

The Texas Commission on Environmental Quality (commission) proposes amendments to §§335.1, 335.116, 335.123, 335.156, 335.172, 335.204, 335.348, and 335.553.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

Senate Bill (SB) 405, 77th Legislature, established the Texas Board of Professional Geoscientists and the regulation of professional geoscientists. The Texas Geoscience Practice Act (the Act) requires that a person may not take responsible charge of a geoscientific report or a geoscientific portion of a report required by state agency rule unless the person is licensed through the Texas Board of Professional Geoscientists. The primary purpose of the proposed amendments is to establish regulations for the public practice of geoscience in conformance with the Act by requiring a person who prepares and submits geoscientific information to the commission to be a licensed professional geoscientist. The Act also allows certain specified engineers to publicly practice geoscience in conformance with the Act. According to the bill analysis prepared at the time of passage, the ultimate purpose of the Act was public safety through the public registration of the practice of geoscience.

SECTION BY SECTION DISCUSSION

Throughout the sections, administrative changes are proposed in accordance with *Texas Register* requirements and to be consistent with other agency rules.

Proposed §335.1, Definitions, amends the introductory paragraph by deleting the word “shall” and the phrase “unless the context clearly indicates otherwise.” The definition of licensed professional geoscientist is proposed as new paragraph (85). The definition of person in paragraph (104) is proposed

to be deleted because it is defined in 30 TAC Chapter 3, Definitions. Existing paragraphs (85) - (103) are proposed to be renumbered.

Proposed §335.116, Applicability of Groundwater Monitoring Requirements, replaces the term “qualified geologist” with “licensed professional geoscientist” regarding the demonstration of groundwater monitoring requirements.

Proposed §335.123, Closure and Post-Closure (Land Treatment Facilities), replaces the term “independent qualified soil scientist” with “licensed professional geoscientist” regarding certification of closures.

Proposed §335.156, Applicability of Groundwater Monitoring and Response, replaces the term “qualified geologist” with “licensed professional geoscientist.” At the January 8, 2003 commission agenda for the post-closure rules (Rule Log No. 2000-048-335-WS), the text of §335.156(a)(2) was inadvertently adopted as the text for §335.156(b)(2). Therefore, the correct text of §335.156(b)(2) has been properly added as originally proposed in the post-closure rules.

Proposed §335.172, Closure and Post-Closure Care (Land Treatment Units), replaces the term “independent qualified soil scientist” with “licensed professional geoscientist.”

Proposed §335.204, Unsuitable Site Characteristics, replaces the term “qualified geologist” with “licensed professional geoscientist.”

Proposed §335.348, General Requirements for Remedial Investigations, adds new subsection (n) requiring that all engineering and geoscientific information submitted to the agency shall be prepared by, or under the supervision of, a licensed professional engineer or licensed professional geoscientist, and shall be signed, sealed, and dated by qualified professionals as required by the Texas Engineering Practice Act and the Texas Geoscience Practice Act and the licensing and registration boards under these acts.

Proposed §335.553, Required Information, adds the requirement that all engineering and geoscientific information submitted to the agency shall be prepared by, or under the supervision of, a licensed professional engineer or licensed professional geoscientist, and shall be signed, sealed, and dated by qualified professionals as required by the Texas Engineering Practice Act and the Texas Geoscience Practice Act and the licensing and registration boards under these acts.

FISCAL NOTE

Doretta Conrad, Analyst in the Budget and Planning Division, has determined that, for the first five-year period the proposed rules are in effect, there will be no significant fiscal implications for the agency or any other unit of state government as a result of administration or enforcement of the proposed rules. There will be no fiscal impact to the agency; however, there may be fiscal implications to the agency if the agency elects to reimburse staff for the annual renewal fees. The fees associated with obtaining the professional geoscientist license is \$200 to cover the application and first-year license, and \$150 per year after the first year.

