The Texas Commission on Environmental Quality (commission) adopts amendments to §§336.1, 336.2, 336.11, 336.103, 336.111, 336.113, 336.203, 336.207, 336.209, 336.211, 336.305, 336.363, 336.501, 336.701, 336.702, 336.705, 336.707 - 336.709, 336.711, 336.716, 336.718, 336.720, 336.723, 336.728 - 336.730, 336.733, 336.735 - 336.737, and 336.743. The commission also adopts new §§336.9, 336.703, 336.704, 336.717, 336.738, 336.801, 336.803, 336.805, 336.807 - 336.809, 336.811, 336.813, 336.815, 336.817, 336.819, 336.821, 336.823, 336.825, 336.901, 336.903, 336.905, 336.907, and 336.909 and the repeal of §336.703. Sections 336.2, 336.103, 336.207, 336.363, 336.701 - 336.703, 336.707, 336.708, 336.716, 336.717, 336.728 - 336.730, 336.733, 336.736, 336.737, 336.738, 336.801, 336.803, 336.805, 336.807 - 336.809, 336.815, 336.817, 336.819, 336.821, 336.823, 336.901, 336.905, and 336.909 are adopted *with changes* to the proposed text as published in the August 22, 2003 issue of the *Texas Register* (28 TexReg 6735). Sections 336.1, 336.9, 336.11, 336.111, 336.113, 336.203, 336.209, 336.211, 336.305, 336.501, 336.704, 336.705, 336.709, 336.711, 336.718, 336.720, 336.723, 336.735, 336.743, 336.811, 336.813, 336.825, 336.903, and 336.907 are adopted *without changes* and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

The changes adopted in this chapter are part of a larger rulemaking action to revise the commission's radiation control rules. The primary purpose of these rules is to implement House Bill (HB) 1567, 78th Legislature, 2003, and its amendments to Texas Health and Safety Code, Chapter 401, also known as the Texas Radiation Control Act. The bill provides for the licensing of a low-level radioactive waste (LLRW) land disposal facility and establishes procedures for the commission to accept and evaluate license applications from private entities to dispose of LLRW. After a review for comparative merit,

the commission may refer one application, after technical review and public comment, to the State Office of Administrative Hearings (SOAH) for a contested case hearing, if requested by an applicant or an affected person, or if the commission determines a hearing would be in the public interest. The commission intends to address additional provisions of HB 1567, such as the compact waste disposal fees, in a future rulemaking.

HB 1567 repeals Texas Health and Safety Code, Chapter 402, the Texas Low-Level Radioactive Waste Disposal Authority Act, in its entirety. This repeal eliminates most of the duties and responsibilities that were transferred from the Texas Low-Level Radioactive Waste Disposal Authority to the Texas Natural Resource Conservation Commission, the predecessor to the Texas Commission on Environmental Quality, effective September 1, 1999. HB 1567 retained authority with the commission for specific support and liaison responsibilities related to LLRW that were part of the duties of the abolished Texas Low-Level Radioactive Waste Disposal Authority. HB 1567 also repealed Texas Health and Safety Code, §401.203, License Restricted to Public Entity, which provided that an LLRW disposal license be issued only to a public entity specifically authorized for LLRW disposal.

Under federal law, Texas is responsible for managing the LLRW generated within its borders. Texas entered into an agreement designated as the Texas Low-Level Radioactive Waste Disposal Compact with the states of Maine and Vermont where Texas will provide for an LLRW disposal facility. The Texas Low-Level Radioactive Disposal Waste Compact was ratified by the United States Congress and signed by President Clinton in September 1998. The State of Maine passed emergency legislation to

withdraw from the Texas Low-Level Radioactive Disposal Waste Compact in April 2002. The withdrawal of Maine is scheduled to take effect in April 2004.

Texas is an "Agreement State" for the regulation of LLRW disposal under the Atomic Energy Act of 1954, as amended (Atomic Energy Act). Section 274 of the Atomic Energy Act provides a statutory basis under which the United States Nuclear Regulatory Commission (NRC) relinquishes to Texas portions of its regulatory authority to license and regulate specific radioactive material. The transfer agreement of this federal authority to the state is signed by the governor and the chair of the NRC. As part of this agreement, the commission must remain compatible in its rules and policies related to LLRW disposal and is subject to periodic review by the NRC for compatibility.

The commission exercises certain authority ceded to the state by the NRC under the *Articles of Agreement Between the United States Nuclear Regulatory Commission and the State of Texas for Discontinuance of Certain Commission and Regulatory Authority and Responsibility within the State Pursuant to Section 274 of the Atomic Energy Act of 1954, as Amended*. The commission's rules address matters relating to this regulatory authority. The primary purpose of this rulemaking action is to revise the commission's application processing and licensing requirements for the disposal of LLRW at the compact waste disposal facility or federal facility waste disposal facility and implement the provisions of two federal NRC rulemakings relating to skin dose and deliberate misconduct. The commission recognizes that issues concerning radioactive materials are very complex and may involve various state and federal agencies. This rulemaking action is not intended to address matters that are not within the jurisdiction of the commission, such as matters under the jurisdiction of the Texas

Department of Health or the Texas Low-Level Radioactive Waste Disposal Compact Commission, authority retained by the NRC, or matters preempted by federal law.

HB 1567 provides that the commission may license federal facility waste disposal at a separate and distinct facility that is operated exclusively for the disposal of federal facility waste and that is adjacent to the compact waste disposal facility. Before accepting federal facility waste, the license holder must submit to the commission a written statement, signed by an official of the federal government, stating that the federal government will assume all required right, title, and interest in land and buildings acquired for the disposal of federal facility waste in accordance with the Federal Nuclear Policy Act of 1982, Subtitle D (42 United States Code (USC), §§10171 *et seq*.), as amended. For the first five years after issuance of a license, the overall capacity of the federal facility waste disposal facility is limited to not more than three million cubic yards. The capacity may then be increased to a total volume of six million cubic yards unless the commission makes an affirmative finding that increasing the capacity of the federal facility waste disposal facility would pose a significant risk to human health, public safety, or the environment. A major amendment to the LLRW disposal license would be required to increase the volume capacity for federal facility waste, even in the absence of an affirmative finding by the commission. New definitions for “Compact,” “Compact waste,” “Compact waste disposal facility,” “Federal facility waste,” “Federal facility waste disposal facility,” “Host state,” “Mixed waste,” “Party state,” and “Perpetual care account” are adopted in §336.2 to implement the new statutory requirements. New Chapter 336, Subchapter I and Subchapter J, are also adopted to implement the statute.

HB 1567 specifically authorizes that mixed waste may be disposed of at an LLRW land disposal facility. "Mixed waste" is a combination of hazardous waste as defined in 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste, and LLRW. "Mixed waste," as adopted in §336.2, also includes federal mixed waste. The compact waste disposal facility license holder, in accepting mixed waste at the compact waste disposal facility or a federal facility waste disposal facility, must comply with Chapter 361; Texas Health and Safety Code, Chapter 401; and the Resource Conservation and Recovery Act of 1976 (42 USC, §§6901 *et seq*.), as amended. Specific license conditions related to mixed waste will be incorporated into an LLRW disposal license issued by the commission.

Discussion of Texas Health and Safety Code, §401.216, Acquisition of Property.

Ownership of property in fee, that is, both the surface rights and the mineral rights, must be demonstrated for an administratively complete application. Or, if the applicant or the state or federal government does not own the mineral rights, the applicant must include an application for an exemption. This ownership is directly related to the ability to transfer property to the state or federal government prior to accepting waste for disposal. Land ownership requirements are provided in federal rules and in existing state rules, as a matter of NRC compatibility. HB 1567 allows for possible deviations from existing land ownership requirements that necessitate an applicant requesting possible exemptions under §336.5. The commission has the ability to grant exemptions under §336.5 if it determines that the exemption is not prohibited by law and will not result in a significant risk to public health and safety or the environment. Persons requesting an exemption must demonstrate that the proposed alternative approach is as protective to the public and the environment as the existing

requirements from which an exemption is being requested. Such requests for exemptions from specific requirements by an applicant must be included in an administratively complete application for LLRW disposal.

HB 1567 specifies an application selection process for a compact waste disposal facility license. Not later than January 1, 2004, the commission shall submit to the Office of the Secretary of State notice for publication in the *Texas Register* that applications for the siting, construction, and operation of a compact waste disposal facility and federal facility waste disposal facility for disposal of LLRW will be accepted by the commission for a 30-day period, beginning 180 days after the date of the notice. All applications received will be evaluated by the commission for administrative completeness, and applications deemed administratively complete will be evaluated in accordance with statutory criteria for the purposes of comparing the relative merit of the applications. Based on the written evaluations and the application materials, the commission shall select the application that has the highest comparative merit. The statutory criteria are specified in the form of weighted tiers. These tiers and the application selection process are specified in new Subchapter I.

This rulemaking also implements HB 1678. This bill changes the name of the "radiation and perpetual care fund" to "perpetual care account," and provides that the account is an account in the general revenue fund. Conforming changes to rules are given in Subchapter H, §336.720, Post-Closure Observation and Maintenance and §336.737, Funding for Institutional Control; and 30 TAC Chapter 37, Subchapter T, Financial Assurance for Near-Surface Land Disposal of Low-Level Radioactive

Waste; §37.9045, Financial Assurance for Closure, Post Closure, Corrective Action, and Liability Coverage; and §37.9050, Financial Assurance Mechanisms.

Some additional changes outside the scope of the bill implementation are being adopted as part of this rulemaking action. This rulemaking action implements federal requirements which are necessary to maintain compatibility between federal and state rules.

The amendments to §336.2 and §336.305 are derived from NRC final rulemaking "Revision of the Skin Dose Limit" (66 Federal Register (FR) 16298, April 5, 2002), effective June 4, 2002. The commission must incorporate NRC rulemakings into its rules to preserve the status of the State of Texas as an "Agreement State" authorized to administer a portion of the radiation control program in the state.

The NRC amended its regulations to change the definition and method of calculating "shallow-dose equivalents" by specifying that the assigned shallow-dose equivalents must be the dose averaged over ten square centimeters of skin receiving the highest exposure, rather than one square centimeter as stated in the existing regulation.

This rulemaking makes the skin dose limit less restrictive when small areas of skin are irradiated and to address skin and extremity doses from all source geometries under a single limit. This change requires measuring or calculating shallow-dose equivalents from discrete radioactive particles on or off the skin, from very small areas (1.0 square centimeter) of skin contamination, and from any other source of

shallow-dose equivalent, by averaging the measured or calculated dose over the most highly exposed, contiguous ten square centimeters for comparison to the skin dose limit of 50 rem.

The commission concurs with the NRC that previous requirements for skin dose, including frequent monitoring of workers to detect small area exposures, might permit more frequent, "transient," observable effects such as reddening of the skin. However, the change to a larger averaging area will result in no more than insignificant health implications and in other aspects will reduce hazards and increase protection. When the standard measurement area was one centimeter, workers were required to wear multiple layers of protective clothing that resulted in workers being subjected to non-radiological hazards, such as heat stress. In addition, workers' mobility and dexterity were hampered by the redundant use of protective equipment and clothing which required them to spend more time completing a job in radiation areas. Therefore, the previous redundant use of protective clothing and other equipment to avoid small area skin contamination may in fact expose workers to more significant hazards than are being avoided.

New §336.9 is derived from NRC final rulemaking "Deliberate Misconduct by Unlicensed Persons" (63 FR 1890, January 13, 1998), effective February 12, 1998. The commission must incorporate NRC rulemakings into its rules to preserve the status of the State of Texas as an “Agreement State” authorized to administer a portion of the radiation control program in the state.

The NRC enacted this rule to be able to take enforcement action against an unlicensed person, such as an employee, contractor, or consultant, or take other administrative action directly against a person,

such as issuance of a notice of violation, who deliberately causes a licensee to be in violation of a requirement, provides material inaccurate information to a licensee, or provides material inaccurate information to a regulator. Similarly, by adopting this rule, any person who knowingly violates a state rule or requirement would be subject to enforcement action under Texas Water Code, Chapter 7, and Texas Health and Safety Code, §401.393.

Various sections are amended to change the name of the commission from the "Texas Natural Resource Conservation Commission" to the "Texas Commission on Environmental Quality" to implement HB 2912, 77th Legislature, 2001, §18.01. Typographical error corrections and other amendments to improve readability are also adopted.

SECTION BY SECTION DISCUSSION

SUBCHAPTER A: GENERAL PROVISIONS

Section 336.1, Scope and General Provisions

Section 336.1(e) is amended to change "Texas Natural Resource Conservation Commission" to "Texas Commission on Environmental Quality," implementing HB 2912, §18.01. Subsection (f)(2) is amended to delete the requirement that only a public entity may receive LLRW from other persons for the purpose of disposal, reflecting the repeal of Texas Health and Safety Code, §401.203, in HB 1567. Specifically, the word “person” is substituted for “public entity.”

Section 336.2, Definitions

Section 336.2 is amended to make it compatible with the latest version of Title 10 Code of Federal Regulations (CFR) §20.1003. The definition of "Shallow-dose equivalent (H_s)" is specifically amended to add after "skin," the words "of the whole body" and after "or," the words "the skin of" to clarify that the definition applies to the skin of the whole body or to the skin of an extremity. The definition is also amended to delete "averaged over an area of one square centimeter" to agree with the amendment adopted in §336.305(c) for averaging over ten square centimeters of skin. Additional definitions for "Compact," "Compact waste," "Compact waste disposal facility," "Federal facility waste," "Federal facility waste disposal facility," "Host state," "Mixed waste," "Party state," and "Perpetual care account" are adopted in §336.2 to implement the new statutory requirements of HB 1567. In response to comment, the definition of "Mixed waste" was modified to refer to the definition of hazardous waste in Chapter 335. The definition of "Federal facility waste" was modified in response to comment to exclude greater than Class C LLRW. The definition of "Federal facility waste disposal facility" was modified in response to comment to provide that such a land disposal facility must be licensed under Chapters 336, Subchapters H and J. The definition of "Compact waste disposal facility" was similarly modified to provide that the compact waste disposal facility is a land disposal facility. The definitions are renumbered accordingly. The definition of "Hazardous waste" is added to provide a reference to Chapter 335. The definition of "Radiation and perpetual care fund" is amended by changing the term to "Radiation and perpetual care account." This amendment provides consistency with HB 1567 and HB 1678. The definition of "Licensee" is amended to delete an unnecessary acronym and provide a correct citation to Texas Health and Safety Code, Chapter 401. The definition of "Special nuclear material in quantities not sufficient to form a critical mass" was changed to reflect the integer "1"

instead of the word “one,” and the definition of “Derived air concentration-hour” was changed to reflect the integer “5" instead of the word “five” in response to comment. The definition of “Violation” is amended to spell out the acronym TRCA as “Texas Radiation Control Act.”

Section 336.9, Deliberate Misconduct

New §336.9 implements federal requirements given in 10 CFR §61.9(b). The new section subjects certain persons specified in rule to enforcement action for deliberate misconduct. Deliberate misconduct may involve providing information that is known to be incomplete or inaccurate in some respect material to the commission, or it may involve conduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any of the commission’s requirements.

Section 336.11, Memorandum of Understanding Between the Texas Department of Health and the Texas Natural Resource Conservation Commission Regarding Radiation Control Functions

The amendments to §336.11 reflect the commission's name change. The title of the section is amended to replace “between” with “with” and to delete "Texas Natural Resource Conservation Commission." At the end of the section, the name of the commission is changed to the new name to correct the address from which to request a copy of the memorandum of understanding (MOU). These amendments implement the commission name change in HB 2912, §18.01.

SUBCHAPTER B: RADIOACTIVE SUBSTANCE FEES

Section 336.103, Schedule of Fees for Subchapter H Licenses

The amendment to §336.103(a) implements HB 1567, §401.229, changes the license application processing fee from $415,000 to $500,000, and makes the fee nonrefundable. The amendment also provides that if the commission's costs in processing an application under Subchapter H exceed the $500,000 application processing fee, the commission may assess and collect additional fees from the applicant to recover the costs. The amendments to §336.103(c) implement HB 1567, §401.206, and provide for the expenses of more than one resident inspector.

Section 336.111, Method of Payment of Fees

The amendment to §336.111 changes "Texas Natural Resource Conservation Commission" to "Texas Commission on Environmental Quality" to implement HB 2912, §18.01.

Section 336.113, Failure to Pay Prescribed Annual Fees

The amendments to §336.113 provide a reference to 30 TAC Chapter 12, Payment of Fees, to identify the manner in which penalties and interest are assessed for the late payment of fees.

SUBCHAPTER C: GENERAL DISPOSAL REQUIREMENTS

Section 336.203, License Required

The amendment to §336.203 changes "Texas Natural Resource Conservation Commission" to "Texas Commission on Environmental Quality" to implement HB 2912, §18.01, and deletes the acronym "TDH" because it is not used again within the section.

Section 336.207, General Requirements for Issuance of a License

The amendment adds the phrase “of this chapter (relating to Radioactive Substance Rules)” to denote that the “applicable chapter” refers to Chapter 336. Additionally, in response to comment, a new paragraph (4) was added to emphasize that an application to dispose of LLRW will not be approved unless an applicant has acquired title to the land and buildings, including the mineral estate, on which the facility or facilities are to be located. The requirements of this paragraph can be met by either having fee simple title to everything or by having acquired fee simple in the surface estate and an approved application for an exemption to use a surface use agreement in lieu of having fee simple title to the mineral estate.

Section 336.209, Issuance of License

The amendments change the phrase “agency rules” to “commission rules” and correct the spelling of the term “radioactive.”

Section 336.211, General Requirements for Radioactive Material

The amendment to §336.211(f) replaces the term “public entity” with the term “person” because HB 1567 repealed Texas Health and Safety Code, §401.203.

SUBCHAPTER D: STANDARDS FOR PROTECTION AGAINST RADIATION

Section 336.305, Occupational Dose Limits for Adults

The amendments to §336.305 make it compatible with the latest version of NRC's 10 CFR §20.1201. Section 336.305(a)(2) is amended to add after "skin" the words "of the whole body" and before

"extremities" the words "the skin of" to clarify that the annual limits apply to the skin of the whole body and to the skin of the extremities. Section 336.305(c) is also amended to add that the deep-dose equivalent "must be for the part of the body receiving the highest exposure" and that the shallow-dose equivalent must be "averaged over the contiguous ten square centimeters of skin receiving the highest exposure."

