The applicant shall provide a plan for proper closure of the facility, including disposition of any remaining feedstocks, in-process, and processed materials.

(15) Financial assurance. The applicant shall be subject to the requirements of §328.5(c) - (e) of this title (relating to Reporting and Recordkeeping Requirements).

SUBCHAPTER D: OPERATIONS REQUIRING A PERMIT

§332.47

STATUTORY AUTHORITY

The amendment is adopted under THSC, §361.119, as amended by HB 1823; and THSC, §361.017 and §361.024, which provide the commission with the authority to adopt rules necessary to carry out its power and duties under the Texas Solid Waste Disposal Act.

§332.47. Permit Application Preparation.

To assist the commission in evaluating the technical merits of a compost facility, an applicant subject to this chapter shall submit a site development plan to the commission along with Compost Form Number 3. The site development plan must be sealed by a registered professional engineer in accordance with the provisions of 22 TAC §131.166 (relating to Engineers' Seals). If the site development plan is submitted in a three-ring binder or in a format that allows the removal or insertion of individual pages, it will not be considered a bound document. The site development plan must contain all of the following information.

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

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

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

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

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

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

(C) proximity to residences and other uses (e.g., schools, churches, cemeteries, historic structures, historic sites, archaeologically significant sites, sites having exceptional aesthetic quality, parks, recreational sites, recreational facilities, licensed day care, etc.). Give the

approximate number of residences and business establishments within one mile of the proposed facility including the distances and directions to the nearest residences and businesses;

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

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

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

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

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

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

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

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

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

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

(ii) a design for a 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 USGS/DHT hydraulic equations compiled by the United States Geological Survey and the Texas Department of Transportation Bridge Division Hydraulic Manual, the HEC-1 and HEC-2 computer programs developed through the Hydrologic Engineering Center of the United States Army Corps of Engineers, or an equivalent or better method approved by the executive director.

(III) Calculations for sizing containment facilities for leachate shall be determined by a mass balance based on the 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 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 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 which is adequately lined to control seepage. The lined surface shall be covered with a material designed to withstand normal traffic from the composting operations. At a minimum, the lined surface shall consist of soil, synthetic, or an alternative material that is equivalent to two feet of compacted clay with a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

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

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

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

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

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

(II) A groundwater sampling program shall provide four background groundwater samples of all monitor wells within 24 months from the date of the issuance of the permit. The background levels shall be established from samples collected from each well at least once during each of the four calendar quarters: January - March; April - June; July - September; and

October - December. Samples from any monitor well shall not be collected for at least 45 days following collection of a previous sample, unless a replacement sample is necessary. At least one sample per well shall be collected and submitted to a laboratory for analysis within 60 days of permit issuance for existing or previously registered operations, or prior to accepting any material for processing at a new facility. Background samples shall be analyzed for the parameters as follows:

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

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

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

(-d-) The executive director may waive the requirement to monitor for any of the constituents listed in items (-a-) - (-c-) of this subclause in a permit, if it can

be documented that these constituents are not reasonably expected to be in or derived from the bulking or feedstock materials. A change to the monitoring requirements may be incorporated into a permit when issued or as a modification under §305.70 of this title (relating to Municipal Solid Waste Permit and Registration Modifications).

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

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

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

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

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