Ms. Conrad also determined that for each of the first five years the proposed rules are in effect, the public benefit anticipated from the enforcement of and compliance with the proposed rules will be potentially improved environmental performance by persons regulated by the commission. The proposed rules might impact other state agencies or local governments with staff geologists who need to become licensed under these rules. No significant fiscal implications are anticipated for any individual or business due to implementation of the proposed rules. Additionally, no significant fiscal implications are anticipated for any small or micro-business due to implementation of the proposed rules. The commission has determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the proposed rules in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the proposed 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 proposed rules is to establish regulations allowing for the public practice of geoscience in agency procedures in accordance with the Act. The Act requires that a person may not

take responsible charge of a geoscientific report or a geoscientific portion of a report required by a state agency rule unless the person is licensed through the Texas Board of Professional Geoscientists. The proposed rules are not specifically intended to protect the environment or reduce risks to human health. The proposed rules are intended to establish procedures to require that specific reports and necessary data submitted to the commission be produced, signed, sealed, and dated by licensed professional geoscientists who have obtained their licenses through the Texas Board of Professional Geoscientists. Therefore, it is not anticipated that the proposed 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 proposed rules do not meet the definition of major environmental rule.

Furthermore, even if the proposed rules did meet the definition of a major environmental rule, the rules are not subject to Texas Government Code, §2001.0225, because they do not accomplish any of the four results 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 proposed rules do not meet any of these requirements. First, there are no federal standards that these rules would exceed. Second, the proposed rules do not exceed an express

requirement of state law. Third, there is no delegation agreement that would be exceeded by these proposed rules. Fourth, the commission proposes these rules to allow for the public practice of geoscience in agency procedures in accordance with the Act. Therefore, the commission does not propose the adoption of the rules solely under the commission's general powers. The commission invites public comment on the draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission evaluated these proposed rules and performed a preliminary assessment of whether these proposed rules constitute a takings under Texas Government Code, Chapter 2007. The specific intent of the proposed rules is to establish regulations allowing for the public practice of geoscience in agency procedures in accordance with the Act. The proposed rules would substantially advance this stated purpose by requiring that specific reports and necessary data submitted to the commission be produced, signed, sealed, and dated by licensed professional geoscientists who have obtained their licenses through the Texas Board of Professional Geoscientists.

Promulgation and enforcement of these proposed rules would be neither a statutory nor a constitutional taking of private real property. Specifically, the proposed rules do not affect a landowner's rights in private real property by burdening private real property, nor restricting or limiting a landowner's right to property, or reducing the value of property by 25% or more beyond that which would otherwise exist in the absence of the proposed rules. These rules simply require that specific portions of applications or necessary data submitted to the commission be produced, signed, sealed, and dated by a qualified professional individual who has demonstrated his or her qualifications by obtaining a license to engage

in the public practice of geoscience from the Texas Board of Professional Geoscientists. These proposed rules do not affect any private real property.

There are no burdens imposed on private real property, and the benefits to society are better applications for environmental permits based upon reliable reports and data submitted by qualified licensed professional geoscientists.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission has reviewed the proposed rulemaking and found that the proposal is a rulemaking identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11(b)(2), relating to Actions and Rules Subject to the Texas Coastal Management Program (CMP), or will affect an action and/or authorization identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11(a)(6), and will therefore require that applicable goals and policies of the CMP be considered during the rulemaking process. The commission has prepared a consistency determination for the proposed rules under 31 TAC §505.22 and found that the proposed rulemaking is consistent with the applicable CMP goals and policies. The following is a summary of that determination. The CMP goal applicable to the proposed rulemaking is the goal to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas. CMP policies applicable to the proposed rules include the construction and operation of solid waste treatment, storage, and disposal facilities, and the discharge of municipal and industrial wastewater to coastal waters. Promulgation and enforcement of these rules will not violate (exceed) any standards identified in the applicable CMP goals and policies because the proposed rule changes do not modify or alter

standards set forth in existing rules, and do not govern or authorize any actions subject to the CMP.

The proposed rulemaking would require a person who prepares and submits geoscientific information to the agency to be a licensed professional geoscientist. The commission invites public comment on the consistency determination of the proposed rules.

SUBMITTAL OF COMMENTS

Comments may be submitted to Lola Brown, Office of Environmental Policy, Analysis, and Assessment, MC 205, P.O. Box 13087, Austin, Texas 78711-3087 or faxed to (512) 239-4808.

Comments must be received by 5:00 p.m., June 30, 2003, and should reference Rule Log Number 2001-051G-335-WS. For further information, please contact Michael Bame, Policy and Regulations Division, at (512) 239-5658.

**SUBCHAPTER A: INDUSTRIAL SOLID WASTE AND
MUNICIPAL HAZARDOUS WASTE IN GENERAL**

§335.1

STATUTORY AUTHORITY

The amendment is proposed under Texas Water Code (TWC), §5.103, which provides the commission with the authority to adopt rules necessary to carry out its power and duties under this code and other laws of this state; TWC, §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and Texas Civil Statutes, Article 3271b, the Act, which authorizes the public practice of geoscience in the State of Texas.