Section 336.363, Appendix F, Requirements for Receipt of Low-Level Radioactive Waste for Disposal at Licensed Land Disposal Facilities and Uniform Manifests

The amendments delete references to older NRC rule changes in subsections (a)(1)(A); (a)(2)(B), (D), and (E); (a)(3); and (b)(1). The referenced March 27, 1995 NRC rule change had two acceptable versions. In a subsequent November 20, 1998 rule change, the version already incorporated in this rule section was made the final, official version. Unless otherwise specified, an "Agreement State," such as Texas, has three years after the promulgation of an NRC rule change to adopt it in state rules. An NRC rule change is not effective in the "Agreement State" until it is adopted and effective in state rules. When a state adopts NRC rule changes by reference, as in this section, the NRC encourages the state to use its own effective date. The amendments cite to the appropriate NRC rules, as amended.

SUBCHAPTER F: LICENSING OF ALTERNATIVE METHODS OF DISPOSAL OF RADIOACTIVE MATERIAL

Section 336.501, Scope and General Provisions

The amendment to §336.501(b) replaces the term "public entity" with the term "person" because HB 1567 repealed Texas Health and Safety Code, §401.203.

SUBCHAPTER H: LICENSING REQUIREMENTS FOR NEAR-SURFACE LAND DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

Section 336.701, Scope and General Provisions

Section 336.701(a) is amended by deleting the words "for near-surface land disposal of low-level radioactive waste and accelerator-produced radioactive material." This is done to improve sentence construction and clarity, and to eliminate redundant language. Subsection (b)(1) is amended to correct a cross-reference. Section 336.701(b) was modified in response to comment to specify that a licensee authorized to dispose of LLRW shall not accept for disposal waste that exceeds Class C limitations as provided in §336.362.

Section 336.702, Definitions

The amendments to §336.702 add a definition for "Containerized Class A waste." This definition implements HB 1567, Texas Health and Safety Code, §401.218(c), which provides that the commission by rule may require a compact waste disposal facility license holder to dispose of certain Class A LLRWs that present a hazard because of their high radiation levels in the manner required for Class B and Class C LLRW. The statutory term "high radiation level" has no equivalent definition in current federal or state rules. The adopted definition is consistent with the existing term "high radiation area," in §336.2, where "high radiation levels" are radiation levels that could result in an individual receiving a dose equivalent in excess of 0.1 rem in one hour at 30 centimeters from any surface that the radiation penetrates. The definition of "Hazardous waste" is deleted because it is redundant with the definition of "Hazardous wastes" given in §336.2. The definition of "Site" was added to §336.702 from the proposal because the term "site" is used extensively in Subchapter H and was not previously

defined. "Site" is defined as the "contiguous land area where any land disposal facility or activity is physically located or conducted including adjacent land used in connection with the land disposal facility or activity and includes soils and groundwater contaminated by radioactive material." A "land disposal facility" is situated on the "site," and a "disposal site" is situated within the "land disposal facility." The term "site" is consistent with the term "disposal facility site" as used in HB 1567. The definition of "Buffer zone" was modified by replacing the term "site" with the term "disposal site" to reflect that the buffer zone extends to the boundary of the disposal site. The definitions are renumbered accordingly.

Section 336.703, License Required - Repeal

Existing §336.703 is repealed because it is redundant of the requirement in §336.701(a) that states: "No person shall engage in disposal of low-level radioactive waste received from other persons except as authorized in a specific license issued under this subchapter."

Section 336.703, Concepts

New §336.703 incorporates the concepts and requirements of 10 CFR §61.7, Concepts. These are NRC program elements that have particular health and safety significance. The essential objectives of these program elements are necessary to maintain an adequate program. In addition, this new rule provides many of the concepts that make the rest of the subchapter understandable. The language in §336.703 was modified in response to the comment from the NRC to provide that the concepts and requirements of 10 CFR §61.7 guide the application of the rules in Chapter 336, Subchapter H.

Section 336.704, Applications for License of Compact Waste Disposal Facility

New §336.704 provides requirements for applications for licenses to dispose of LLRW at the "Compact" waste disposal facility. New subsection (a) provides that only one license to dispose of LLRW from other persons may be issued by the commission, which implements HB 1567, §401.202(b). New subsection (b) provides that the compact waste disposal facility licensed under this subchapter is the regional disposal facility established and operated under the compact established under Texas Health and Safety Code, Chapter 403, for purposes of the federal Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (42 USC, §2021b-2021j). New subsection (b) implements HB 1567, §401.214.

Section 336.705, Content of Application

Section 336.705 is amended to include the words "low-level radioactive" in the first sentence and to improve grammar.

Section 336.707, Specific Technical Information

The amendments to §336.707(6) require that an application for disposal of LLRW include a description of any prior disposal containing radioactive material at the site. An accurate accounting of all radionuclides is essential so that the performance objective for the site can be demonstrated. In response to comment, §336.707(11) was modified to remove the word "facility" because it is an undefined term in Subchapter H. The applicant must provide a description of the electronic recordkeeping system as required in §336.740(i).

Section 336.708, Environmental Information

Section 336.708 is amended by designating existing rule language as subsection (a). Paragraph (11) is amended to add language to specify that the closure plan is also to cover site stabilization, which would be compatible with 10 CFR §61.7(c)(2), and to specify that the intent is to eliminate the need for active maintenance "after closure," and to require an estimated date of site closure for planning purposes. New subsection (b) provides compatibility with 10 CFR §61.10. This NRC rule states: "An environmental report prepared in accordance with subpart A of part 51 of this chapter must accompany this application." New subsection (b) incorporates the environmental report requirements. Changes were made to the proposed language in subsection (a) to avoid the use of undefined terms. Paragraph (1) changes the undefined term “facility” to “site,” which is defined in §336.702. Paragraph (2) changes “facility” to “land disposal facility” which is defined in §336.2. Paragraph (4) changes “disposal site” to “site” because the identification of the known natural resources that could be exploited resulting in inadvertent intrusion is required for the entire site and not just the disposal site.

Section 336.709, Technical and Environmental Analyses

Section 336.709 is a list of demonstrations which an applicant must make as part of the technical and environmental portion of the application. Cross-references to existing performance standards are added to ensure that the correct demonstrations are submitted to the agency. Implied subsection (a) is amended by adding a cross-reference to the performance objectives in §336.723. Paragraph (1) is amended by adding language that specifically requires that the potential effects on the general population be evaluated for a minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer. Paragraph (2) is amended by adding a cross-reference to the

performance objective for inadvertent intrusion in §336.725. Paragraph (3) is amended by adding a cross-reference to the performance objective for protection of individuals during operations in §336.726. Paragraph (4) is amended by adding a cross-reference to the performance objective for stability of the disposal site after closure in §336.727.

Section 336.711, Financial Information

The amendments to §336.711 add cross-references to other rule sections that provide more detailed information on financial qualification and financial assurance requirements.

Section 336.716, Terms and Conditions of License

The amendment to §336.716(c) provides a citation to Texas Health and Safety Code, Chapter 401. The amendment to §336.716(h) requires an initial license term of 15 years rather than a fixed licensing period of 20 years in accordance with new Texas Health and Safety Code, §401.222. A new sentence is also added stating: "After the initial 15 years, the commission may renew the license for one or more terms of ten years." This sentence is added to implement new Texas Health and Safety Code, §401.222. In response to comment, a new sentence was added to §336.716(f) to require approval by the executive director of financial assurance prior to receiving waste for disposal. New subsection (i) provides that the compact waste disposal facility license must require the license holder to indemnify the state for any liability imposed on the state under state or federal law for the disposal of federal facility waste. This provision implements HB 1567, §401.211(c). Subsection (d) was modified in response to comment to change the undefined term “facility” to the term “land disposal facility” to avoid the use of

an undefined term. In response to comment, a new subsection (j) was added to address records maintained by the licensee that are public information.

Section 336.717, Conveyance of Waste

A new §336.717 specifies criteria by which title to compact waste is conveyed to the state which implements HB 1567, §401.2051. Subsection (a) provides that title to the waste is conveyed to the state at the time the waste is accepted at the site. Subsection (b) provides that title and all related rights and interest in the compact waste are the property of the commission on the state's behalf. Subsection (a) was modified in response to comment to change the undefined term "disposal facility" to "compact waste disposal facility" to avoid the use of an undefined term.

Section 336.718, Application for Renewal or Closure

The amendments to §336.718(a) change the time requirement on applying for a license renewal from 30 days before license expiration to one year before license expiration.

Section 336.720, Post-closure Observation and Maintenance

The amendment to §336.720 adds new subsection (b) which states "Upon transfer of the license to the custodial agency, the licensee will be released from the requirements of liability coverage under Chapter 37, Subchapter T of this title (relating to Financial Assurance for Near-Surface Land Disposal of Radioactive Waste)."

Section 336.723, General Requirement

The title for §336.723 is changed to "Performance Objectives" because this is a more descriptive term for the sections which are referred to in this section.

Section 336.728, Disposal Site Suitability Requirements for Near-Surface Land Disposal

Section 336.728(k) is amended to add a requirement that "If activities involving radioactive material were previously performed on the site, the applicant shall evaluate the contribution of those activities that may impact the ability of the site to meet performance objectives." New §336.728(m) - (p) further delineate areas unsuitable for the disposal site, which implement HB 1567, §401.217. Subsection (b) was modified in response to comment to use the defined term "land disposal facility" instead of the undefined terms "facility" and "disposal facility." Subsections (m) - (p) have also been modified to use the term "site," rather than "disposal site." "Site" is consistent with "disposal facility site" in HB 1567.

Section 336.729, Disposal Site Design for Near-Surface Land Disposal

New §336.729(g) implements HB 1567, §401.220, with respect to hazards from local meteorological or geologic conditions. Subsection (g) was modified in response to comment to use the defined term "land disposal facility" rather than the undefined term "disposal facility."

Section 336.730, Near-Surface Land Disposal Facility Operation and Disposal Site Closure

The amendments to §336.730(a) improve formatting and update a section title. The amendments to §336.730(b) reorganize the subsection to provide specific requirements for disposal of containerized

Class A LLRW, as defined in §336.702(5), as well as Class B and Class C LLRWs. These types of wastes must be disposed of within a reinforced concrete container and within a reinforced concrete barrier. These types of wastes must also be disposed of in such a manner that the waste can be monitored and retrieved. These new requirements implement HB 1567, §401.218. Section 336.730(b)(1) has been modified in response to comment to eliminate any confusion dealing with the separate requirements for structural stability. Section 336.730(b)(1) as modified now provides for the statutorily-mandated provisions for concrete containers plus additional barriers. The statutorily-mandated barrier requirements do not affect the NRC structural stability requirements.

Section 336.733, Waste Classification, Characteristics, and Labeling

The amendments to §336.733(a) require that all LLRW and mixed waste received for disposal must be classified in accordance with the NRC waste classification system, that includes any federal facility waste received for disposal. Section 336.733(b) has been modified in response to comment. The rule now provides that alternatives to the containerization requirement for wastes consisting of radionuclides with half-lives greater than 35 years and wastes containing transuranic radionuclides in concentrations of less than ten nanocuries per gram may be granted by the executive director on a case-by-case basis. This new requirement provides greater regulatory flexibility when considering disposal requirements for wastes with very low concentrations of transuranic radionuclides and other radionuclides with long half-lives. New §336.733(c) requires that a licensee comply with the requirements of Chapter 335 for the disposal of mixed waste, and implements HB 1567, §401.221.

Section 336.735, Applicant Qualifications and Assurances

The amendment to §336.735 requires that applicants provide proof of funds sufficient to cover any annual license fee and any agency costs of processing the application that may exceed the $500,000 application processing fee.

Section 336.736, Funding for Disposal Site Closure and Stabilization

The amendments to §336.736 change the title to "Liability Coverage and Funding for Disposal Site Closure and Stabilization." Subsection (c) is amended by adding the words "and cost estimates" to specify that cost estimates will also be reviewed annually because it is the cost estimate that provides the basis for any required adjustment in financial assurance. A new subsection (e) is added to require that prior to the receipt of waste, the applicant shall provide financial assurance for bodily injury and property damage to third parties caused by sudden and non-sudden accidental occurrences arising from operations of the compact waste disposal facility and/or federal facility waste disposal facility in a manner that meets the requirements of Chapter 37. The new section title and new subsection implement HB 1567, §401.233 and §401.112. The timing of financial assurance requirements has been modified in response to comment in §336.736(a) and (e) to provide that the financial assurance must be provided 60 days prior to the initial receipt of waste. Subsection (a) was modified in response to comments to address financial assurance for closure to include the disposal of any radioactive material remaining on the site at the time of closure. At the commission agenda on December 17, 2003, §336.736(c) was amended to include an annual review of financial assurance for closure by the commission at an open meeting.

Section 336.737, Funding for Institutional Control

The amendments to §336.737(a) change the term “Radiation and Perpetual Care Fund” to “perpetual care account” to implement HB 1567, §401.052(d). Language is also added to subsection (a) to provide the method of calculation of an amount of funding for "perpetual" institutional control by the state. The language is derived from NRC's *Draft Regulatory Guide DG-4006, Demonstrating Compliance with the Radiological Criteria for License Termination*, dated August 1998. Section 4.2.3 of the guide (Amount of Financial Assurance) states: "For funds placed into an account segregated from the licensee's assets and outside its administrative control, the financial assurance fund may be assumed to earn a real (i.e., inflation adjusted, after tax) rate of return of 2% per year . . .. Therefore, if perpetual control and maintenance were planned, the financial assurance funding would be 50 times the first year annual cost . . .." Subsection (b) is amended by substituting “Sixty days prior to the initial receipt of waste” for “During the term of the license before the institutional control period” to require that financial assurance for the institutional control period must be in place in the same manner as required for disposal site closure and stabilization, liability coverage, and corrective action. Active operation of the land disposal facility could end at any time during the term of the license, and decommissioning could be required, triggering the need for funding from financial assurance. Cessation of operations would impact the ability of the license holder to fund financial assurance; therefore, the statutory requirements of Texas Health and Safety Code, §401.109 and §401.241, requiring that financial security to fund closure, corrective action, and institutional control is available at the time of decommissioning are met by ensuring that financial assurance is in place prior to the acceptance of waste. The timing of financial assurance requirements has been modified in response to comment in §336.737(b) to provide that the financial assurance must be provided 60 days prior to the initial receipt of waste. In response to a

comment from the NRC, §336.737(b) was also modified to provide that any changes to institutional control proposed by the licensee must be submitted to the commission in an application for a license amendment. At the commission agenda on December 17, 2003, §336.737(c) was amended to include an annual review of financial assurance for institutional control by the commission at an open meeting.

Section 336.738, Funding for Corrective Action

New §336.738 requires that the amount of security required of a license holder under this section shall not be less than $20 million at the time the land disposal facility site is decommissioned. The new section conforms with new statutory requirements given in Texas Health and Safety Code, §401.241(b). New subsection (a) requires that financial assurance for corrective action be in place prior to the initial receipt of waste for the same reasons as outlined in the preamble discussion of §336.737. The timing of financial assurance requirements has been modified in response to comment in §336.738(a) to provide that the financial assurance must be provided 60 days prior to the initial receipt of waste. Subsection (a) has been further modified to include the risk posed to the environment. In response to comment, annual review by the commission of financial assurance for corrective action has been added to §336.738(b). Corrective action is defined in §37.9035, Definitions, as the activities to remediate unplanned events that pose a risk to public health and safety, and the environment, and that may occur after the decommissioning and closure of the compact waste disposal facility or a federal facility waste disposal facility. New subsection (b) states that the payment schedule will be determined by the executive director. The payment schedule will be a condition of the LLRW disposal license. A typographical error was corrected in subsection (b) by changing the word “that” to the word “than.” New subsection (c) provides the cross-reference to Chapter 37, Subchapter T. At the commission

agenda on December 17, 2003, §336.738(b) was amended to include an annual review of financial assurance for corrective action by the commission at an open meeting.

Section 336.743, Resident Inspector

The amendments to §336.743 change the title to "Resident Inspectors" and provide for two or more resident inspectors, which implements HB 1567, §401.206.

NEW SUBCHAPTER I: COMPACT WASTE DISPOSAL FACILITY APPLICATION SELECTION PROCESS

Section 336.801, Applicability

New §336.801 provides a statement of general applicability for Subchapter I, which implements HB 1567. This subchapter describes the procedures for submitting and evaluating license applications to receive, possess, and dispose of LLRW from others at the compact waste disposal facility. In response to comment, the term "licenses" has been changed to "license" because only one license may be issued. Other changes were made to §336.801(a) to specify that Subchapter I only applies to the initial application process because the comparative merit review process in Subchapter I applies only to the initial license application. Additionally, a part of a sentence that was inadvertently left out at proposal was added to describe the license authorization for the disposal of federal facility waste.

Section 336.803, Receipt of License Applications

New §336.803 specifies the procedures the agency must follow to publish notice to receive applications for the siting, construction, and operation of a facility or facilities for disposal of LLRW. The rule implements HB 1567, §401.228 and §401.230. The statute requires that the commission shall submit a notice for publication in the *Texas Register* not later than January 1, 2004. Section 336.803 was changed in response to comment to provide that the notice relates to the applications for the compact waste disposal facility and a federal facility waste disposal facility, if applicable. At the commission agenda on December 17, 2003, §336.803(b) was added to include a requirement that the commission identify all applicants and provide Web address links to applications filed with the commission.

Section 336.805, Application Requirements

New §336.805 provides general requirements for submittal of applications. Subsection (a)(2) implements HB 1567, §401.229, and provides that the application must include a nonrefundable $500,000 application processing fee. Subsection (a)(3) implements HB 1567, §401.219, which requires an applicant to provide evidence relating to the reasonableness of any technique for managing LLRW to be practiced at the proposed land disposal facility or facilities. Section 336.805 was modified in response to a general comment to use the term “land disposal facility” instead of “disposal facility” to avoid the use of an undefined term. At the commission agenda on December 17, 2003, §336.805(4) was added to require complete copies of applications to be available on a publicly accessible Web site with a Web address link for application materials provided to the commission.