The proposed amendment implements TWC, §5.103 and §5.105, and Texas Civil Statutes, Article 3271b, the Act.

§335.1. Definitions.

In addition to the terms defined in Chapter 3 of this title (relating to Definitions), the following words and terms, when used in this chapter, [shall] have the following meanings[, unless the context clearly requires otherwise].

(1) - (84) (No change.)

(85) Licensed professional geoscientist - A geoscientist who maintains a current license through the Texas Board of Professional Geoscientists in accordance with its requirements for professional practice.

(86) [(85)] Liner - A continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of solid waste or hazardous waste, hazardous waste constituents, or leachate.

(87) [(86)] Management or hazardous waste management - The systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of solid waste or hazardous waste.

(88) [(87)] Manifest - The waste shipping document which accompanies and is used for tracking the transportation, disposal, treatment, storage, or recycling of shipments of hazardous wastes or Class 1 industrial solid wastes. The form used for this purpose is TNRCC-0311 (Uniform Hazardous Waste Manifest) which is furnished by the executive director or may be printed through the agency's "Print Your Own Manifest Program."

(89) [(88)] Manifest document number - A number assigned to the manifest by the commission for reporting and recordkeeping purposes.

(90) [(89)] **Military munitions** - All ammunition products and components produced or used by or for the Department of Defense (DOD) or the United States Armed Services for national defense and security, including military munitions under the control of the DOD, the United States Coast Guard, the United States Department of Energy (DOE), and National Guard personnel. The term “military munitions”:

(A) includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DOD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof; and

(B) includes non-nuclear components of nuclear devices, managed under DOE's nuclear weapons program after all required sanitization operations under the Atomic Energy Act of 1954, as amended, have been completed; but

(C) does not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof.

(91) [(90)] **Miscellaneous unit** - A hazardous waste management unit where hazardous waste is stored, processed, or disposed of and that is not a container, tank, surface impoundment, pile,

land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under Chapter 331 of this title (relating to Underground Injection Control), corrective action management unit, containment building, staging pile, or unit eligible for a research, development, and demonstration permit or under Chapter 305, Subchapter K of this title (relating to Research Development and Demonstration Permits).

(92) [(91)] **Movement** - That solid waste or hazardous waste transported to a facility in an individual vehicle.

(93) [(92)] **Municipal hazardous waste** - A municipal solid waste or mixture of municipal solid wastes which has been identified or listed as a hazardous waste by the administrator of the EPA.

(94) [(93)] **Municipal solid waste** - Solid waste resulting from or incidental to municipal, community, commercial, institutional, and recreational activities; including garbage, rubbish, ashes, street cleanings, dead animals, abandoned automobiles, and all other solid waste other than industrial waste.

(95) [(94)] **New tank system or new tank component** - A tank system or component that will be used for the storage or processing of hazardous waste and for which installation has commenced after July 14, 1986; except, however, for purposes of 40 Code of Federal Regulations (CFR) §264.193(g)(2) (incorporated by reference at §335.152(a)(8) of this title (relating to Standards))

and 40 CFR §265.193(g)(2) (incorporated by reference at §335.112(a)(9) of this title (relating to Standards)), a new tank system is one for which construction commences after July 14, 1986. (See also “existing tank system.”)

(96) [(95)] **Off-site** - Property which cannot be characterized as on-site.

(97) [(96)] **Onground tank** - A device meeting the definition of tank in this section and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

(98) [(97)] **On-site** - The same or geographically contiguous property which may be divided by public or private rights-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing, as opposed to going along, the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

(99) [(98)] **Open burning** - The combustion of any material without the following characteristics:

(A) control of combustion air to maintain adequate temperature for efficient combustion;

(B) containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and

(C) control of emission of the gaseous combustion products. (See also "incineration" and "thermal treatment.")

(100) [(99)] **Operator** - The person responsible for the overall operation of a facility.

(101) [(100)] **Owner** - The person who owns a facility or part of a facility.

(102) [(101)] **Partial closure** - The closure of a hazardous waste management unit in accordance with the applicable closure requirements of Subchapters E and F of this chapter (relating to Interim Standards for Owners and Operators of Hazardous Waste Storage, Processing, or Disposal Facilities; and Permitting Standards for Owners and Operators of Hazardous Waste Storage, Processing, or Disposal Facilities) at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

(103) [(102)] **PCBs or polychlorinated biphenyl compounds** - Compounds subject to 40 Code of Federal Regulations Part 761.

(104) [(103)] **Permit** - A written permit issued by the commission which, by its conditions, may authorize the permittee to construct, install, modify, or operate a specified municipal hazardous waste or industrial solid waste storage, processing, or disposal facility in accordance with specified limitations.

[(104) **Person** - Any individual, corporation, organization, government, or governmental subdivision or agency, business trust, partnership, association, or any other legal entity.]

(105) - (106) (No change.)

(107) **Petroleum substance** - A crude oil or any refined or unrefined fraction or derivative of crude oil which is a liquid at standard conditions of temperature and pressure.

(A) Except as provided in subparagraph (C) of this paragraph for the purposes of this chapter, a "petroleum substance" shall be limited to a substance in or a combination or mixture of substances within the following list (except for any listed substance regulated as a hazardous waste under the federal Solid Waste Disposal Act, Subtitle C (42 United States Code USC), §§6921, *et seq.*) and which is liquid at standard conditions of temperature (20 degrees Centigrade) and pressure (1 atmosphere):

(i) - (xii) (No change.)

(B) For the purposes of this chapter, a "petroleum substance" shall include solvents or a combination or mixture of solvents (except for any listed substance regulated as a hazardous waste under the federal Solid Waste Disposal Act, Subtitle C (42 USC, [United States Code] §§6921, *et seq.*) and which is liquid at standard conditions of temperature (20 degrees Centigrade) and pressure (1 atmosphere) i.e., Stoddard solvent, petroleum spirits, mineral spirits, petroleum ether, varnish makers' and painters' naphthas, petroleum extender oils, and commercial hexane.

(C) (No change.)

(108) - (130) (No change.)

(131) **Solid waste** -

(A) Any garbage, refuse, sludge from a waste 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, and from community and institutional activities, but does not include:

(i) - (ii) (No change.)

(iii) waste materials which result from activities associated with the exploration, development, or production of oil or gas or geothermal resources, as those activities are

defined in this section, and any other substance or material regulated by the Railroad Commission of Texas in accordance with the Natural Resources Code, §91.101, unless such waste, substance, or material results from activities associated with gasoline plants, natural gas, or natural gas liquids processing plants, pressure maintenance plants, or repressurizing plants and is a hazardous waste as defined by the administrator of the EPA in accordance with the federal Solid Waste Disposal Act, as amended by the RCRA, 42 United States Code, §§6901 *et seq.*, as amended; or

(iv) (No change.)

(B) A discarded material is any material which is:

(i) (No change.)

(ii) recycled, as explained in subparagraph (D) of this paragraph; [or]

(iii) considered inherently waste-like, as explained in subparagraph (E)
of this paragraph; or [.]

(iv) (No change.)

(C) - (K) (No change.)

(132) - (163) (No change.)

**SUBCHAPTER E: INTERIM STANDARDS FOR OWNERS AND OPERATORS OF
HAZARDOUS WASTE STORAGE, PROCESSING, OR DISPOSAL FACILITIES**

§335.116, §335.123

STATUTORY AUTHORITY

The amendments are proposed under TWC, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its power and duties under this code and other laws of this state; TWC, §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and Texas Civil Statutes, Article 3271b, the Act, which authorizes the public practice of geoscience in the State of Texas.

The proposed amendments implement TWC, §5.103 and §5.105, and Texas Civil Statutes, Article 3271b, the Act.

§335.116. Applicability of Groundwater Monitoring Requirements.

(a) - (b) (No change.)

(c) All or part of the groundwater monitoring requirements of this subchapter may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste or hazardous waste constituents from the facility via the uppermost aquifer to water supply wells (domestic, industrial, or agricultural) or to surface water. This demonstration must be in writing and

must be kept at the facility. This demonstration shall [must] be certified by a licensed professional geoscientist [qualified geologist] or geotechnical engineer and must establish the following:

(1) - (2) (No change.)

(d) - (g) (No change.)

§335.123. Closure and Post-Closure (Land Treatment Facilities).

(a) - (d) (No change.)