Section 336.807, Administrative Review

New §336.807 specifies the procedures the agency must follow in reviewing license applications and determining if those applications are administratively complete. This section implements HB 1567, §401.230 and §401.231. Section 336.807 was modified in response to a general comment to use the term "land disposal facility" instead of "disposal facility" to avoid the use of an undefined term. This section was also modified in response to a general comment to use the term "site" instead of the term "disposal facility site" to avoid the use of an undefined term.

Section 336.808, Ownership of Land and Buildings

New §336.808 requires that an application to receive, possess, and dispose of LLRW from others at the compact waste disposal facility may not be considered administratively complete unless the applicant has acquired the title to and any interest in land and buildings on which the facility or facilities are to be located. The requirement for ownership of the land and buildings in "fee simple" is specified in federal and state rules; 10 CFR §61.14 for example, requires ownership in fee by the federal or state government. Similar provisions in existing rules are located at §336.710(2) and §336.734(a). Subsection (a) was modified in response to comment to address situations where the ownership of land and buildings is already owned by the state or federal government and where the applicant will petition the commission to request the Texas attorney general to initiate condemnation proceedings. Subsection (a) was also modified to use the defined term "land disposal facility." Subsection (b) provides that if an applicant is unsuccessful in acquiring undivided ownership of the mineral estate in fee simple of the land on which the facility or facilities are proposed to be located, the applicant may, to the extent permissible under federal law, request an exemption of the requirement under §336.5. If the

requirement of ownership of the mineral estate in fee simple title is exempted under this subsection, the applicant may use an executed surface use agreement that restricts access to natural resources, including slant drilling and subsurface mining, to the extent necessary to prevent intrusion into the disposal facility site. This provides compatibility with 10 CFR §61.50(a)(4), which provides that the site may not include areas of known natural resources which if exploited would result in failure of the performance objectives. Subsection (b) was modified in response to comment from the NRC to use the term"natural resources" rather than mineral resources. The provision that the exemption must be obtained prior to determination of administrative completeness was removed from the proposed language because an applicant may include the application for exemption with the application for the license. Subsection (b) was modified in response to an NRC comment so that the applicant must have entered into a surface use agreement prior to the request for the exemption. This subsection was modified from the proposed language to require that an applicant requesting an exemption submit the exemption application at the same time as the license application. Subsection (b) was also modified to use the defined term "site." Subsection (c) provides that if an applicant cannot reach a surface use agreement and cannot otherwise obtain fee simple title to the mineral estate of the land on which the facility or facilities are proposed to be located, the applicant may petition the commission under 30 TAC §1.8, Initiation of Proceeding, to request the Texas attorney general to institute condemnation proceedings as provided under Texas Property Code, Chapter 21, to acquire fee simple interest in the mineral rights. These provisions implement HB 1567, §401.204. In response to comment, subsection (c) was modified to provide that the petitioner to the commission must demonstrate that the petitioner's license application was selected as the application with the highest technical merit so that there will not be multiple condemnation petition requests from various license applicants. Subsection (c) was also

modified to remove the requirement that the applicant acquire the mineral interests before administrative review because a condemnation proceeding could not be completed in the time frame established in HB 1567 for the administrative review of applications. Subsection (c) was also modified to require the petitioner to demonstrate it has made a good faith effort to acquire the mineral rights interest or to enter into a surface use agreement as provided in subsection (b) prior to filing its petition application.

Section 336.809, Notice of Declaration of Administrative Completeness

New §336.809 provides for notice of an administratively complete application in accordance with 30 TAC §39.702, Notice of Declaration of Administrative Completeness. At the commission agenda on December 17, 2003, §336.809 was modified to require the executive director to post Web site notice of applications declared administratively complete.

Section 336.811, Public Meeting

New §336.811 requires at least one public meeting in the county or counties where a compact waste disposal facility or federal facility waste disposal facility is proposed to be located. The purpose of the public meeting is to receive public comments on the administratively complete applications as provided in 30 TAC §55.253, Public Comment Processing, and implements HB 1567, §401.232(b).

Section 336.813, Evaluation of Applications

New §336.813 specifies the procedures the agency must follow in reviewing administratively complete license applications and evaluating each application according to the statutory criteria established by

Texas Health and Safety Code, §§401.233 - 401.236. The purpose of the evaluation is to compare the relative merit of the applications. This new section implements HB 1567, §401.232.

Section 336.815, Tier 1 Criteria

New §336.815 specifies the Tier 1 criteria for evaluation of administratively complete applications, which are listed in HB 1567, §401.233. HB 1567, §401.232 provides that the commission may also adopt criteria in addition to the statutory criteria specified in proposed §336.815, provided that the criteria are consistent with this section. Section 336.815 was modified in response to a general comment to use the term "land disposal facility" instead of "disposal facility" to avoid the use of an undefined term. This section was also modified in response to a general comment to use the term "site" instead of the term "disposal facility site" to avoid the use of an undefined term.

Section 336.817, Tier 2 Criteria

New §336.817 specifies the Tier 2 criteria for evaluation of administratively complete applications, which are listed in HB 1567, §401.234. HB 1567, §401.232 provides that the commission may also adopt criteria in addition to the statutory criteria specified in proposed §336.817, provided that the criteria are consistent with this section. Section 336.817 was modified in response to a general comment to use the term "land disposal facility" instead of "disposal facility" to avoid the use of an undefined term.

Section 336.819, Tier 3 Criteria

New §336.819 specifies the Tier 3 criteria for evaluation of administratively complete applications, which are listed in HB 1567, §401.235. HB 1567, §401.232 provides that the commission may also adopt criteria in addition to the statutory criteria specified in proposed §336.819, provided that the criteria are consistent with this section. Section 336.819 was modified in response to a general comment to use the term "land disposal facility" instead of "disposal facility" to avoid the use of an undefined term. This section was also modified in response to a general comment to use the term "site" instead of the term "disposal facility site" to avoid the use of an undefined term.

Section 336.821, Tier 4 Criteria

New §336.821 specifies the Tier 4 criteria for evaluation of administratively complete applications, which are listed in HB 1567, §401.236. HB 1567, §401.232 provides that the commission may also adopt criteria in addition to the statutory criteria specified in proposed §336.821, provided that the criteria are consistent with this section. Section 336.821 was modified in response to a general comment to use the term "land disposal facility" instead of "disposal facility" to avoid the use of an undefined term. This section was also modified in response to a general comment to use the term "site" instead of the term "disposal facility site" to avoid the use of an undefined term.

Section 336.823, Technical Review

New §336.823 specifies the procedures the agency must follow in reviewing the selected license application of highest comparative merit, and determining if that application is technically complete. This new section implements HB 1567, §401.237. The statute requires that the technical review shall be completed and a draft license prepared not later than the 15th month after the month in which the

technical review begins. The executive director shall give priority to the review of the selected application over all other radioactive materials licensing and registration matters pending before the commission. At the commission agenda on December 17, 2003, §336.823 was modified to require the executive director to post Web site notice of the application with the highest comparative merit selected for technical review.

Section 336.825, Delegation

New §336.825 provides that the commission delegates to the executive director the authority to review and evaluate applications for radioactive materials licenses under this subchapter and to select the one application under §336.813 for further technical review. A decision by the executive director under §336.813 is not appealable to the commission until the commission makes a final decision on the selected license application.

NEW SUBCHAPTER J: FEDERAL FACILITY WASTE DISPOSAL FACILITY

Section 336.901, Applicability

New §336.901 provides a statement of general applicability for Subchapter J. This new subchapter provides additional licensing requirements to the requirements of Subchapter H and other rules of this title for the disposal of federal facility waste at a separate land disposal facility at the site. This new subchapter implements HB 1567, §401.216. In response to comment, §336.901 was modified to provide that the federal facility waste disposal facility is a separate land disposal facility on the same site as the compact waste disposal facility.

Section 336.903, Receipt of Waste

New §336.903 provides requirements for the receipt of federal facility waste. Subsection (a) requires that the compact waste disposal facility license holder may not accept federal facility waste for disposal unless the compact waste disposal facility license holder is licensed for its disposal under Subchapter J and other commission rules. Subsection (b) requires that a licensee may not accept federal facility waste at a federal facility waste disposal facility until the licensee begins accepting compact waste at the compact waste disposal facility. This provision implements HB 1567, §401.216(e).

Section 336.905, Volume Limitation

New §336.905 provides statutorily imposed limits on the total volume of federal facility waste which may be disposed of at a federal facility waste disposal facility. Subsection (a) provides that for the first five years after a license is issued under this subchapter, the license shall limit the overall capacity of the federal facility waste disposal facility to not more than 3,000,000 cubic yards. Of that amount, the total volume of LLRW accepted at the federal facility waste disposal facility that must be disposed of in reinforced concrete containers and within a reinforced concrete barrier, shall be limited to not more than 300,000 cubic yards. Subsection (b) provides that after five years from the date of licensing of the disposal of federal facility waste under this subchapter, the capacity of the federal facility waste disposal facility may be increased by 3,000,000 cubic yards for a total capacity of 6,000,000 cubic yards. An application for license amendment under 30 TAC §305.62 will be required to increase the total capacity. Also, there must be a determination by the commission that increasing the capacity of the federal facility waste disposal facility would not pose a significant risk to human health, public safety,

or the environment. The commission changed the written numbers to numerical values in §336.905(a) and (b) in response to comment. These provisions implement HB 1567, §401.216(b) and (c).

Section 336.907, Prohibition of Commingling of Waste

New §336.907 prohibits the commingling of compact waste and federal facility waste. If licensed to dispose of federal facility waste, the licensee shall maintain separate waste transport, waste acceptance, waste processing, and waste disposal of compact waste and federal facility waste. This provision implements HB 1567, §401.216(d).

Section 336.909, Additional Responsibilities

New §336.909 implements additional statutory requirements. New §336.909(1), which implements HB 1567, §401.205(b)(1), requires the licensee to arrange for and pay the costs of management, control, stabilization, and disposal of federal facility waste and the decommissioning of the licensed federal facility waste disposal activity. New §336.909(2) has been amended in response to comment to require the licensee to submit to the commission a written agreement by the United States secretary of energy, stating that the federal government will assume all title and interest in land and buildings acquired for the disposal of federal facility waste, together with requisite rights of access to the land and buildings. New §336.909(3), which implements HB 1567, §401.205(b)(3), requires the licensee to formally acknowledge conveyance of the right, title, and interest in LLRW to the federal government prior to termination of the license. New §336.909(4), which implements HB 1567, §401.210, requires the licensee to transfer LLRW and mixed waste and land and buildings to the federal government without cost to the government, other than the government's administrative and legal costs incurred in making

the transfer. New §336.909(5), which implements HB 1567 §401.211(a) - (c), requires the licensee to indemnify the state, and its officers and agents, for any liability imposed on the state under state or federal law, for damages, removal or remedial action with respect to the land, the facility, or the waste accepted, stored, or disposed of, because the transfer does not relieve a license holder of liability for any act or omission before or following the transfer. An existing commission requirement in §336.734 provides that disposal of LLRW received from other persons may be permitted only on land owned in fee by the state or federal government. Ordinarily, the transfer of ownership from a license applicant to the state or federal government occurs at license issuance. However, commission rules in §336.5 provide for an exemption process. This exemption process is available to applicants seeking to transfer ownership of a federal facility waste disposal facility at decommissioning. In response to comment from the NRC, §336.909(3) was modified to provide that before termination of the license, the licensee must formally convey to the federal government the right, title, and interest in federal facility waste located at the federal facility waste disposal facility.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rulemaking action in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the action is not subject to §2001.0225 because it does not meet the definition of a "major environmental rule" as defined in the statute. "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 amendments to Chapter 336 are not

anticipated to 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, because there are no significant requirements added to radioactive material land disposal facilities. The rulemaking action implements legislative requirements in HB 1567, including the repeal of the restriction that an LLRW disposal facility may only be issued to a public entity specifically authorized by law for LLRW disposal. The rulemaking action implements procedural requirements for license application submission, review, and selection. The rulemaking action also implements federal requirements to maintain consistency with NRC requirements, and updates existing rules by changing references from the Texas Natural Resource Conservation Commission to the Texas Commission on Environmental Quality. There are no existing commercial LLRW land disposal facilities subject to any of these rule changes.

Furthermore, the rulemaking action does not meet any of the four applicability requirements listed in §2001.0225(a). Section 2001.0225 only applies to a major environmental rule, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law. The rulemaking action does not exceed a standard set by federal law, an express requirement of state law, a requirement of a delegation agreement, nor does it adopt a rule solely under the general powers of the agency.

Texas Health and Safety Code, Chapter 401, authorizes the commission to regulate the disposal of most radioactive material in Texas. Sections 401.051, 401.103, 401.104, and 401.412 authorize the commission to adopt rules for the control of sources of radiation and the licensing of the disposal of radioactive materials. In addition, the State of Texas is an "Agreement State" authorized by the NRC to administer a radiation control program under the Atomic Energy Act. The amended rules do not exceed the standards set by federal law. The rulemaking action implements changes in federal requirements for skin dose limits and deliberate misconduct.

The amended rules do not exceed an express requirement of state law. Texas Health and Safety Code, Chapter 401, establishes general requirements for the licensing and disposal of radioactive materials. The purpose of the rulemaking action is to implement statutory requirements consistent with recent amendments to Texas Health and Safety Code, Chapter 401, as provided in HB 1567.

The amended rules do not exceed a requirement of a delegation agreement or contract between the state and an agency of the federal government. The State of Texas has been designated as an "Agreement State" by the NRC under the authority of the Atomic Energy Act. The Atomic Energy Act requires that the NRC find that the state radiation control program is compatible with the NRC requirements for the regulation of radioactive materials and is adequate to protect health and safety. Under the *Agreement Between the United States Nuclear Regulatory Commission and the State of Texas for Discontinuance of Certain Commission Regulatory Authority and Responsibility Within the State Pursuant to Section 274 of the Atomic Energy Act of 1954, as Amended*, NRC requirements must be implemented to maintain a compatible state program for protection against hazards of radiation. The

amended rules do not exceed the NRC requirements nor exceed the requirements for retaining status as an "Agreement State."

These rules are adopted under specific authority of Texas Health and Safety Code, Chapter 401. Sections 401.051, 401.103, 401.104, and 401.412 authorize the commission to adopt rules for the control of sources of radiation and the licensing of the disposal of radioactive materials.

TAKINGS IMPACT ASSESSMENT

The commission evaluated the rulemaking action and performed an assessment of whether Texas Government Code, Chapter 2007, is applicable. The commission's preliminary assessment indicates that Texas Government Code, Chapter 2007, does not apply to these amended rules because the implementation of the NRC rulemakings on skin dose limits and deliberate misconduct is an action that is reasonably taken to fulfill an obligation mandated by federal law, which is exempt under Texas Government Code, §2007.003(b)(4). The State of Texas has received authorization as an "Agreement State" from the NRC to administer a radiation control program under the Atomic Energy Act. The Atomic Energy Act requires the NRC to find that the state's program is compatible with NRC requirements for the regulation of radioactive materials and is adequate to protect health and safety. The rulemaking action will provide compatibility with federal regulations relating to skin dose limits and deliberate misconduct.

Nevertheless, the commission further evaluated these amended rules and performed an assessment of whether these amended rules constitute a taking under Texas Government Code, Chapter 2007. The

purpose of this rulemaking action is to implement changes to the Texas Radiation Control Act required by HB 1567, 78th Legislature, 2003, for the regulation and licensing of the disposal of LLRW, implement federal requirements relating to skin dose limits and deliberate misconduct, and make non-substantive amendments to commission rules, such as amendments to reflect the commission's name change. The rulemaking action would substantially advance this purpose by amending existing rules to conform with new statutory requirements, by implementing new federal requirements for skin dose limits and deliberate misconduct, and by reflecting the new name of the agency.

Promulgation and enforcement of these amended rules would be neither a statutory nor a constitutional taking of private real property. The amended rules do not affect a landowner's rights in private real property because this rulemaking action does not burden (constitutionally), nor restrict or limit, the owner's right to property and reduce its value by 25% or more beyond which would otherwise exist in the absence of the regulations. The amended rules primarily implement changes to existing rules to reflect statutory requirements in HB 1567. In addition, the amended rules reduce burdens on licensing by allowing private entities to submit applications for licensing of an LLRW land disposal facility.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed this rulemaking action and determined that the amended rules are neither identified in, nor will they affect, any action/authorization identified in Coastal Coordination Act Implementation Rules in 31 TAC §505.11, relating to Actions and Rules Subject to the Coastal Management Program. Therefore, the rulemaking action is not subject to the Texas Coastal Management Program.

PUBLIC COMMENT

Written and/or oral comments were received from the Advocates for Responsible Disposal in Texas (ARDT); the American Electric Power (AEP); the League of Women Voters of Dallas (LWV-Dallas); the League of Women Voters of Texas (LWV-Texas); the Nuclear Regulatory Commission (NRC); the South Texas Project Nuclear Operating Company (STP); the Texas Department of Insurance (TDI); the Texas Radiation Advisory Board (TRAB); Texas Radiation Online (TRO); State Representative Lon Burnam representing the Texas Radioactive-Waste Defense Fund (TRWDF); TXU Energy (TXU); US Ecology, Incorporated (US Ecology); Hance Scarborough Wright Woodward & Weisbart, L.L.P., and BakerBotts, L.L.P., on behalf of Waste Control Specialists (WCS); and 237 individuals. One individual endorsed the recommendations submitted by the TRWDF, and TRO agreed with the concerns voiced by the Sierra Club. The TRWDF includes the Lone Star Chapter of the Sierra Club, Public Citizen, Sustainable Energy & Economic Development, the LWV-Texas, and the Nuclear Information and Resource Service.

RESPONSE TO COMMENTS

ARDT, AEP, TRAB, and TXU generally supported the proposed rules. One individual stated opposition to the weak regulations as currently developed. LWV-Dallas, LWV-Texas, TRO, TRWDF, and 234 individuals urged the commission to establish regulations that are second to none or rules that are more stringent than the proposed rules. ARDT, AEP, LWV-Dallas, LWV-Texas, NRC, STP, TDI, TRAB, TRO, US Ecology, TRWDF, WCS, TXU, and 237 individuals raised issues or suggested changes to the rules.