(e) For the purpose of complying with 40 CFR §265.115 concerning certification of closure, when closure is completed, the owner or operator may submit to the executive director certification both by the owner or operator and by a licensed professional geoscientist [an independent qualified soil scientist], in lieu of an independent licensed [registered] professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(f) (No change.)

**SUBCHAPTER F: PERMITTING STANDARDS FOR OWNERS AND
OPERATORS OF HAZARDOUS WASTE STORAGE, PROCESSING, OR
DISPOSAL FACILITIES**

§335.156, §335.172

STATUTORY AUTHORITY

The amendments are proposed under TWC, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its power and duties under this code and other laws of this state; TWC, §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and Texas Civil Statutes, Article 3271b, the Act, which authorizes the public practice of geoscience in the State of Texas.

The proposed amendments implement TWC, §5.103 and §5.105, and Texas Civil Statutes, Article 3271b, the Act.

§335.156. Applicability of Groundwater Monitoring and Response.

(a) Except as provided in subsection (b) of this section, the rules pertaining to groundwater monitoring and response apply to owners and operators of facilities that process, store, or dispose of hazardous waste.

(1) (No change.)

(2) Except as provided in paragraph (3) of this subsection, all solid waste management units must comply with the requirements in §335.167 of this title (relating to Corrective Action for Solid Waste Management Units). A surface impoundment, waste pile, land treatment unit, or landfill that receives hazardous waste after July 26, 1982, (hereinafter referred to as a regulated unit) must comply with the requirements of §§335.157 - 335.166 of this title (relating to Required Program; Groundwater Protection Standard; Hazardous Constituents; Concentration Limits; Point of Compliance; Compliance Period; General Groundwater Monitoring Requirements; Detection Monitoring Program; Compliance Monitoring Program; and Corrective Action Program) in lieu of §335.167 of this title for purposes of detecting, characterizing, and responding to releases to the uppermost aquifer. The financial responsibility requirements of §335.167 of this title apply to regulated units.

(3) (No change.)

(b) The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under this section and §§335.157 - 335.166 of this title if:

(1) (No change.)

(2) he operates a unit which the commission finds:

(A) is an engineered structure;

(B) does not receive or contain liquid waste or waste containing free liquids;

(C) is designed and operated to exclude liquid, precipitation, and other run-on and run-off;

(D) has both inner and outer layer of containment enclosing the waste;

(E) has a leak detection system built into each containment layer for which continuing operation and maintenance will be provided during the active life of the unit and the closure and post-closure care periods; and

(F) to a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the post-closure care period.

[(2) All solid waste management units must comply with the requirements in §335.167 of this title (relating to Corrective Action for Solid Waste Management Units). A surface impoundment, waste pile, land treatment unit or landfill that receives hazardous waste after July 26, 1982 (hereinafter referred to as a regulated unit) must comply with the requirements of §§335.157 - 335.166 of this title (relating to Required Program; Groundwater Protection Standard; Hazardous Constituents; Compliance Period; General Groundwater Monitoring Requirements; Detection Monitoring Program; Compliance Monitoring Program; and Corrective Action Program) in lieu of §335.167 of this title (relating to Corrective Action for Solid Waste Management Units) for purposes of

detecting, characterizing, and responding to releases to the uppermost aquifer. The financial responsibility requirements of §335.167 of this title (relating to Corrective Action for Solid Waste Management Units) apply to regulated units.]

(3) (No change.)

(4) the commission finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the post-closure care period specified under 40 CFR §264.117. This demonstration shall [must] be certified by a licensed professional geoscientist [qualified geologist] or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall [must] base any predictions on assumptions that maximize the rate of liquid migration; or

(5) (No change.)

(c) Sections 335.157 - 335.166 of this title apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, these sections:

(1) (No change.)

(2) apply during the post-closure [post closure] care period under 40 CFR §264.117 if the owner or operator is conducting a detection monitoring program under §335.164 of this title; or

(3) (No change.)

§335.172. Closure and Post-Closure Care (Land Treatment Units).

(a) (No change.)

(b) For the purpose of complying with 40 CFR §264.115, when closure is completed, the owner or operator may submit to the executive director certification by a licensed professional geoscientist [an independent qualified soil scientist], in lieu of an independent registered professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(c) - (e) (No change.)

**SUBCHAPTER G: LOCATION STANDARDS FOR HAZARDOUS
WASTE STORAGE, PROCESSING, OR DISPOSAL**

§335.204

STATUTORY AUTHORITY

The amendment is proposed under TWC, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its power and duties under this code and other laws of this state; TWC, §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and Texas Civil Statutes, Article 3271b, the Act, which authorizes the public practice of geoscience in the State of Texas.