General Comments

One individual expressed a belief that there is no such thing as low-level nuclear waste and that each individual state should keep all of any type of garbage within its own state.

LLRW is a statutorily defined classification of radioactive waste. The definition of "Low-level radioactive waste" is provided in Texas Health and Safety Code, §401.004. The Texas definition is consistent with the federal definition of LLRW as a matter of compatibility. Under federal law, Texas is responsible for managing the LLRW generated within its borders. The commission made no change in response to this comment.

One individual expressed concern about the nuclear waste dump in West Texas and the storing of waste. The individual was adamant that Texas does not become a national dumping ground.

Texas entered into an agreement in 1993 designated as the Texas Low-Level Radioactive Waste Disposal Compact with the States of Maine and Vermont. Under the terms of the Texas Low-Level Radioactive Waste Disposal Compact, Texas is the host state in which the disposal facility is to be located. The commission made no changes in response to this comment.

Two individuals stated that the commission has failed with preserving good air quality, and cannot fail to protect against nuclear waste. Another individual asked the commission to take the threats of radiation seriously because it cannot be seen, it is cancer-causing, and it is a danger to the health of humans and other animals. One individual was alarmed to read about the proposed rules for an LLRW

disposal facility. One individual was very upset that fellow Texans may be considering exposing their neighbors to the dangers of radioactive waste. One individual asked if the commission remembered Love Canal, because this is a prime example of what happens if we do not take the time and effort to do the job right the first time and protect our children and the environment. Two individuals were very concerned about the proposed rules for an LLRW disposal facility because of the extremely long-term danger posed by radioactive waste. One individual stated that we as a society cannot keep on disregarding our environment, and that we must honestly assess whether our actions, with regard to our environment, are necessary and prudent. The individual stated that radioactive materials are a proven danger and the utmost care should be taken with the handling of these materials. One individual expressed concern about the rape and pillage of our established environmental rules, guidelines, and laws. The individual stated that Texans have already absorbed enormous costs, both financial and environmental, related to being a border state as well as providing a major trucking corridor to the north.

The commission takes seriously its regulatory responsibilities over the disposal of LLRW, and is committed to the final adoption of disposal rules that are protective of public health and safety, and the environment. In response to these comments, §336.738 and §37.9035(3) have been modified to include risk posed to the environment in determination of appropriate financial assurance for unplanned events at a site after decommissioning and closure.

One individual was very concerned about the dangers posed by poor oversight of the storage of nuclear waste in Texas. One individual was adamant about the establishment and enforcement of tough standards for safety in the storage of this nuclear waste.

Specific rules and compliance oversight apply to the safe storage of radioactive waste in Texas. The Texas Department of Health, Bureau of Radiation Control, has jurisdiction over the storage of radioactive materials and radioactive waste in Texas, except in cases where the commission has jurisdiction over disposal activities at the site. The commission made no changes in response to these comments.

General Comments - Administrative Issues

TRAB stated that the first paragraph in §336.709 and §336.805 appears to be missing an "(a)."

1 TAC §91.33(a)(1)(B), Rule Structure and Terminology, states that the implied "(a)" will be used in the rule language when there is no other subsection. The commission made no change in response to this comment.

TRAB commented on consistency in use of numerical values in §336.905(a) and (b).

The commission changed the written numbers to numerical values in §336.905(a) and (b) in response to this comment.

General Comments - Legislative

One individual expressed concern that the implementation of HB 1567 does not pay attention to environmental justice as a problem in site location and alternative disposal methods such as "assured isolation." One individual was shocked and amazed concerning HB 1567 and the proposed implementation rules. One individual stated that the legislature passed a bill that does not protect the public interest. One individual expressed rage that HB 1567 was passed and asked what our representatives were thinking when this was done? One individual was very much against HB 1567 because there is no positive value in having Texas be a nuclear dump, and was very disturbed that it passed. One individual stated that when a country produces nuclear waste that it has refused to find a way to neutralize, then it is the federal government's responsibility to store it above ground, in high level security, forever monitored, and guarded. Elected officials must stop looking for easy ways to deal with difficult problems and accept responsibility for dealing with them responsibly. One individual asked that with a bill like HB 1567 containing so many loopholes, is it really safe? The individual requested that the commission fight for the citizens, because beyond the financial or political aspects, there is the human aspect. One individual stated that because the legislature has authorized private, for profit corporations to operate waste deposit sites, the public is exposed to an economic risk which rivals in seriousness the health and safety risk. One individual stated that the Texas Legislature passed HB 1567 in order to please its corporate contributors, and that the media was asleep on the switch, deliberately or otherwise. The individual also stated that Texans, voters, and innocents have been harmed. One individual did not want taxes funding a future state cleanup of a get-rich-quick scheme of bribes to politicians to allow the dump as well as a "get-rich-quick and run" scheme for the billionaire

who owns it. One individual also stated that they would never vote for any congressman who approves the legal poisoning of Texas.

House Bill 1567 provides specific direction to the commission for its implementation. Specific criteria for license application review, statutory time lines for milestones, and specific siting and design features were included in HB 1567. The conference committee report for HB 1567 was passed by the House on May 23, 2003 by a vote of 92 Yeas, 42 Nays, 3 present but not voting and by the Senate on May 26, 2003 by a vote of 24 Yeas and 7 Nays. On June 20, 2003, Governor Perry signed HB 1567 into law. The commission made no changes in response to these comments.

Fiscal Note

TRAB questioned the basis for a 3.5 multiplier for contractor fringe and indirect costs.

Standard state government rates for professional services of scientists and engineers on engineering service contracts reflect a multiplier of 3.0 to 4.0 times the unburdened salary rates for state employees in comparable positions; therefore, a multiplier of 3.5 was used to estimate professional services rates. Fully burdened costs for state employees are near 1.6%. The higher multipliers estimated for professional services from consulting firms are due to a combination of their higher salaries and higher overhead costs. The commission made no change to the fiscal note in response to this comment.

Need for a Disposal Facility

TRAB stated that its duty is to protect Texas residents; however, the process must be feasible because Texas needs a disposal site. ARDT commented that on-site storage is not a long-term solution to LLRW management. ARDT commented that without a Texas LLRW disposal facility various Texas generators must choose from a few undesirable alternatives for LLRW disposal. One individual expressed an understanding of the need for hazardous waste storage because our nation produces tons and tons of the stuff. One individual was not opposed to the idea of an LLRW site given the greater attention to the potential environmental consequences. One individual strongly supported the development of suitable nuclear waste disposal sites, both in Texas and across the United States, and stated that the continued opposition of uninformed organizations like the Sierra Club have seriously delayed the resolution of this critical national need.

Public testimony was received on the need for an LLRW disposal facility in Texas by both House and Senate committees during the 2003 Regular Session of the Texas Legislature. The passage of HB 1567 includes a statutory milestone for the commission to begin accepting applications for an LLRW disposal license by June 2004, thus accelerating the initial rulemaking process. HB 1567 also includes milestones to be reached throughout the licensing process in order to address the need for disposal capacity in a timely manner. The commission made no change in response to these comments.

ARDT commented that an LLRW disposal facility is needed in Texas in order to comply with the federal Low-Level Radioactive Waste Policy Act of 1980.

Under the federal Low-Level Radioactive Waste Policy Act and amendments, Texas is responsible for managing the LLRW generated within its borders. The commission made no changes in response to this comment.

One individual stated that radioactive waste disposal in Texas was a great idea; however, the facilities should be in Houston rather than West Texas.

HB 1567 includes specific siting criteria which would exclude the Houston area from being considered for the potential disposal of LLRW. According to Texas Health and Safety Code, §401.217(2), the commission could not license a facility in the Houston area because the average annual rainfall is greater than 20 inches. The commission made no changes in response to this comment.

Fee rulemaking

ARDT, TXU, and STP commented that once the waste disposal facility is opened, an appropriate fee structure must be in place that addresses the needs of the generators and provides for a reasonable rate of return for the operator. ARDT commented that stakeholder input should be obtained before future rulemaking on the fee structure begins.

Statutory provisions under Texas Health and Safety Code, §401.245, grant the commission authority to adopt fees for compact waste disposal. These fees will be adopted in a later rulemaking closer to the time in which the disposal facility is scheduled to open. The commission

acknowledges the importance of stakeholder input prior to proposing rules on a fee structure. The commission made no change in response to this comment.

Access to information - Application and Staff Analysis

TRWDF stated that the public's ability to understand and participate in licensing proceedings turns on meaningful access to the details of the license and renewal and amendment applications and access to the commission's staff analyses that support the agency's decisions. All applications for the initial license and for subsequent amendments and renewals of the license, as well as the commission staff analyses of those applications, should be made available on the Internet in a Web-browser-accessible format.

LWV-Dallas and LWV-Texas stated that the complete permit application and supporting materials should be posted on the commission's Web site and by a method other than the Web.

211 individuals stated that the public should have access to all documentation associated with the licensing, building, and operation of a disposal facility.

The commission is committed to ensuring meaningful public participation in its decision-making processes. The commission strives to provide clear, concise, and accurate information related to all applicable licensing and certification procedures via written materials and the official Web site. In response to these comments, new §336.716(j) has been added to require that all records maintained by the licensee in accordance with §336.740 are public information, unless otherwise

exempt from public disclosure. Section 39.707 requires that, upon completion of technical review and preparation of the draft license, whether for a new license, renewal, or major amendment, the draft license be available for review on the commission's Web site and the draft license and application materials be available for review at the commission's offices and in a public place in the county or counties in which the proposed facility site is located. At the commission agenda on December 17, 2003, §336.805(4) was added to require complete copies of applications to be available on a publicly accessible Web site with a Web address link for application materials provided to the commission The application and supporting materials will continue to be made available both at the commission offices and in a public place in the county or counties in which the proposed site is located.

Access to information - Licensee Records

TRWDF stated that by allowing a non-public entity to operate the facility, facility-related records will be shielded from public view. The proposed regulations should be modified to specify, as a license-application requisite, the license applicant's commitment to public information access, generally paralleling that available from public entities under the Texas Public Information Act, to facility specific information.

211 individuals stated that the public should have access to all documentation associated with the licensing, building, and operation of a disposal facility.

208 individuals stated that the facility was originally to be state-owned and operated, and expressed a belief that the principles of open government should still apply to a site with such serious implications for the state.

In HB 1567, the Texas Legislature repealed Texas Health and Safety Code, §401.203, which provided that an LLRW disposal license may only be issued to a public entity. The legislature intended to allow non-public entities to operate an LLRW disposal facility. While it is possible that not all of a non-public entity's business records would be considered public information under the Texas Public Information Act, the commission disagrees that key facility records of a non-public entity will be inaccessible to the public.

The commission's rules require that a variety of information be maintained for or submitted to the commission. Any records required to be maintained for the commission and any records submitted to the commission, not otherwise exempt from disclosure would be considered public information. In response to these comments, new §336.716(j) has been added to require that all records maintained by the licensee in accordance with §336.740 are public information, unless otherwise exempt from public disclosure. Specifically, Texas Government Code, §552.002, provides that "public information" means information that is collected, assembled, or maintained under a law or ordinance or in connection with the transaction of official business of a governmental body or for a governmental body, and the governmental body owns the information or has a right of access to it.

Public Notice/Participation - Proposed Rules

One individual commented that most people in the state were unaware of the public comment period for this policy. The individual only learned of the issue before the end of the comment period and was challenged to respond both in terms of time and available information. One individual stated that given the impact of these rules, there needs to be much more public review and discussion.

Texas Government Code, §2001.023, relating to notice of a proposed rule, provides that a state agency shall give at least a 30-day notice of its intention to adopt a rule before it adopts the rule, and that the notice of the proposed rule be published in the *Texas Register*. The commission complied with the requirements in the August 22, 2003 issue of the *Texas Register* (28 TexReg 6735). Moreover, the commission published notice of the proposed rules in several newspapers throughout the state: the *Amarillo Globe-News* on August 14, 2003, the *Austin American-Statesman* on August 11, 2003, the *Fort Worth Star-Telegram* on August 10, 2003, the *Houston Chronicle* on August 11, 2003, the *Lubbock Avalanche-Journal* on August 10, 2003, and the *Odessa American* on August 12, 2003.

Public Notice/Participation - Adequacy of Public Participation In General

TRO stated that the opportunity for public comment is, in some cases, in conflict with the federal rules in 10 CFR Part 2, and is too short, particularly regarding the technical review comment period of ten days.

TRWDF stated that the current rules only allow the public 30 days in which to comment on the draft license and on license amendments and renewals. This time period is so short that it deprives the public of a meaningful role in decision-making, unless the public has forewarning. TRWDF stated that all administratively complete applications for licenses, renewals, and amendments should be noticed by newspaper publication.

TRWDF stated that for nearly all other air, water, solid waste, and hazardous waste permits and permit amendments, members of the public are given newspaper notice and an opportunity to comment on preliminary decisions. The proposed rules should be modified in §39.703 to provide for a notice and comment process that mirrors the process for other applications.

LWV-Texas and LWV-Dallas stated that there should be the opportunity for any resident of Texas to request to be on a mailing list to receive notice so that the opportunity to respond is greater than the ten days after mailing currently listed in the rules.

LWV-Texas and LWV-Dallas stated that since mixed waste will be accepted at the LLRW site, the permitting process should offer the same level of public involvement as the rules for hazardous waste disposal sites.

211 individuals stated that the rules must establish a large and vigorous role for public participation in this critical process, and that if Texas is going to open its borders to vast amounts of dangerous materials, there should be a citizen oversight committee. One individual urged the commission to

include citizens of West Texas, who will have to live with what the commission does, in the whole process. One individual stated that public scrutiny is vital and that this issue cannot be rushed through without risking the health of this and future generations of Texans.

LWV-Texas and LWV-Dallas supported the existence of a citizen oversight committee and stated that the Keystone education project is a good model (for community involvement in the permitting process). LWV-Texas and LWV-Dallas expressed a belief that the rules for licensing an LLRW facility should include, at a minimum, the level and types of public participation found in rules governing hazardous waste disposal site permits and air permits. LWV-Texas and LWV-Dallas implored the commission to promote public participation in decision-making throughout the process of permitting and subsequent monitoring of any LLRW facility established in Texas. LWV-Texas and LWV-Dallas requested that the commission allow citizens to voice their concerns at the beginning of the permit application process.

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission proposed no changes to §39.403 and §39.405, relating to Applicability and General Notice Provisions, respectively. Nevertheless, the commission responds as follows. The Texas Radiation Control Act provides specific time requirements for application processing and specific public notice requirements. The commission rules were written in accordance with those statutory requirements.

Section 336.809 provides notice of an administratively complete application. The executive director shall conduct at least one public meeting in the county or counties where a facility is proposed to be located to receive public comments on the administratively complete application(s). The applicant shall publish notice of the public meeting once each week during the three weeks preceding the public meeting. Notice of the meeting shall also be mailed to certain specified entities and persons. The notice shall include, among other things, the location and availability of the application.

Upon completion of the technical review of an application for a new license, major amendment, or renewal of a license issued under Chapter 336, or for a minor amendment issued under Chapter 336, Subchapter H, notice shall be mailed and published in the *Texas Register* and in the newspaper of largest circulation in the county in which the facility is located or proposed to be located. Section 39.707 requires that the published notice specify the requirements for requesting a contested case hearing and include that the draft license be available for review on the commission's Web site and the draft license and application materials be available for review at the commission offices and in a public place in the county or counties in which the proposed site is located. The deadline to file public comment, protests, or hearing requests is 30 days after publication. Section 39.707(c) has been modified to clarify that HB 1567 requires *Texas Register* publication of the initial notice of draft license and opportunity to comment in addition to *Texas Register* publication of amendments to an existing license.

Section 39.703(b) provides that for any application for a minor amendment to a license issued under Chapter 336, Subchapter F or Subchapter G, notice shall be mailed. The deadline to file public comment, protests, or hearing requests is ten days after mailing. The ten-day notice requirement does not apply in the case of the license application for an LLRW disposal facility under Chapter 336, Subchapter H.

Section 39.407 provides that the commission's Office of the Chief Clerk shall maintain a mailing list of persons requesting notice. Thus, once on the mailing list, persons other than adjacent property owners can receive all of the mailed notices relating to an application.

The rules regarding the processing of public comments for LLRW applications are subject to 30 TAC Chapter 55, Subchapter G, including responding to public comment. The commission made no change in response to these comments.

Public Notice/Participation - License Transfer

TRWDF stated that the transfer of a radioactive waste disposal license should in all cases require full public notice and participation.

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission proposed no changes to §39.403 and §39.15, relating to Applicability and Public Notice Not Required for Certain Types of Applications, respectively.

Nevertheless, the commission responds as follows. Texas Health and Safety Code, §401.119, provides that a license issued by the Texas Department of Health or commission may be assigned only to a person qualified under rules of the issuing agency. Section 305.62(c)(1) provides that changes in the operator of the facility and transfers of the license to the custodial agency are major amendments.

Section 39.703 provides that, upon completion of technical review of a major amendment, notice shall be mailed and published. The comment period is 30 days. Section 39.707 requires that the published notice specify the requirements for requesting a contested case hearing and include that the draft license be available for review on the commission's Web site, and the draft license and application materials be available for review at the commission's offices and in a public place in the county or counties in which the proposed site is located.

Section 336.721 provides that following closure and the period of post-closure observation and maintenance, the licensee may apply for a major amendment to transfer the license to the custodial agency so long as certain findings are made by the commission. Before a licensee may close a facility, it must file a license termination plan with the commission. Section 39.713 provides that, upon the receipt of a license termination plan or decommissioning plan from the licensee, the commission shall notify and solicit comments from local and state governments in the vicinity of the site; the United States Environmental Protection Agency (EPA) for cases where the licensee proposes to release a site under §336.609; and publish a notice in the *Texas Register* and in a forum, such as local newspapers, letters to state or local organizations, or other appropriate

forum, that is readily accessible to individuals in the vicinity of the site; and solicit comments from affected parties.

The commission made no changes in response to these comments.

Public Notice/Participation - Minor Amendment

TRWDF stated that the proposed rule excludes minor amendments from published notice and the definition of minor is ambiguous. The rules should be amended to either: 1) eliminate the distinction between minor and non-minor amendments; or 2) specify a small universe of changes that may be characterized as minor.

TRWDF stated that if the minor amendment category of license amendments is retained, then a minimum of 45 days in which to comment on preliminary decisions or minor amendment applications should be allowed.

Changes to the minor amendment notice provisions were not proposed as part of this rulemaking action. The rules remain as follows: 1) for a minor amendment issued under Chapter 336, Subchapter H, notice shall be mailed and published and the deadline to file public comment, protests, or hearing requests is 30 days after publication; and 2) for a minor amendment to a license issued under Chapter 336, Subchapter F or Subchapter G, notice shall be mailed and the deadline to file public comment, protests, or hearing requests is ten days after mailing. The commission made no changes in response to these comments.

Public Notice/Participation - Exemptions

TRWDF stated that preliminary decisions on exemptions should be publicly noticed and subject to a 45-day comment period.

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission proposed no changes to §336.5, relating to Exemptions. Nevertheless, the commission responds that applications for exemptions are subject to 30 TAC Chapter 90, which provides that the applicant publish notice at least once in a newspaper of general circulation in the county in which the facility is located or proposed to be located and that there is a 30-day comment period. The commission made no changes in response to this comment.

Public Notice/Participation - Newspaper Notice

LWV-Dallas stated that the proposed rules in Chapter 39 which only require notice in the county in which the facility would be located, are inadequate. LWV-Dallas and LWV-Texas stated that rules should include the requirement that it is the responsibility of the applicant to provide notice statewide. TRWDF stated that all notices should be published in major newspapers throughout the state. The notices should be published in newspapers in Dallas, Houston, San Antonio, Austin, El Paso, Lubbock, Midland-Odessa, and Amarillo. Notices should also be required in New Mexico, Colorado, and Oklahoma newspapers to the extent the laws of those states would require newspaper notice of an in-state hazardous waste facility located along the Texas border.

The rules contain no changes to the location of newspapers for published notice. The publication requirement in §39.707(b) continues to be the newspaper of largest general circulation in the county in which the facility is located or proposed to be located. This requirement is consistent with Texas Health and Safety Code, §401.114, and Texas Government Code, §313. The commission made no change in response to these comments.

Consistent Use of Terminology

WCS commented that defined terms have not been used in a clear and consistent manner, and that undefined terms were used where a defined term would be more appropriate.

The commission has made changes from the proposed rules to use defined terms. The changes replace the undefined terms "facility," "disposal facility," and "disposal facility site" with the defined terms "Land disposal facility," "Disposal site," and "Site" as appropriate. A new definition, "Site," is added to §336.702 to provide clarity and consistency.

WCS commented that §336.705 should be modified to provide that "An application for a license to receive, possess, and dispose of LLRW from other persons by near-surface land disposal shall consist of, but is not limited to, the information specified in Chapter 305, Consolidated Permits, *as such information pertains to the disposal facility site.*" WCS commented that this modification will provide clarity and address potential ambiguities about the use of the terms "facility" and "site" that are used in Chapter 305 of the commission rules.

The commission disagrees with this comment. The commission rules in Chapter 336, Subchapter H, are based on the NRC rules in 10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste. Both the commission and the NRC rules consider and regulate the processing of waste that is disposed in the near-surface land disposal facility. Neither the commission's licensing of disposal nor the commission's authority to regulate disposal are confined to a specific geographic location, such as within the boundaries of the disposal facility site. The commission's interpretation of the extent of its authority to regulate the processing of waste for disposal is consistent with the commission's historical practice in reviewing licenses for the disposal of LLRW from other persons, the commission's rules in §336.211(d) and §336.701(a), and the MOU with the Texas Department of Health. A new definition "Site" is added to §336.702 to provide clarity and consistency.

Compact

TRAB requested the status of Maine in the Compact, and questioned whether Maine was still liable to pay the Compact fee to Texas even though the state is dropping out of the Compact?

The State of Maine passed emergency legislation in April 2002 to withdraw from the Texas Low-Level Radioactive Waste Disposal Compact. The withdrawal of Maine is scheduled to take effect in April 2004. Texas Health and Safety Code, Chapter 403, §7.05, states that "A party state, other than the host state, may withdraw from the compact by repealing the enactment of this compact, but this withdrawal shall not become effective until two years after the effective date of the repealing legislation. During this two-year period the party state will continue to have access

to the facility. The withdrawing party shall remain liable for any payments under §4.05(5) and (6) of Article IV that were due during the two-year period and shall not be entitled to any refund of payments previously made."

ARDT, TXU, and STP commented that HB 1567 calls for Maine and Vermont to make initial payments to the State of Texas by November 1, 2003.

HB 1567, §401.250, requires each non-host party state to pay Texas the initial compact payment of $12.5 million no later than November 1, 2003. The Texas attorney general sent letters to the governors of Maine and Vermont on September 10, 2003 requesting that the initial payment of $12.5 million from each be paid to Texas by November 1, 2003. A payment of $2.5 million has been received from the State of Vermont. Texas Health and Safety Code, Chapter 403, §5.01, states that "Each party state, except the host state, shall contribute a total of $25 million to the host state. Payments shall be deposited in the host state treasury to the credit of the low-level waste fund in the following manner except as otherwise provided. Not later than the 60th day after the date of congressional ratification of this compact, each non-host party state shall pay to the host state $12.5 million. Not later than the 60th day after the date of the opening of the compact facility, each non-host party state shall pay to the host state an additional $12.5 million."

ARDT, TXU, and STP commented that the Texas Low-Level Radioactive Waste Disposal Compact Commission should be established as soon as possible. AEP stated that the Compact Commission needs to be established as soon as possible in order to fully implement HB 1567.

Texas Health and Safety Code, Chapter 403, §3.01, states that "There is hereby established the Texas Low-Level Radioactive Waste Disposal Compact Commission. The commission shall consist of one voting member from each party state except that the host state shall be entitled to six voting members. Commission members shall be appointed by the party state governors, as provided by the laws of each party state." Although Maine and Vermont have both appointed one commissioner to the Texas Compact, Texas has never appointed commissioners to the Texas Compact.

One individual expressed concern that the rules implementing HB 1567 may be flawed in several areas relating to the Compact, particularly with regard to monitoring and cross-contamination of combined Compact and non-Compact facilities and their interaction with related industries. The individual's principal concern was with the potential problem that HB 1567 and its implementation may jeopardize Texas' participation in the Compact by facilitating the creation of a disposal facility not governed by the Compact commissioners. According to the commenter, this condition violates Article VI, §6.02 of the Compact, which clearly prohibits management of "radioactive waste" in Texas outside the jurisdiction of the Compact. The commenter also asserted that HB 1567 violates the doctrine of federal preemption based on the supremacy clause of the United States Constitution and may result in recission of the Compact. This problem has been discussed in a document previously issued by the commission's Environmental Law Division (*Legal Considerations Related to Low-Level Radioactive Waste Management Techniques in Texas*, August 2002, pp. 109-110).

As explained in the proposal preamble, the primary purpose of the rules is to implement HB 1567 and its amendments to Texas Health and Safety Code, Chapter 401. The bill provides for the licensing of LLRW disposal and established procedures for the commission to accept and evaluate license applications from private entities to dispose of LLRW. The commission's rulemaking is not intended to address matters that are not within the jurisdiction of the commission, such as matters under the jurisdiction of the Texas Low-Level Radioactive Waste Disposal Compact Commission. The commission's jurisdiction to license the disposal of LLRW is derived from Texas Health and Safety Code, Chapter 401. The commission does not exercise jurisdiction under Texas Health and Safety Code, Chapter 403, relating to the Texas Low-Level Radioactive Waste Disposal Compact. Whether the provisions in HB 1567 that would authorize the disposal of federal facility waste conflict with or are preempted by the terms of the Texas Compact is not a matter within the jurisdiction of the commission.

Land ownership

TRAB asked that the commission confirm that an exemption must be applied for from Chapter 336, Subchapter H, regarding fee simple title.

Ownership by the state in fee simple title of the land and buildings of the compact waste disposal facility is required at license issuance. If requesting authorization to license the disposal of federal facility waste at a federal facility waste disposal facility, an applicant may request an exemption from the requirements of §336.735(a) to transfer ownership of a federal facility waste disposal facility at decommissioning rather than at license issuance. An exemption from the requirement

of state or federal ownership of the mineral interests may also be requested to authorize the use of a surface use agreement. The exemption process in §336.5 is authorized by Texas Health and Safety Code, §401.106(b), and is similar to the federal exemption process in 10 CFR §61.6. Section 336.5 requires the applicant to submit an application to the agency using the regulatory flexibility process under Chapter 90 of the commission's rules. An applicant would have to demonstrate that the exemption is not prohibited by law, will not result in a significant risk to public health and safety or the environment, and is at least as protective of the environment and the public health as the method or standard prescribed by commission rule that would otherwise apply.

TRAB asked, what if someone does not want to sell the mineral rights?

Applicants who do not own the surface and mineral rights in fee simple title underlying their proposed land disposal facilities are strongly encouraged to negotiate with the owners of the outstanding interests to acquire all interests in the property prior to submitting an application. However, if negotiations are not successful, HB 1567 amended Texas Health and Safety Code, §401.204(c), to provide that the Texas attorney general shall, at the request of the commission, initiate condemnation proceedings to acquire fee simple interest in the mineral rights, if an applicant cannot reach a surface use agreement with a private landowner. The commission made no changes in response to this comment.

TRAB asked who will be paying for the mineral rights that are to be taken?

Section 336.808(c) provides that the applicant shall pay for all costs incurred by the commission in the process of obtaining the mineral interests. HB 1567 amended Texas Health and Safety Code, §401.210, to provide that land and buildings transferred to the state or federal government shall be transferred without cost.

TRAB requested the commission to stipulate that the "federal government official" have authority to engage in such agreements provided in §336.909(2).

The commission agrees with this comment. The commission agrees that the government official referred to in §336.909(2) must have authority to engage in such agreements, and the signed agreement must be acceptable to the executive director. In response to this comment, §336.909(2) has been changed to specify the United States secretary of energy as the government official with the authority to engage in this agreement.

WCS commented that §336.734 should be revised to be consistent with the Texas Radiation Control Act to authorize the disposal of waste at the federal facility waste disposal facility on land owned by the licensee provided that arrangements have been made with the federal government in accordance with §336.909(2).

The NRC commented that the proposed regulation does not meet the essential objectives of 10 CFR §61.14, which requires federal or state ownership of land before issuance of a license. The NRC stated that while §336.734 requires that disposal of waste received from other persons may be permitted only

on land owned in fee by the state or federal government, proposed §336.909(2) and (3) requires an applicant to provide for a commitment from the federal government, before the licensee can accept federal facility waste to assume all right, title, and interest in land and buildings for the disposal of federal facility waste, and requires the licensee to convey to the federal government the right, title, and interest in the federal facility waste and associated land and property before license termination rather than before license issuance. The NRC also commented that the state needs to provide a mechanism that would enable the existing regulations to provide for federal or state land ownership to be in effect for that part of the facility that would be accepting federal waste before issuance of a license. The NRC questioned the provisions of §336.909(3) in relation to §336.734 about the timing of the ownership requirements for the federal facility waste disposal facility.

The commission disagrees with these comments. The commission proposed no changes to §336.734. The commission's rules harmonize Texas Health and Safety Code, §401.205, which provides for transfer of ownership of the federal facility waste disposal facility on decommissioning and the existing requirement in §336.734(a), which requires disposal of LLRW only on land owned in fee by the state or federal government by use of the exemption process in §336.5. The commission notes that the legislature intends for the State of Texas to maintain a state licensing program that is compatible with federal standards and regulatory programs as provided in §§401.001(1)(A), 401.059(b), 401.103(c), 401.151, and 401.412(c). Further, HB 1567 provides that the commission may issue the license for a single compact waste disposal facility only for a facility that meets the requirements of Texas Health and Safety Code, Subchapter F, the requirements of commission rules, *and requirements for disposal adopted by the commission that*

***meet federal requirements for disposal*. The provision in §336.734(a) is based on the federal requirement found in 10 CFR §61.59(a) for licensing requirements for land disposal of radioactive waste. The NRC has identified this provision as an element that has particular health and safety significance and provides that an agreement state, such as Texas, should adopt the essential objectives of such a program element in order to maintain an adequate program. Under the Articles of Agreement, the State of Texas agreed to use its best efforts to cooperate with the NRC and other agreement states in the formulation of standards and regulatory programs of the state and the NRC for protection against hazards of radiation, and to assure that the state's program will continue to be compatible with the program for the regulation of like materials. Existing requirements in §336.10 are based on the requirements in 10 CFR §61.14 and are not changed in this rulemaking.**

As explained in the proposal preamble, an exemption process is available to applicants seeking to obtain an exemption from the requirements of commission rules. An applicant could pursue an exemption from the requirement in §336.734(a) to authorize the ownership transfer of a federal facility waste disposal facility at decommissioning rather than at license issuance. The relevant issue is not whether there is an exemption process, but rather, whether the granting of a specific exemption "poses a sufficient safety problem as to require the NRC to revoke or suspend" agreement state status. Supporting information may be found in 60 Federal Register 6570 - 6571 (1995).

An application for exemption does not guarantee that an exemption will be granted, or that the federal government will agree to take all right, title, and interest in the waste and the land on which it is disposed. The exemption process in §336.5 is authorized by Texas Health and Safety Code, §401.106(b), and is similar to the federal exemption process in 10 CFR Part 61. The process requires the applicant to submit an application to the agency using the regulatory flexibility process under Chapter 90 of the commission's rules. An application for an exemption would have to describe the nature of the requested exemption, demonstrate that the exemption is not prohibited by law, will not result in a significant risk to public health and safety or the environment, and is at least as protective of the environment and the public health as the method or standard prescribed by the commission rule that would otherwise apply. An exemption that may be granted must provide control of the disposal site that is equivalent to the control provided in 10 CFR Part 61. Additionally, any exemption must not affect the commission's enforcement and regulatory authority over a site or affect the continuing responsibilities of the licensee. Specific considerations that may be involved in an exemption decision related to land ownership include, but are not limited to, the following: license restrictions on the amount of undisposed waste allowed on the site at any one time; restrictive covenant provisions that are enforceable by the state or federal custodial agency during the institutional control period; and the corrective action financial assurance amount that is required to be available prior to accepting waste on the site. Section 336.909(3) has been modified in response to the NRC comment to indicate that before termination of the license formal conveyance to the federal government to the right, title, and interest in federal waste disposed at the federal facility waste disposal facility is required.

WCS commented that §336.808 should be modified as follows:

"*Section 336.808. Ownership of Land and Buildings and Mineral Estate*

(a) Land and Buildings.

(1) A license application to receive, possess, and dispose of LLRW from others at the compact waste disposal facility may not be considered under Chapter 50 of this title unless the applicant has acquired the title to and any interest in land and buildings on which the land disposal facility is to be located as specified in this subsection. The applicant must demonstrate that an undivided interest in fee simple title of the land and buildings, including the surface estate but not including the mineral estate, on which the land disposal facility is to be located is owned by the applicant or the government prior to a declaration that a license is administratively complete.

(b) Mineral Estate.

(1) A license application to receive, possess, and dispose of LLRW from others at the compact waste disposal facility may not be considered under Chapter 50 of this title unless the applicant has acquired control of and the right to exclude parties other than the government from the mineral estate underlying the proposed land disposal facility as specified in this subsection. Control of and the right to exclude parties other than the government from the mineral estate underlying the proposed land disposal facility shall be demonstrated prior to a declaration of administrative completeness of a license application in any one of the following means: (A) ownership of an undivided interest in fee simple title in the mineral estate by the applicant or the government, as applicable; (B) entry into a surface use agreement restricting access to the mineral estate as set forth in subsection (b)(2) below, or (C) the filing of a petition seeking initiation of condemnation proceedings in compliance with subsection (b)(3) below.

(2) An applicant may, to the extent permissible under federal law, enter into a surface use agreement that restricts mineral access, including slant drilling and subsurface mining, to the extent necessary to prevent intrusion into the disposal site. The applicant must demonstrate that the surface use agreement is permissible under federal law and consistent with the Agreement Between the United States Nuclear Regulatory Commission And the State of Texas for Discontinuance of Certain Commission Regulatory Authority and Responsibility with the State Pursuant to Section 274 of the Atomic Energy Act of 1954, as amended. The surface use agreement shall prohibit the use of the surface in the development and access of the minerals in perpetuity by the owner of the mineral estate, heirs, and successors and shall be assigned to and be enforceable by the state or federal government upon conveyance of the property under §336.710(2) of this title (relating to Institutional Information).

(3) If an applicant cannot reach a surface use agreement that is consistent with federal law and cannot otherwise obtain fee simple title to the mineral estate underlying the proposed land disposal facility, the applicant, when it submits its license application, shall petition the commission under §1.8 of this title (relating to Initiation of Proceeding) to request the attorney general to institute condemnation of proceedings as provided under Texas Property Code, Chapter 21, to acquire fee simple interest in the mineral rights. The petition to request initiation of condemnation proceedings shall include a description of the communications between the applicant and the mineral estate interest owner, an appraisal of the fair market value of the mineral interest, and a demonstration by the applicant of the ability to pay for all costs in obtaining the mineral interests in condemnation proceedings, including legal fees. The applicant shall provide a copy of the petition under this subsection to the owner of the mineral interest. If the commission selects the license application as the application having the highest comparative merit, the commission shall request the attorney general to initiate condemnation

proceedings and the applicant shall pay for all costs incurred by the commission in the process of obtaining the mineral interests."