The proposed amendment implements TWC, §5.103 and §5.105, and Texas Civil Statutes, Article 3271b, the Act.

§335.204. Unsuitable Site Characteristics.

(a) Storage or processing facilities (excluding storage surface impoundments).

(1) - (3) (No change.)

(4) A storage or processing facility (excluding storage surface impoundments) may not be located in areas overlying regional aquifers unless:

(A) the regional aquifer is separated from the facility by a minimum of ten [10] feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} centimeters per second (cm/sec), or a thicker interval of more permeable material which provides equivalent or greater retardation to pollutant migration; or

(B) (No change.)

(5) - (8) (No change.)

(9) A storage or processing facility may not be located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures, unless the design, construction, and operational features of the facility will prevent adverse effects resulting from fault movement. The presence, and if a fault is found to be present, the width and location of the actual or inferred surface expression of a fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, shall [must] be determined by a licensed professional geoscientist [qualified geologist] or geotechnical engineer. For purposes of fault assessment under this paragraph, depths of shallow sediments to be considered could be as little as 100 feet (for older, slowly accumulated sediments), or as great as 300 feet (for younger, rapidly accumulated sediments). The fault study should include analyses of any electric logs developed for any required subsurface characterization of the site, interpretation of available aerial photographs, study of

available maps, logs, and documents that may indicate fault locations at the surface and in the subsurface, and a visual observation of the proposed site.

(b) Land treatment facilities.

(1) - (3) (No change.)

(4) A land treatment facility may not be located in areas overlying regional aquifers

unless:

(A) (No change.)

(B) the regional aquifer is separated from the base of the treatment zone by a minimum of ten [10] feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} cm/sec, or a thicker interval of more permeable material which provides equivalent or greater retardation to pollutant migration.

(5) - (11) (No change.)

(12) A land treatment facility may not be located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures,

unless the design, construction, and operational features of the facility will prevent adverse effects resulting from fault movement. The presence, and if a fault is found to be present, the width and location of the actual or inferred surface expression of a fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, shall [must] be determined by a licensed professional geoscientist [qualified geologist] or geotechnical engineer. For purposes of fault assessment under this paragraph, depths of shallow sediments to be considered could be as little as 100 feet (for older, slowly accumulated sediments), or as great as 300 feet (for younger, rapidly accumulated sediments). The fault study should include analyses of any electric logs developed for any required subsurface characterization of the site, interpretation of available aerial photographs, study of available maps, logs, and documents that may indicate fault locations at the surface and in the subsurface, and a visual observation of the proposed site.

(c) Waste piles.

(1) - (3) (No change.)

(4) A waste pile may not be located in areas overlying regional aquifers unless:

(A) the regional aquifer is separated from the base of the containment structure by a minimum of ten [10] feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} cm/sec or a thicker interval of more permeable material which provides equivalent or greater retardation to pollutant migration; or

(B) (No change.)

(5) - (10) (No change.)

(11) A waste pile may not be located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures, unless the design, construction, and operational features of the facility will prevent adverse effects resulting from fault movement. The presence, and if a fault is found to be present, the width and location of the actual or inferred surface expression of a fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, shall [must] be determined by a licensed professional geoscientist [qualified geologist] or geotechnical engineer. For purposes of fault assessment under this paragraph, depths of shallow sediments to be considered could be as little as 100 feet (for older, slowly accumulated sediments), or as great as 300 feet (for younger, rapidly accumulated sediments). The fault study should include analyses of any electric logs developed for any required subsurface characterization of the site, interpretation of available aerial photographs, study of available maps, logs, and documents that may indicate fault locations at the surface and in the subsurface, and a visual observation of the proposed site.

(d) Storage surface impoundments.

(1) - (3) (No change.)

(4) A storage surface impoundment may not be located in areas overlying regional aquifers unless:

(A) the regional aquifer is separated from the base of the containment structure by a minimum of ten [10] feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} cm/sec or a thicker interval of more permeable material which provides equivalent or greater retardation to pollutant migration; or

(B) (No change.)

(5) - (10) (No change.)

(11) A storage surface impoundment may not be located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures, unless the design, construction, and operational features of the facility will prevent adverse effects resulting from fault movement. The presence, and if a fault is found to be present, the width and location of the actual or inferred surface expression of a fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, shall [must] be determined by a licensed professional geoscientist [qualified geologist] or geotechnical engineer. For purposes of fault assessment under this paragraph, depths of shallow sediments to be considered could be as little as 100 feet (for older, slowly accumulated sediments), or as great as 300 feet (for younger, rapidly

accumulated sediments). The fault study should include analyses of any electric logs developed for any required subsurface characterization of the site, interpretation of available aerial photographs, study of available maps, logs, and documents that may indicate fault locations at the surface and in the subsurface, and a visual observation of the proposed site.

(e) Landfills. Any surface impoundment to be closed as a landfill (where wastes will remain after closure of the impoundment) is subject to the requirements for landfills.

(1) - (3) (No change.)

(4) A landfill may not be located in areas overlying regional aquifers unless:

(A) (No change.)

(B) the regional aquifer is separated from the base of the containment structure by a minimum of ten [10] feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} cm/sec or a thicker interval of more permeable material which provides equivalent or greater retardation to pollutant migration.

(5) - (12) (No change.)

(13) A landfill may not be located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures, unless the design, construction, and operational features of the facility will prevent adverse effects resulting from fault movement. The presence, and if a fault is found to be present, the width and location of the actual or inferred surface expression of a fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, shall [must] be determined by a licensed professional geoscientist [qualified geologist] or geotechnical engineer. For purposes of fault assessment under this paragraph, depths of shallow sediments to be considered could be as little as 100 feet (for older, slowly accumulated sediments), or as great as 300 feet (for younger, rapidly accumulated sediments). The fault study should include analyses of any electric logs developed for any required subsurface characterization of the site, interpretation of available aerial photographs, study of available maps, logs, and documents that may indicate fault locations at the surface and in the subsurface, and a visual observation of the proposed site.

(14) (No change.)

(f) (No change.)

**SUBCHAPTER K: HAZARDOUS SUBSTANCE FACILITIES ASSESSMENT
AND REMEDIATION**

§335.348

STATUTORY AUTHORITY

The amendment is proposed under TWC, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its power and duties under this code and other laws of this state; TWC, §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and Texas Civil Statutes, Article 3271b, the Act, which authorizes the public practice of geoscience in the State of Texas.

The proposed amendment implements TWC, §5.103 and §5.105, and Texas Civil Statutes, Article 3271b, the Act.

§335.348. General Requirements for Remedial Investigations.

(a) Unless otherwise directed by the commission, a remedial investigation as approved by the executive director shall be completed before the executive director's selection of the remedial action, except for removals and preliminary site investigations in accordance with [pursuant to] §335.346 of this title (relating to Removals and Preliminary Site Investigations).

(b) - (c) (No change.)

(d) A remedial investigation may include the following, as appropriate to a particular facility, for the purpose of allowing the executive director to select an appropriate remedial action:

(1) investigations of surface water and sediments necessary to characterize hydrologic features such as surface drainage patterns, areas of erosion and sediment deposition, surface waters, floodplains, and actual or potential hazardous substance migration routes within these areas. Properties of surface and subsurface sediments, which would influence the type and rate of hazardous substance migration or affect the ability to implement alternative remedial actions, shall be characterized.

(2) investigations to adequately characterize the nature and extent of hazardous substances in the soils encompassing the facility. Properties associated with the soils, which would influence the type and rate of hazardous substance migration or affect the ability to implement alternative remedial actions, shall be characterized.

(3) - (7) (No change.)

(e) (No change.)

(f) A workplan for a remedial investigation shall be submitted to the executive director for final review and possible modifications and shall include the following:

(1) a sampling and analysis plan covering all sampling activities to be undertaken in accordance with [pursuant to] the remedial investigation;

(2) a quality assurance project plan to ensure the integrity of all samples taken in accordance with [pursuant to] the remedial investigation;

(3) - (4) (No change.)

(g) - (i) (No change.)

(j) A report shall be prepared at the completion of the remedial investigation and submitted to the executive director for review, possible modification, and final approval.

(k) - (m) (No change.)

(n) All engineering and geoscientific information submitted to the agency shall be prepared by, or under the supervision of, a licensed professional engineer or licensed professional geoscientist, and shall be signed, sealed, and dated by qualified professionals as required by the Texas Engineering Practice Act and the Texas Geoscience Practice Act and the licensing and registration boards under these acts.