The commission modified §336.808(a) to address situations where the ownership of land and buildings is already owned by the state or federal government. The commission does not agree with the recommended changes to §336.808(b) because it does not reconcile the use of the surface use agreements with the requirements of land ownership in §336.734(a). However, because §336.807(d)(9) requires an applicant to provide a copy of the warranty deed or other conveyance showing that right, title, and interest in the land on which the facility or facilities is proposed to be located is owned in fee by the applicant as required by Texas Health and Safety Code, §401.204, an applicant may include an application for an exemption to authorize the use of the surface use agreement to satisfy the administrative review of this application requirement. The commission does not agree with the recommended change to §336.808(b)(2) that provides for the use of the surface use agreement without an exemption to the requirements in §336.734(a). The commission's rules harmonize Texas Health and Safety Code, §401.204(b), which provides for the use of a surface use agreement, to the extent permissible under federal law, and the existing requirement in §336.734(a), which requires disposal of LLRW only on land owned in fee by the state or federal government by use of the exemption process in §336.5. The commission does not agree with the commenter's suggested language in §336.808(b)(3) because the commission is not required to request the Texas attorney general to initiate condemnation procedings, but has modified §336.808(c) to provide that the condemnation proceeding is only available for an applicant whose application has been selected with the highest comparative merit under

§336.813(d). Texas Health and Safety Code, §401.204(c), provides discretionary authority to request the Texas attorney general to initiate condemnation proceedings after consideration of such factors as the applicant's own efforts to acquire the outstanding mineral interests, the state's ability to facilitate or negotiate a resolution outside of a formal legal proceeding, and the complexity of the legal issues involved.

WCS commented that it is inappropriate to subject an applicant's efforts to secure a surface use agreement, a right that the legislature has acknowledged subject only to a determination of consistency with federal law, to the exemption and regulatory flexibility process under §336.5. WCS also commented that the commission should confirm in these rules that a surface use agreement is consistent with federal law.

The commission disagrees with the comment. The legislature directed the commission to maintain a state licensing program that is compatible with federal standards and regulatory programs as provided in Texas Health and Safety Code, §§401.001(1)(A), 401.059(b), 401.103(c), 401.151, and 401.412(c). The commission's rules harmonize Texas Health and Safety Code, §401.204(b), which provides for the use of a surface use agreement, to the extent permissible under federal law, and the existing requirement in §336.734(a), based on a federal requirement, which requires disposal of LLRW only on land owned in fee by the state or federal government by use of the exemption process in §336.5. Under the exemption process in §336.5, the applicant has the burden to demonstrate that the exemption is not prohibited by law, will not result in a significant risk to public health and safety or the environment, and is at least as protective of the environment and

the public health as the method or standard prescribed by the commission rule that would otherwise apply. The commission made no change in response to this comment.

The NRC commented that the phrase, "to the extent permissible under federal law" in §336.808(b) is unclear.

The commission interprets the statutory phrase "to the extent permissible under federal law" to mean that a surface use agreement may be used in lieu of state or federal ownership of the mineral interests underlying the disposal site in fee simple title if the use of such an agreement is consistent and compatible with federal law. An applicant would have to apply for an exemption from the requirement that waste be disposed on land, including the mineral interests, owned in fee by the state or federal government to use a surface use agreement. Under the exemption process in §336.5, the applicant has the burden to demonstrate that the exemption is not prohibited by state or federal law. The commission made no change in response to the comment.

The NRC commented that §336.808(b) uses the term "mineral" resources instead of "natural" resources and that the state should clarify that mineral is intended to be read broadly to encompass "natural resources" as used in 10 CFR §61.50(a)(4).

The commission agrees with the comment. Language in §336.808(b) was changed to reflect that the surface use agreement must restrict access to natural resources, including slant drilling and subsurface mining, to the extent necessary to prevent inadvertent intrusion into the site. The

surface use agreement must prohibit the use of the surface in the development and access of natural resources in perpetuity by the owner of the mineral estate, heirs, and successors.

The NRC commented that the rule and preamble should provide that the exemption for acquiring mineral/natural resources is not effective until after the surface agreement is entered into.

The commission modified §336.808(b) in response to the NRC comment to state that the applicant must have entered into a surface use agreement to prevent intrusion into the site. An exemption under §336.5 is subject to the process for regulatory flexibility under Chapter 90. Under §90.14(a), commission action on an application is subject to 30 TAC Chapter 50, Action on Applications and Other Authorizations. After commission action on the application, the Office of the Chief Clerk mails notice of the order to the applicant, the executive director, persons who commented on the application, and to persons who requested reconsideration or a contested case hearing. If a motion for rehearing is denied on the application, the commission's decision is final and appealable to Texas District Court under Texas Water Code, §5.351. In considering an exemption as described in §336.808(b) to authorize the use of a surface use agreement rather than outright ownership of the mineral interests, the commission would consider, among other things, the effective date and the enforceability of the surface use agreement.

TRAB commented that the requirement allowing condemnation of land should be deleted.

HB 1567 provides in Texas Health and Safety Code, §401.204(c), that if an applicant cannot reach a surface use agreement with a private landowner, the Texas attorney general shall, on request of the commission, institute condemnation proceedings as provided under Texas Property Code, Chapter 21, to acquire fee simple interest in the mineral rights. The commission made no change in response to this comment.

TRAB asked how will assurance be guaranteed that slant drilling is prohibited, and is a prohibition possible or permissible?

Intrusions into the land disposal facility, including slant drilling, are addressed by requiring state or federal ownership of the land on which the disposal site is located as provided in §336.734(a). State or federal ownership assures adequate control of the disposal site after closure, and reduces the potential for inadvertent intrusion into the site. Under §336.728, a site should be selected so that future developments, including oil and gas exploration and development, are not likely to affect the ability of the land disposal facility to meet performance objectives. Under §336.728(c), disposal areas should be avoided that have known natural resources which, if exploited, would result in failure to meet performance objectives. The disposal site shall not be located where nearby facilities or activities, including oil and gas exploration and development, could adversely impact the ability of the site to meet the performance objectives or significantly mask the environmental monitoring program. In the executive director's application selection process, Tier I Criteria include the consideration of the adequacy of the proposed facility to safely isolate, shield, and contain LLRW from mankind and mankind's environment. Tier I Criteria also

include consideration of the natural characteristics of the disposal site including the compatibility of disposal activities with any uses of land near the site, such as oil and gas exploration and development, that could affect the natural performance of the site or that could affect monitoring of the disposal facility.

WCS commented that it agrees that it is appropriate for an applicant that does not own the mineral estate under the land disposal facility to have exhausted its efforts to acquire the mineral estate or enter into a surface use agreement prior to a determination of administrative completeness.

The commission appreciates the comment and strongly urges applicants to acquire ownership of all mineral interests underlying the disposal facility site in fee simple title.

WCS commented that the proposed rule in §336.808 should be modified to allow a writ of possession to be a sufficient showing of property interest for a technically complete application.

The commission partially agrees with the comment. Section 336.808(a) has been modified to provide that except as provided in subsection (b) or (c) or for land and buildings owned by the state or federal government, an applicant must demonstrate ownership of an undivided interest in fee simple title of the land and buildings, including the surface and mineral estates, on which the facility or facilities are to be located. Like all matters in the application, the applicant carries the burden of proof, including proving ownership, and would carry the burden in demonstrating that a writ of possession satisfies the requirement that the disposal of waste occurs only on land owned

in fee by the state or federal government and meeting the application requirements in §336.710(1) and (2).

The NRC commented that §336.909 is based on Texas Health and Safety Code, §401.205(b), which requires the commitment for future conveyance and actual conveyance to be pursuant to the Nuclear Waste Policy Act, §151(b). The NRC interprets the Texas legislation as a direction that the State of Texas not own right, title, and interest in federal waste or the land and facility used for disposal of federal waste. The NRC commented and requested verification, that the proposal preamble provides that an exemption to the requirement in §336.734 is needed to allow the licensing of a facility to dispose of federal waste.

The commission agrees with the comment. In accordance with the requirements of the Texas Radiation Control Act, the State of Texas will not own the federal facility waste disposal facility or the federal facility waste disposed at the federal facility waste disposal facility. The exemption process in §336.5 is available to applicants seeking to obtain an exemption from the requirements of §336.734(a). The commission made no change in response to this comment.

The NRC questioned whether the federal government can accept title of waste at a facility licensed by Texas under the Nuclear Waste Policy Act, §151(b) because §151(b) does not appear to provide for conveyance until termination of the license; §151(b) requires the licensing authority to make a determination that federal ownership is necessary or desirable to protect public health and safety; §151(b) contemplates a post-closure determination of federal ownership and not a pre-operation

prediction that license termination requirements have been met; and §151(b) does not require the secretary of the Department of Energy to accept title. The NRC commented that a radiation control program that would rely on §151(b) for land disposition, as part of the initial licensing process, could raise potential questions on overall program adequacy.

The NRC comment addresses Texas Health and Safety Code, §401.205(b)(4), which provides that the licensee, if licensed to dispose of federal facility waste, shall "before accepting federal facility waste, submit to the commission a written agreement, signed by an official of the federal government, stating that the federal government will assume all required right, title, and interest in land and buildings acquired under commission rules under §401.204 for the disposal of federal facility waste, together with requisite rights of access to the land and buildings, in accordance with the federal Nuclear Waste Policy Act of 1982, Subtitle D (42 USC Section 10171 et seq.), as amended." This provision is implemented in §336.909(2). The commission does not consider this requirement as a pre-operation prediction that license termination requirements have been met. Rather, §336.909 provides that if federal facility waste is to be disposed of within the state, that the federal government will assume all right, title, and interest in land and buildings and in the federal facility waste disposed at the federal facility waste disposal facility. In addition, the federal government must agree in writing to assume all right, title, and interest in land and buildings and the federal facility waste disposed at the federal facility waste disposal facility prior to the acceptance of waste.

By providing an exemption process to request transfer of ownership of a federal facility waste disposal facility at decommissioning, the Texas LLRW program is not automatically incompatible with the federal regulations. The exemption process in §336.5 is authorized by Texas Health and Safety Code, §401.106(b), and is similar to the federal exemption process in 10 CFR Part 61. Additionally, the Nuclear Waste Policy Act, §151(b), relating to title and custody, clearly contemplates that not all LLRW disposal sites will be owned by the federal government at the time of disposal. Thus, the issue is not the existence of an exemption process, but rather, whether the "exercise of the exemption provision poses a sufficient safety problem as to require the NRC to revoke or suspend" a state's program. Supporting information may be found in 60 Federal Register 6570 - 6571 (1995). Nothing in the commission rules is a guarantee that the federal government will agree to accept all right, title, and interest in the waste and the land on which it is disposed, or that an exemption will be granted.

Land Ownership - Condemnation

TRAB asked who will put a value on the minerals?

Section 336.808(c) requires the applicant petitioning the commission to request the Texas attorney general to initiate condemnation proceedings under Texas Property Code, Chapter 21, to provide an appraisal of the fair market value of the mineral interests. The actual award of damages in a condemnation proceeding is determined by the special commissioners of the condemnation proceeding or by order of the district court or county court at law in which the condemnation proceeding is heard.

TRAB asked if the condemnation proceedings will occur before a license can be issued?

No license can be issued before ownership issues are resolved. Section 336.715(7) provides that a license may be issued by the commission upon a finding that the institutional control meets the requirements of §336.734. Unless otherwise exempted, §336.734(a) requires that LLRW disposal occurs only on land owned in fee by the state or federal government. Section 336.207 has been modified to emphasize that an application for a license to dispose of LLRW will not be approved unless an applicant has acquired title to the land and buildings, including the mineral estate, on which the facility or facilities are to be located. The requirement can be met by either having fee simple title to everything (by purchase or condemnation) or by having acquired fee simple in the surface estate and an approved application for an exemption to use a surface use agreement in lieu of having fee simple title to the mineral estate.

TRAB asked if the state will be exercising eminent domain powers, and requested that the commission explain the details on this.

Whether the state will be exercising eminent domain powers depends on whether an applicant owns the mineral interests in fee simple title underneath the property on which a proposed land disposal facility is to be located and whether the commission decides to request the Texas attorney general to institute condemnation proceedings. HB 1567 amended Texas Health and Safety Code, §401.204(c), to provide "if an applicant cannot reach a surface use agreement described by Subsection (b) with a private landowner, the attorney general shall, on request of the commission,

institute condemnation proceedings as provided under Chapter 21, Property Code, to acquire fee simple interest in the mineral right." The process for requesting that the commission initiate a condemnation proceeding is set out in §336.808(c).

WCS commented that it makes no sense for the commission to request the Texas attorney general to institute condemnation proceedings simultaneously for multiple applicants and would require unwarranted duplication of effort by applicants and the Texas attorney general. WCS commented that the rule should be modified to require that the commission request that condemnation proceedings be instituted, if necessary, at the same time as it selects the application with the highest comparative merit.

The commission partially agrees with the comment. Section 336.808(c) has been modified to provide that the petition to request initiation of condemnation proceedings must demonstrate that the applicant's application has been selected as the application that has the highest comparative merit under §336.813(d). Texas Health and Safety Code, §401.204(c), provides discretionary authority to request the Texas attorney general to initiate condemnation proceedings after consideration of such factors as the applicant's own efforts to acquire the outstanding mineral interests, the state's ability to facilitate or negotiate a resolution outside of a formal legal proceeding, and the complexity of the legal issues involved.

WCS commented that §336.808 should be modified to lengthen the deadline by which the mineral estate must be acquired or an acceptable surface use agreement should be in place. WCS commented that the proposed requirement in §336.808 would not provide an applicant who does not own an undivided fee

interest in the mineral estate enough time to identify outstanding mineral interest owners, attempt to acquire those interests, fail to do so, seek a regulatory flexibility order under §336.5 to use a surface use agreement, attempt to negotiate a surface use agreement, fail to do so, file a petition pursuant to 30 TAC §1.8, have the petition granted, and have the condemnation proceedings concluded prior to a determination of administrative completeness.

The commission agrees with the commenter. The sentence "It is the responsibility of the applicant to apply for and obtain the exemption in a manner that will allow the timely processing of the application under this subchapter." has been removed from §336.808(b) and (c). An applicant may apply for an exemption for the requirement of fee simple interest by use of a surface use agreement contemporaneously with the application for the license authorizing disposal. Because §336.807(d)(9) requires an applicant to provide a copy of the warranty deed or other conveyance showing that right, title, and interest in the land on which the facility or facilities is proposed to be located is owned in fee by the applicant as required by Texas Health and Safety Code, §401.204, an applicant may include an application for an exemption to authorize the use of the surface use agreement that it has entered into in order to satisfy the administrative review of this application requirement. The second sentence of §336.808(a) has also been modified from the proposed language to provide "Except as provided in subsections (b) *or (c)* of this section . . .."

Jurisdiction - Annual License Fee

TRAB asked if the "annual license fee" is in conflict with HB 2292, 78th Legislature, 2003, or does that apply only to Texas Department of Health licenses?

The annual license fee is not in conflict with HB 2292. HB 2292 amended Texas Health and Safety Code, Chapter 12, Subchapter B, by adding §12.0111, which applies to each licensing program administered by the Texas Department of Health or by a regulatory board that is under the jurisdiction of the Texas Department of Health. HB 2292 only applies to licenses issued by the Texas Department of Health or that are under its jurisdiction.

Jurisdiction - Disposal

WCS commented that §336.701 is unclear because it uses the undefined term "licensed site." WCS commented that the commission's jurisdiction over the licensing of disposal of waste received from other persons under the Texas Radiation Control Act does not extend to processing activities that may occur on property owned by an applicant, but that takes place outside of a licensed land disposal facility. WCS recommended that the last sentence of §336.701(a) be modified to provide: *"A license under this subchapter shall conduct any processing of LLRW that may occur within the boundaries of a land disposal facility, in accordance with provisions of the commission license which authorizes the disposal. Any storage or processing of LLRW that may occur within a site boundary but outside of the boundaries of a land disposal facility is subject to the regulation of the department."*

The commission disagrees with these comments. Texas Radiation Control Act, §401.201, provides the commission with the authority to regulate the disposal of LLRW. Furthermore, HB 1567 amended the Texas Radiation Control Act to provide in §401.202(b)(2) that the commission may issue a license only for a facility that meets requirements for disposal that are compatible with federal requirements for disposal. The commission's rules in Chapter 336, Subchapter H, are

consistent with the NRC rules in 10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste. Both the commission's rules in §336.211(d) and §336.701(a) and the NRC rules consider and regulate the processing of waste that is disposed in the near surface land disposal facility. Neither the commission's licensing of disposal nor the commission's authority to regulate disposal are confined to a specific geographic location, such as within the boundaries of the land disposal facility. The extent of the commission's authority to regulate the processing of waste necessary for disposal is consistent with the commission's historical practice in reviewing licenses for the disposal of LLRW from other persons. Texas Radiation Control Act, §401.413, provides that a person required to obtain a license for the disposal of radioactive substance is required to obtain the license from the commission and not from the Texas Department of Health. Section 401.414 requires the commission and the Texas Department of Health to adopt an MOU defining their respective duties under the Texas Radiation Control Act. Under the commission's MOU with the Texas Department of Health and in §336.211(d), the receipt, storage, and/or processing of radioactive substances received by a commission licensee at a commercial radioactive substance disposal facility for the explicit purpose of disposal at that facility shall be regulated by the commission. The MOU also provides that all other uses of radioactive material such as well logging, industrial radiography, and gauging devices, at a commission-licensed radioactive substance disposal facility shall be regulated by the Texas Department of Health. To be consistent with federal regulations, the MOU, and commission rules, §336.701(a) is amended as follows: ". . . A licensee under this subchapter shall conduct processing of low-level radioactive waste received for disposal at the site, incidental to the disposal of that waste in accordance with provisions of the

commission license which authorizes the disposal." This delineation assures that wastes that are received, stored, or processed for disposal will meet the commission's disposal requirements.

Jurisdiction - Protection of the Public and the Environment/Rule Stringency

TRO stated that the Low-level Waste Policy Act, 42 USC, §2021(o)(2) permits a state to adopt standards for significantly improved regulation in regards to statutorily defined disposal and siting criteria. LWV-Dallas and LWV-Texas urged the commission to develop rules that offer maximum protection to public health and preservation of ecosystems affected by the development of LLRW facilities in Texas. TRAB stated that the commission should be careful in enhancing any federal rules because of compatibility issues. This might trigger a compatibility review that takes a great deal of time and could delay the licensing process. 209 individuals stated that there is nothing in the law that prevents the state from exceeding existing regulations on radioactive substances and their disposal.

LWV-Dallas and LWV-Texas urged the commission to develop rules that offer maximum protection to public health and preservation of ecosystems affected by the development of LLRW facilities in Texas.

207 individuals stated that the potential and extremely long-term danger posed by radioactive waste requires that the state do its utmost to protect the public and the environment. One individual stated that the commission is expected to fulfill its crucial responsibilities to protect Texans and Texas. Two individuals urged the commission to extend every effort to establish regulations that require the state to do its utmost to protect the public and the environment. Two individuals requested that the commission extend every effort to establish regulations that maximally protect the public. One individual stated that

the proposed rules do not live up to the commission's duty to ensure public safety and protection of the environment. One individual stated that the proposed rules do not go far enough to provide a secure future for Texans, while this stream of radioactive waste is shipped into our state and stored for thousands of years. The individual stated that the commission should realize the importance of these regulations and what it can mean to our children and descendants, and should write rules that could protect future generations from this dangerous waste and that the commission must do it to the absolute best of the commission's ability. One individual urged the commission to do everything within its power to establish strict regulations that will protect the people of the state. One individual urged the commission to use public health protection as the most important factor in decision-making for the rules. Two individuals stated that it is essential that regulations are there that ensure the protection of the public and the environment. One individual stated that the commission must protect the state's greatest resources and people, and that the proposed rules for an LLRW disposal facility need to be strengthened and reviewed more carefully in order to achieve this goal. One individual stated that the potential and extremely long-term danger posed by radioactive waste requires that the commission consider and plan for every facet and every possible repercussion of locating radioactive waste dumps in Texas. The individual also expressed confidence that the commission takes very seriously the role of protectors of the environment and the citizens of Texas, and stated that it is time for the commission to discharge its responsibilities using every tool at its disposal. One individual stated that every effort should be taken to protect Texans and future Texans. One individual stated that it is a shame that Texas has to be dumped on with radioactive waste and how tragic that the materials will travel across the state and perhaps many states, putting more people at risk. The individual also stated that the commission has been given a job to do and is not the one who decided on this disgraceful dumping plan for Texas,

but the commission must make sure that nothing happens that hurts people now or in future generations. One individual stated that the commission's action can literally mean life or death to Texas citizens. One individual expressed hope that the commission will do right by the people and the natural resources it was created to protect. One individual expressed hope that the commission will prove themselves worthy as the guardians of the public trust, and stated that in establishing these rules the commission has an awesome responsibility for the future welfare of this state. One individual asked that the commission look beyond the immediate political climate and consider the future, and to not mess with our beautiful home.

One individual requested that the state provide the strongest possible regulations, not only for our protection, but for that of future generations because some of this stuff has a very long half-life. 203 individuals urged the commission to extend every effort to establish regulations that are second to none. One individual expressed worry that the proposed rules are inadequate. Two individuals stated that the commission must exceed existing regulations on radioactive substances and their disposal. One individual stated that the commission must vastly and more stringently exceed existing regulations on radioactive substances and their disposal in order to have any hope of a decent outcome. One individual urged the commission to extend every effort to establish regulations that are hole proof. One individual urged the commission to extend every effort to establish regulations regarding the proposed rules for an LLRW disposal facility. One individual stated that the commission needed to be very careful in developing the strongest regulations possible to offer some real security. One individual stated that the commission has a huge responsibility to the living and yet-to-be-born citizens of Texas with regard to the regulations for the permitted disposal of radioactive and hazardous wastes at the sites

in Andrews County. The individual requested that the commission make the rules for acceptance of wastes in Texas stringent, so as to avoid future problems in health, drinking water supply, and economic blight in the communities near the disposal sites. One individual stated that until governments stop the destruction of the environment by the generation of radioactive waste, all of us, especially people in positions such as the commission, must hold the standards of containment and protection as high as humanly possible. One individual stated that the commission must extend every effort to establish regulations that leave as little to the imagination of the licensees as possible. One individual stated that it is ultimately the citizens at risk and risk must be minimized as much as possible, if not eliminated, and demanded that the commission consider more safety and environmental protections. 210 individuals stated that these proposed rules, while attempting to cover the "letter of the law," are insufficient to adequately control the stream of radioactive waste coming into our state, and thus do not live up to the commission's duty to ensure public safety and protection of our environment. 211 individuals expressed a belief that the commission can do better with the daunting task and expected the commission to take the proper time and care to do so. One individual expressed an expectation that the commission would handle this serious issue in the interests of common Texas citizens, not for corporations or political agendas. Two individuals requested that the commission do the right thing for the citizens of Texas for a change, instead of the polluters. One individual expressed hope that the commission would act in the true spirit of the commission's charge to ensure environmental quality for all citizens, and not give any corporation the right to exploit Texans.

The Texas Legislature has tasked the commission with protecting occupational and public health and safety and the environment. Texas Health and Safety Code, §401.151, specifically requires

the commission to "assure that the management of LLRW is compatible with applicable federal commission standards." The commission takes seriously its regulatory responsibilities over the disposal of LLRW, and is committed to the final adoption of disposal rules that are protective of public health and safety, and the environment. The commission made no changes in response to these comments.

Jurisdiction - Authority for Non-State Operator

LWV-Dallas and LWV-Texas supported a state-owned and -operated LLRW disposal site.

In HB 1567, the Texas Legislature repealed Texas Health and Safety Code, §401.203, which provided that an LLRW disposal license may only be issued to a public entity. HB 1567 allows non-public entities to operate an LLRW disposal facility. The commission made no change in response to these comments.

License Issues - Renewal

WCS commented that the requirement to submit a renewal application one year prior to license expiration is unprecedented and unworkable because the application would not be reflective of data and site conditions at the time of license expiration because the data would have to be collected so far in advance. WCS commented that the 30-day requirement be maintained or, at most, the timing be no more restrictive than 180 days as required by the Texas Solid Waste Disposal Act and the Texas Injection Well Act.

The commission disagrees with this comment. Submitting the renewal application one year in advance of the expiration date is a reasonable requirement given the complexity of the renewal application and the time required to conduct a thorough, technical review of the application. Furthermore, the extended length of an LLRW disposal license dictates a thorough, technical review prior to renewal. The commission made no change in response to this comment.

Compliance Issues

TRO commented that WCS disrespects state and federal regulatory authorities.

This is not a comment regarding these rules. The commission made no change in response.

Adequacy of Financial Assurance Amounts

Several commenters expressed concern about the adequacy of financial assurance amounts to be provided by a licensee. TRO stated that there should be sufficient financial assurance from the licensed entity. LWV - Texas and LWV - Dallas commented that the current amount of $20 million should be reviewed for adequacy. TRAB commented that the license is for a long duration; therefore, $20 million now may not be enough in the future. TRAB also asked if there would be coverage for subsequent events if the first event of corrective action exceeded $20 million.

The commission agrees with the commenters and shares the same concerns with the adequacy of financial assurance over a long period of time; therefore, the rules require the commission to conduct an annual review of the cost estimates for financial assurance. As cost estimates increase,

financial assurance must also increase. The Texas Health and Safety Code specifies that the financial assurance for corrective action is required to address unplanned events occurring after decommissioning. Prior to decommissioning, it is the licensee's financial responsibility to address corrective action irrespective of financial assurance funding. The commission notes that the financial assurance requirement for corrective action may exceed $20 million, but it must be at least that amount. If the first event were to exceed the funding set aside for corrective action, the licensee would be financially responsible for any additional corrective action required prior to the transfer of the license.

LWV-Texas and LWV-Dallas stated that the rules need to ensure that any monies in the perpetual care fund are adequate to support monitoring and retrieval of leaking containers after closure.

Financial assurance funding amounts are determined, as well as revisited annually, by the commission based on the actual disposal activities occurring on a licensed LLRW land disposal facility. Financial assurance amounts will be set based on the actual inventory of LLRW received for disposal for the purpose of monitoring and maintenance during the institutional control period following closure. Additionally, a corrective action amount for any necessary retrieval of waste after closure will be set based on the actual inventory of waste received for disposal that will be on site.

Licensee or Federal Liability

LWV-Dallas and LWV-Texas commented that the federal government should provide assurances to pay for cleanup and repackaging of their nuclear waste disposal at the site in Texas. In a related comment, TRAB asked whether the federal government assumes the liability for the facility if the government takes it over.

The commission disagrees with the comment that it is necessary for the federal government to provide stand-alone financial assurance for federal facility waste. Cost estimates related to the license include the waste and activities at both the compact waste disposal facility and the federal facility waste disposal facility.

On decommissioning of the federal facility waste disposal facility, the licensee, the owner of the facility, waste generators, which may include the federal government, and other parties, may be liable.

Protection of the Perpetual Care Fund

The NRC commented that the state is using a perpetual care fund rather than standby trusts as the ultimate depository for financial assurance. This raises an issue if the state requires legislative approval each time it seeks to expend funds from this account which is described as a general revenue fund. The state may need to consider appropriation authority, such as multi-year spending authority, to ensure that these funds are available when needed. The NRC also commented that the state should define the process for accessing the perpetual care account funds.

The commission agrees that any expenditure out of the perpetual care account requires appropriation authority from the legislature. It would be reasonable to request an appropriation or a rider appropriation from the perpetual care account in the 2006 - 2007 biennial Legislative Appropriations Request. As long as there is an appropriation, expenditures can be made against the account. However, the legislature can remove appropriation authority any time when in session. The commission also notes that Texas Health and Safety Code, §401.305, identifies how the commission and the Texas Department of Health may use the perpetual care account.

Financial Liability of Licensee

TRAB and TRWDF commented that the rules should clarify the financial liability of the licensee for any unplanned event that does not require decommissioning. TRWDF, in a related comment, also stated that the rules should require specific proof that a licensee's financial assets are adequate to address remediation during the operation of the facility which does not result in decommissioning.

LWV-Dallas, LWV-Texas, and 204 individuals encouraged the commission to write rules that deal more completely with the issue of liability and financial responsibility. A related general comment expressed by several individuals was that financial responsibility provisions are inadequate, and taxpayers should not be left with financial responsibility for liabilities at the disposal site. Disposal site operators should be held fully responsible and liable for their activities. 206 individuals stated that there are already examples (including radioactive waste dumps) in this country of disposal companies eluding their responsibility to pay for clean-up costs (due to leakage), or even abandoning dumps to avoid liability.

The Texas Health and Safety Code specifies that the financial assurance for corrective action is required to address unplanned events occurring after decommissioning. Prior to decommissioning, it is the licensee's financial responsibility to address corrective action irrespective of financial assurance funding. Texas Health and Safety Code, §401.211, states that the transfer of title to the LLRW, land, and buildings to the state or federal government does not relieve the licensee of liability for any act or omission performed before the transfer or while the LLRW, land, and buildings are in the possession and control of the licensee.

For the compact waste disposal facility, the disposal fee rate will include a component for the cost of financial assurance. It is expected that the licensee will charge a fee for federal facility waste that also includes the cost of financial assurance. Financial assurance is specifically for the activities of decommissioning, post-closure observation and maintenance, and corrective action. These are defined activities that take place under the control of the licensee, or in the worst case, under state direction due to a need for corrective action when the licensee is unable or unwilling to address the needed activities. Financial assurance is also for institutional control that takes place after the transfer of the license to the state and to the federal government.

Under §336.711 and §336.735, the applicant's financial qualifications will be evaluated. However, in the worst case, if a licensee is unable or unwilling to address an unplanned or unforeseen event (corrective action) that requires remediation during the operation of the site, the executive director has the authority to demand closure and begin the decommissioning process. Additionally, the commission may use, under authority in Texas Health and Safety Code,

§401.152, any financial security provided by the license holder to address a situation that threatens public health and safety, and the environment.

The commission disagrees with the comments that the rules have not been written to deal with the issues of liability and financial responsibility, and that the taxpayer will be left with the liability for the disposal site. The commission notes that financial assurance for decommissioning, post-closure observation and maintenance, corrective action, and institutional control is required to be provided in full before the initial receipt of waste at the facility. In response to these comments, a requirement for executive director approval of financial assurance prior to accepting waste for disposal has been added to §336.716(f). Additionally, cost estimates for these obligations will be reviewed annually by the commission. For consistency with the review requirements of other financial assurance, annual review by the commission of financial assurance for corrective action has been added to §336.738(b). In response to these comments, a requirement was added to financial assurance for closure in §336.736(a) to include the disposal of any radioactive material remaining at the site at the time of closure. The rules also ensure the soundness and long-term stability of the financial assurance.

Timing of Coverage

WCS commented that the commission should clearly specify the expectations with respect to financial assurance in §336.711 on timing, coverage, and amounts of coverage required for each type of financial assurance. Each requirement should conform to the enabling legislation and its directives. WCS

commented that the broad use of the term "financial assurance" should be minimized or eliminated throughout the rules and specific requirements should be expressly delineated.

The commission disagrees with the commenter. The proposed financial assurance requirements conform with HB 1567, Texas Health and Safety Code, Chapter 401, and NRC compatibility requirements. Financial assurance coverage amounts for decommissioning, post-closure observation and maintenance, corrective action, and institutional control are based on a licensee's specific license application. Proposed financial assurance amounts are reviewed by the executive director during the licensing process, and may be adjusted during the licensing process. Additionally, financial assurance amounts are reviewed annually after the license is issued and may be adjusted. The timing of submitting effective financial assurance is specified in §37.9040 and §§336.736 - 336.738. The coverage requirements for the particular activities are specified in §37.9059 and §§336.736 - 336.738. The commission made no changes in response to this comment.

WCS commented that §§37.9040, 336.736(e), and 336.737(b) should be revised to provide more specificity on when the various financial assurance mechanisms should be "signed" and should be "effective." Although the rules suggest this should occur for closure, post-closure, corrective action, and liability coverage "60 days prior to commencement of operations," it would be more appropriate to require these coverages for closure, post-closure, and liability coverage to be in effect prior to the initial receipt of waste.

The commission agrees that the timing of the submission of effective financial assurance mechanisms could be more exact. The timing of the submission of financial assurance has been revised from "before commencement of operations" to "sixty days prior to the initial receipt of waste." Sixty days allows the executive director the time to review and approve the financial assurance mechanisms, and ensures that financial assurance is in place before waste is received for disposal at the site. Conforming changes are made in §§336.736 - 336.738 and 37.9040.

WCS commented that §336.738 exceeds statutory authority for the rule with respect to the deadline imposed for providing financial assurance for corrective action by requiring the financial assurance prior to the commencement of operations. WCS commented that Texas Radiation Control Act, §401.109 and §401.241, provide for funding that eventually reaches $20 million at the time the disposal site is decommissioned, and not before.

In contrast, TRWDF commented that it applauds the commission's requirement of $20 million for corrective action to be available upon licensing and encourage the agency to maintain this requirement.

The commission disagrees with the WCS comment. Texas Radiation Control Act, §401.241, does not state that corrective action funding must eventually reach $20 million at the time the disposal site is decommissioned. Section 401.241(b) states that "The amount of the security required of the license holder may not be less than $20 million at the time the disposal facility site is decommissioned." Active operation of the land disposal facility could end at any time during the term of the license, and decommissioning could be required, triggering the need for funding from

financial assurance. Cessation of operations would impact the ability of the license holder to fund financial assurance; therefore, the statutory requirement that financial assurance for corrective action is available at the time of decommissioning is met by ensuring that financial assurance is in place prior to the receipt of waste. The commission made no change in response to this comment.

Liability Coverage

TRAB commented that the terms, "sudden and non-sudden accidental occurrences" should be defined.

Sudden and nonsudden accidental occurrences are defined in Chapter 37, Subchapter E, §37.402, Definitions. Section 37.9059(a) states that the licensee must comply with the requirements of Subchapter E. The commission made no changes in response to this comment.

Financial Assurance for Institutional Controls

The NRC commented that the state does not require the licensee to submit to the regulatory body changes made in its arrangements for institutional control. The state rule is less restrictive than NRC guidelines in this regard, and needs to be revised to include this requirement.

The commission agrees, and amended §336.737(b) by adding "Any changes to institutional control proposed by the licensee shall be submitted to the commission in the form of an application for a license amendment."

Coverage Question

One individual commented that a private business may cease to exist or may choose not to perform the functions originally spelled out in connection with the disposal site. The individuals stated that sufficient monies should be placed in escrow so that a transitional management system will be covered while another company is found to take on the tasks.

Texas Health and Safety Code, §401.152, provides that the commission may require any action, including a corrective measure, to remove a threat to the public health and safety, and the environment. The commission shall use the financial assurance provided by the licensee to pay the costs of these actions. In developing the cost estimates used for financial assurance, the licensee must assume that an independent contractor is hired to perform the work. The commission made no change in response to this comment.

Exemptions - Extended Storage

One individual expressed concern that a private company may be granted exemptions and exclusions in their handling of radioactive waste storage. The individual stated that storage, in and of itself, implies extended care and diligence and a watchful eye, because these materials will be around much longer than the company that has contracted to handle them.

Under §336.5(a), the commission may exempt a source of radiation or a kind of use or user from the application of a rule in Chapter 336 if the commission determines that the exemption is not prohibited by law and will not result in a significant risk to public health and safety or the

environment. The application requirements for an exemption are provided in §336.5. The commission made no change in response to this comment.

Applicability of Financial Assurance to Decommissioning

WCS commented that the commission should clarify whether the financial assurance requirements of §336.619 are applicable to a land disposal facility and ancillary surface facilities located within the boundaries of a land disposal facility.

The financial assurance requirements of Chapter 336, Subchapter G, are applicable to ancillary surface facilities that support LLRW disposal activities. Applicants should include cost estimates for closure of any ancillary surface facilities. The commission made no change in response to this comment.

Administrative Review of Applications

TRAB stated that the administrative review should require the "review of the design," not a description of the design features."

The language in §336.807(d)(6) is taken verbatim from Texas Health and Safety Code, §401.231(6). The description must be adequate to allow the commission to administratively review the technical merits of the application, including review of the design. In addition, the applicant must provide proposed designs sufficient to allow review of the application. The commission made no change in response to this comment.

Regarding an administratively complete application, WCS commented that the phrase "but not limited to" be deleted in §336.807(d) because consideration of additional criteria is inconsistent with Texas Radiation Control Act, §401.231.