SUBCHAPTER S: RISK REDUCTION STANDARDS

§335.553

STATUTORY AUTHORITY

The amendment is proposed under TWC, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its power and duties under this code and other laws of this state; TWC, §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and Texas Civil Statutes, Article 3271b, the Act, which authorizes the public practice of geoscience in the State of Texas.

The proposed amendment implements TWC, §5.103 and §5.105, and Texas Civil Statutes, Article 3271b, the Act.

§335.553. Required Information.

(a) (No change.)

(b) Risk Reduction Standard Number 3, the person shall conduct the activities set forth in paragraphs (1) - (4) of this subsection. The results of activities required by paragraphs (1) - (3) of this subsection may be combined to address a portion of a facility or one or more facilities of a similar nature or close proximity. The submittal shall be subject to review and approval by the executive

director prior to carrying out the closure or remediation. Upon completion of the approved activity, the person shall submit the final report required by paragraph (4) of this subsection.

(1) The person shall prepare a remedial investigation report which contains sufficient documentation such as, but not limited to, descriptions of procedures and conclusions of the investigation to characterize the nature, extent, direction, rate of movement, volume, composition, and concentration of contaminants in environmental media of concern, including summaries of sampling methodology and analytical results. Information obtained from attempts to attain Risk Reduction Standard Number [Numbers] 1 or 2 may be submitted for this purpose.

(2) - (4) (No change.)

(c) (No change.)

(d) For Risk Reduction Standards Numbers 1, 2, and 3, attainment of cleanup levels shall be demonstrated by collection and analysis of samples from the media of concern. Persons shall utilize techniques described in SW 846, Test Methods for Evaluating Solid Waste, EPA [United States Environmental Protection Agency], or other available guidance in developing a sampling and analysis plan appropriate for the distribution, composition, and heterogeneity of contaminants and environmental media. A sufficient number of samples shall be collected and analyzed for individual compounds to both accurately assess the risk to human health and the environment posed by the facility or area and to demonstrate the attainment of cleanup levels. Non compound-specific analytical techniques (e.g., total

petroleum hydrocarbons [Total Petroleum Hydrocarbons], total organic carbon [Total Organic Carbon], etc.) may, where appropriate for the nature of the wastes or contaminants, be used to aid in the determination of the lateral and vertical extent and volume of contaminated media; however, such non compound-specific analyses will serve only as indicator measures and must be appropriately supported by compound-specific analyses. Comparisons may be based on the following methods:

(1) (No change.)

(2) for a data set of ten [10] or more samples, statistical comparison of the results of analysis utilizing the 95% confidence limit of the mean concentration of the contaminant as determined by the following expression:

Figure: 30 TAC §335.553(d)(2) (No change.)

(3) (No change.)

(e) For Risk Reduction Standards Numbers 2 and 3, in determining toxicity information for contaminants (e.g., EPA [Environmental Protection Agency] carcinogen classification, type of toxicant, reference doses, carcinogenic slope factors, etc.), persons shall utilize values from the following sources in the order indicated. For Risk Reduction Standard Number 2, persons may utilize data from these sources that are more current than those used to derive the unadjusted medium-specific concentrations [MSCs] listed in §335.568 of this title (relating to Appendix II), provided that

substantiating information is furnished to the executive director in the report required by §335.555(f) of this title (relating to Attainment of Risk Reduction Standard Number 2).

(1) - (2) (No change.)

(3) EPA [United States Environmental Protection Agency] Criteria Documents;

(4) - (5) (No change.)

(f) For Risk Reduction Standards Numbers 2 and 3, persons determining cleanup levels for contaminated media characterized by non compound-specific analytical techniques (e.g., total petroleum hydrocarbons [Total Petroleum Hydrocarbons], total organic carbon [Total Organic Carbon], etc.) and for which individual compounds such as hazardous constituents are not present as contaminants, must at a minimum consider other scientifically valid published numeric criteria to address: adverse impacts on environmental quality; adverse impacts on the public welfare and safety; conditions that present objectionable characteristics (e.g., taste, odor, etc.); or conditions that make a natural resource unfit for use.

(g) All engineering and geoscientific information submitted to the agency shall be prepared by, or under the supervision of, a licensed professional engineer or licensed professional geoscientist, and shall be signed, sealed, and dated by qualified professionals as required by the Texas Engineering

Practice Act and the Texas Geoscience Practice Act and the licensing and registration boards under these acts.