The commission disagrees with this comment. The criteria for demonstrating an administratively complete application are not limited to those specified in Texas Health and Safety Code, §401.231, nor does the statute mandate limiting the criteria that may be provided in either existing or new commission rules. An application for a license to receive, possess, and dispose of waste from other persons by near-surface land disposal shall consist of, but is not limited to, the information set forth in the TAC including Chapter 305, relating to Consolidated Permits; §336.706, relating to General Information; §336.707, relating to Specific Technical Information; §336.708, relating to Environmental Information; §336.709, relating to Technical and Environmental Analyses; §336.710, relating to Institutional Information; and §336.711, relating to Financial Information. The commission made no change in response to this comment.

Application Issues

TRAB expressed a concern that the applicant may be responsible for the $6 milliion cost if money is not received from Compact partners.

The $500,000 initial application processing fee is intended to recover costs incurred by the commission for administrative review and comparative review of each application received. This payment is made by each applicant. Additional costs must be recovered by the commission that

exceed this initial fee, including any portion of administrative review, technical review, hearings, and other actual costs associated with the licensing process. As a matter of comparison, the State of Utah has a $5 million initial fee for "Any application for a waste transfer, storage, decay in storage, treatment, or disposal facility" with a statutory requirement to "subsequently pay an additional fee to cover the costs to the state associated with review of the application, . . ., studies, and services required to evaluate a proposed facility."

Payments made by non-host party states under Section 5.01 of the Compact under Texas Health and Safety Code, §403.006, are deposited in the state treasury to the credit of the low-level waste fund, and have not been designated to pay for a private company's application processing fee or other administrative matters. The commission made no change in response to this comment.

TRAB requested that the commission revise §336.708(11) to read "a decommissioning, site closure and stabilization plan *possessing* those design features that are intended to facilitate disposal site closure . . .."

The commission disagrees with this comment. The language in §336.708(11) is taken directly from federal requirements in 10 CFR §61.12(g). The commission made no change in response to this comment.

WCS commented that §336.805 should be moved to Subchapter H or re-labeled as establishing notice requirements and not substantive selection process criteria. WCS commented that application

requirements in §336.805 may be incorrectly considered as substantive grading criteria for the application selection process for the compact waste disposal facility.

The commission disagrees with this comment. The application requirements specified in §336.805 are specific to applications for the Compact waste disposal facility and are in addition to any other application requirements in Chapter 336. These requirements are specified in Texas Health and Safety Code, §401.229 and §401.219. Further, these requirements are not specified in the tier criteria given in §§336.815 - 336.821. The commission made no changes in response to this comment.

WCS commented that the requirement in §336.805(1) of compliance with all applicable statutes and rules will only be known during the technical review of the selected application.

The commission disagrees with this comment. This is an omnibus provision intended to ensure an applicant's compliance with all applicable statutes and regulations. It may be known prior to the technical review of an application that an applicant has not complied with applicable requirements. This would be a reason to issue a notice of deficiency or to reject an application from further consideration. The commission made no change in response to this comment.

WCS commented that the application fee requirement in §336.805(2) is already included in §336.807(d).

The application fee is both a requirement under §336.805, Application Requirements, and is necessary to demonstrate an administratively complete application under §336.807, Administrative Review. The commission made no change in response to this comment.

WCS commented that the application requirements in §336.805(3) to provide management techniques analysis is not part of administrative completeness nor Tier 1 - 4 Grading Criteria analysis.

The management techniques analysis is a statutory requirement from Texas Health and Safety Code, §401.219, and therefore a necessary component of an administratively complete application. This analysis has no relation to the tier criteria established in Texas Health and Safety Code, §§401.233 - 401.236. The criteria for demonstrating an administratively complete application are not limited to those specified in Texas Health and Safety Code, §401.231. The statute does not mandate limiting the criteria that may be provided in either existing or new commission rules for the demonstration of administrative completeness. The commission made no change in response to this comment.

Regarding the application deadline, TRO stated that while the rules, on their face, indicate that any company may apply for a license to dispose of LLRW, there is actually only one company, WCS, that will be able to file an application by the early 2004 deadline.

The commission disagrees with this comment. The legislature provided a license selection process based on comparative merit with the opportunity for multiple applications to be filed with the

commission. Each administratively complete application is subject to a written evaluation according to the statutory criteria established by Texas Health and Safety Code, §§401.233 - 401.236, for the purposes of comparing the relative merit of the applications. The commission, based on the written evaluations and application materials, then selects the application that has the highest comparative merit. The commission made no change in response to this comment.

WCS commented that the provision in §336.735 addressing an applicant's proof of funds to cover agency costs in processing the application that may exceed the $500,000 application fee is vague and open-ended. WCS commented that the rule should provide a dollar estimate of the additional costs.

The commission disagrees with this comment. The actual application fee, if greater than $500,000, will be determined by the scope, schedule, and direct costs of processing the application and holding any administrative hearings on a proposed license. The scope and schedule of application processing are in turn related to the quality and completeness of applications submitted for evaluation. Thus, an estimate of additional costs in rule would be premature and impractical. The commission made no change in response to this comment.

Comparative Merit Review

TRAB stated that the commission should define "unanticipated extraordinary events" and provide guidance for these criteria.

The term "unanticipated extraordinary events" is taken directly from Texas Health and Safety Code, §401.233(d)(1)(B). The statute provided no specific guidance; however, extraordinary events would include site specific evaluation for such occurrences as tornados, hurricanes, earthquakes, etc. These criteria will be evaluated on an application-by-application basis as part of the comparative merit review. The commission made no change in response to this comment.

TRAB requested that the commission define how the tier criteria are used in scoring the applications.

The legislature provided a license selection process based on comparative merit. Each administratively complete application is subject to a written evaluation according to the statutory criteria established by Texas Health and Safety Code, §§401.233 - 401.236, for the purposes of comparing the relative merit of the applications. The commission, based on the written evaluations and application materials, then selects the application that has the highest comparative merit. The commission made no change in response to this comment.

WCS commented that delegation of authority to the executive director to select the application in §336.825 violates Texas Water Code, §5.122(b), which requires that a delegated decision be either appealable to the commission or be a final and appealable decision subject to judicial review. WCS commented that because §336.825 allows appeal to the commission on the application selection only after a final decision on the application, the delay on appealing a decision on the selected application frustrates the intent of the mandatory right of appeal for delegated decisions under Texas Water Code, §5.122(b). WCS recommended that §336.825 be modified to grant affected persons a right to appeal

the executive director's selection to the commission by modifying the second sentence in §336.825 as follows: *"A decision by the executive director under §336.813 of this title is appealable to the commission pursuant to Subchapter G of 30 TAC Chapter 50. Notwithstanding any other rule, a commission decision under this section is not subject to judicial review until the commission makes a final decision on the selected license application."*

The commission disagrees with this comment. Texas Health and Safety Code, §401.240(a), provides that, notwithstanding any other law, a person affected by an action under Texas Health and Safety Code, Subchapter F, may file a petition for judicial review only after the commission takes final action on a license application. Accordingly, an executive director decision to select the most meritorious application is not appealable to the commission until a final decision is made on the application. The process for the selection of one application for further technical review is unique and significantly different from the process for final decisions on permit applications established in Chapter 50. Because a decision to select the most meritorious application necessitates consideration of many technical issues that would also come up during the technical review and licensing decisions, it is most appropriate for the commissioners to consider these issues only when making a final decision. An appeal to the commissioners on the decision to select a particular application may expose the commissioners to many technical issues that have not been finalized in the licensing process and could raise issues of bias or *ex parte* participation, based on this earlier exposure, during later consideration of a licensing decision. The commission made no change in response to this comment.

TRAB requested that the commission define the terms "acceptable operational safety" and "acceptable long-term safety," and provide objective guidance for these criteria.

The commission appreciates the comment, but respectfully declines to define the terms "acceptable operational safety" and "acceptable long-term safety." These qualitative criteria are tied directly to the federal approach of focusing on performance objectives on a site-specific basis for LLRW disposal. What is "acceptable" is determined by the commission on a case-by-case and comparative basis after thorough evaluation of application materials. Thus, no objective definitions can be offered for these qualitative criteria. The commission made no change in response to this comment.

Concurrent Acceptance of Waste

AEP stated that concurrent acceptance of Compact and federal LLRW is critical to beneficial operation of the facility. ARDT and TXU supported the requirement of concurrent acceptance of compact and federal waste in §336.903(b) and considered the provision consistent with the intent of HB 1567.

The commission agrees that the timing of the acceptance of federal facility waste is provided in statute. Texas Health and Safety Code, §401.216(e), provides that federal facility waste may not be accepted at a licensed facility until compact waste has been accepted. The commission made no change in response to this comment.

Separation of Facilities

ARDT and STP commented that the commission should take a closer consideration of the physical separation between the federal waste disposal facility and the compact waste disposal facility because of liability concerns from the potential migration of radionuclides at separate, but adjacent facilities.

The commission agrees that physical separation of the two facilities is an important consideration in the technical review of the application. Several disposal scenarios could be proposed as part of a license application under the rules. Additional considerations are dependent on many potential waste segregation issues, e.g., radioactive vs. non-radioactive, etc. The commission made no change in response to this comment.

Monitoring and Retrievability

WCS commented that there is a possible conflict with the provision in §336.730(b)(2) that requires certain Class A, Class B, and Class C waste be disposed of in such a manner that the waste can be "monitored and retrieved" and the definition of disposal as "isolation or removal of LLRW without intent to retrieve that LLRW later." WCS commented that the program does not envision monitoring in perpetuity, and recommended that §336.730(b)(2) be modified: "in such a manner the waste can be monitored *during the operational period of the land disposal facility and up to and including the active institutional control period, and retrieved during the operational period of the land disposal facility and concluding at the time of closure of the land disposal facility*."

The commission disagrees with this comment. The statutory provision in Texas Health and Safety Code, §401.218(b)(2) requires disposal "in such a manner that waste can be monitored and retrieved." This statutory provision does not expressly limit the period of time during which the waste can be monitored and retrieved. The ability to monitor, locate, and then retrieve waste beyond the operational period is necessary to protect public health and safety and the environment. It is especially necessary if the disposal of federal facility waste and compact waste will occur at adjacent land disposal facilities. Disposal is defined as the "isolation or removal of LLRW from mankind and mankind's environment without intent to retrieve that LLRW waste later." Disposal is intended to be permanent isolation of the LLRW. This definition is not in conflict with the provisions in the rules that provide for retrieval of disposed LLRW. Waste that is disposed of may be retrieved if, for example, the disposal proves to be defective in that it has not effectively isolated the LLRW. If a scenario necessitates retrieval of previously disposed waste, the initial intent to dispose is unchanged. The commission made no change in response to this comment.

LWV-Dallas stated the commission should require Class B and Class C waste to be disposed of in aboveground, retrievable vaults.

The commission disagrees with this comment. The mandatory use of aboveground, retrievable vaults for the disposal of Class B and Class C LLRW is not explicitly provided for by the statute. The statutory provision in Texas Health and Safety Code, §401.219, does require study and

analyses of alternative management techniques including the use of aboveground isolation facilities. The commission made no change in response to this comment.

TRWDF stated that the rules suggest the concept of monitoring containers for leakage and the retrieval of containers before leakage could spread beyond a disposal vault; however, the rules do not provide detail. TRWDF suggested that the rules be clarified to specify that leakage be detectible from individual containers prior to release into the vadose zone and the design of the facility be such that the leaking containers are readily identifiable and retrievable without digging up significant portions of the facility, and the monitoring and retrievability are to work for periods of time not trivial compared to the hazardous life of the waste.

Existing rules in §336.731, relating to environmental monitoring, specifically provide for environmental monitoring of the land disposal facility during site construction, operation, and closure. Further, the licensee is required to take corrective measures if migration of radionuclides and chemical constituents would indicate that the performance objectives may not be met. Moreover, the addition of a specific requirement for monitoring and retrievability of waste goes beyond the operational period to enable a focused clean-up effort, if necessary. The commission made no change in response to this comment.

Transportation/Emergency Response

TXU commented that the Texas Department of Health, United States Department of Transportation, Texas Department of Transportation, and the NRC have regulations in place to regulate the labeling,

packaging, placarding, routing, shipping, and transportation of radioactive materials as well as equipment safety and inspection standards.

LWV-Dallas commented that neither Dallas County nor the City of Dallas has an emergency preparedness team or committee to be the first responders in the event of a transportation accident. LWV-Dallas stated that the commission should set rules and ensure adequate security and funding during the transport of radioactive waste going to the site.

One individual stated that about three million shipments of radioactive materials are made each year in the United States by highway, railroad, aircraft, and ship. Some of these are "fresh" material which includes fuel for nuclear power plants and radioactive sources for use in medical therapy and industry. Some low-activity fresh radionuclides are sent by express mail, chiefly for biomedical research and diagnosis. The individual stated that much radioactive transport involves "waste" material called "radwaste" which is primarily produced by the nuclear power industry and the remainder comes from other industry, biomedical research, medical diagnosis, and consumer products. The individual stated that all of these sources produce "low-level waste" of low radioactivity, and that "high-level waste" (15% of the volume of all radwaste and 99% of the radioactivity) is produced almost exclusively by the nuclear power industry in the form of spent fuel rods.

One individual cited Report Number 3, *Ionizing Radiation Exposure of the Population of the United States*, (1987) of the National Council on Radiation Protection and Measurements, which conservatively estimated that the average annual dose to the maximally exposed individual member of the public due to

transport of radioactive material related to a large (1,000 megawatt) nuclear power plant is estimated to be 20 mrem, which is 6% of the annual dose from natural background radiation. The report further stated that in practice, much lower exposures are usually experienced, and that it must be recognized that the overall dose to the general public will be a tiny fraction.

One individual cited a 1990 book, *Medical Management of Radiation Accidents*, by Fred Mettler, M.D. of the University of New Mexico, School of Medicine, which stated that in 30 to 40 years during which we in the United States have been transporting substantial quantities of radioactive material, there has never been an accident severe enough to cause a major release of these materials. The book further stated that there has never been anyone injured radiologically or much less killed as a result of exposure to radiation or contamination arising as a result of an accident involving radioactive materials during transportation.

One individual cited a 1995 United States Department of Energy (DOE) fact sheet, *Environmental Impact Statement for a Proposed Repository at Yucca Mountain, Nevada - Transportation*, which stated that various kinds of radioactive materials have been moved around our country for decades, and that shipments of spent nuclear fuel regularly go to or from nuclear power plants, government research facilities, industrial complexes, and other facilities. The DOE report concluded that after more than 25 years and more than 2,500 shipments of spent nuclear fuel, there has not been a single death or injury because of the radioactive nature of the cargo.

One individual cited a 1995 National Safety Council report, *Accident Facts*, that stated that during a three-year period from 1990 through 1992, there were 131,232 deaths due to motor vehicle accidents, 658 deaths due to railway accidents, 431 deaths due to electric generating plant accidents including transmission, 217 deaths due to lightning, 74 deaths due to gas distributed by pipeline accidents, and no deaths due to radiation accidents.

One individual concluded from the four cited reports that the transport of radioactive materials in this country has caused no deaths or significant injury due to radiation exposure, and that this unparalleled safety record was achieved because of careful attention to packaging, especially of high-level waste.

One individual stated that nuclear waste must never be transported around the country on trains and trucks, and asked if we have learned from 9/11. Two individuals found it very alarming that with the heightened risk of terrorism, that stringent measures are not in place for the transport of these materials which place cities and towns on the routes at risk for accidents, abandonment, or theft. Five individuals expressed extreme concern about the interstate transportation of potentially lethal radioactive waste, which not only greatly increases the possibilities for accidents, but also the opportunities for terrorists to strike.

202 individuals stated that the transportation of massive amounts of potentially lethal radioactive waste across our state is a disturbing proposition, and that the increase of frequency of such shipments brings an increased likelihood of accidents, as well as a higher potential for abandonment (as has already happened in Texas), theft, or even terrorist attack.

206 individuals stated that cities along the highway routes, much less smaller towns and rural communities, do not have the plans or resources to respond to a release of radioactivity, and that preparations for funding for such an event and regulations covering transporter security must be required.

One individual stated that transportation spill plans must be in place in advance to avoid delay which could mean more harm to more people as the radioactive waste spill spreads into the soil, air, or water. One individual urged the commission to require funding for education and preparation in case of a spill, as well as regulations covering transporter security measures.

LWV-Dallas and LWV-Texas stated that any committee formed should include citizens who will be affected by the transportation of the radioactive waste.

TXU commented that Dallas County has several methods of action in place to respond to an incident involving hazardous material, including radioactive material. Dallas County firefighters are trained in the use and have access to instruments to detect and measure radioactive materials. If detected, firefighters are trained to evacuate the area and contact the Public Safety Hazardous Materials Response Team (HazMat). TXU commented that Dallas County has four HazMat teams. HazMat teams are available 24 hours a day, seven days a week and respond to all incidents involving hazardous materials, including radioactive materials and have emergency contacts at various state and federal agencies.

LWV-Dallas commented that neither Dallas County nor the City of Dallas has an emergency preparedness team or committee to be the first responders in the event of a transportation accident. LWV-Dallas stated that the commission should set rules and ensure adequate security and funding during the transport of radioactive waste going to the site.

The transportation and routing of LLRW is governed by federal law and state statute. Federal requirements govern packaging, labeling, storage during transport, safety, and security. The United States Department of Transportation and the NRC share responsibility for ensuring the safe transportation of LLRW. The United States Department of Transportation requirements for the transportation of radioactive material and radioactive waste are found in 49 CFR Parts 171 - 177 and 397. NRC requirements related to the packaging and transportation of radioactive material and radioactive waste are found in 10 CFR Parts 71 and 73.

At the state level, Texas Health and Safety Code, §401.052, requires the Texas Department of Health to adopt rules that are consistent with federal requirements. The Texas Department of Health rules must require each shipper and transporter of radioactive waste to adopt an emergency plan, approved by the Texas Department of Health, for responding to transportation accidents. Consistent with these requirements, the Texas Department of Health, Bureau of Radiation Control, maintains a 24-hour radiological emergency hotline and has staff to respond to radiological emergencies. The Texas Department of Transportation along with the Texas Department of Health, Bureau of Radiation Control, have jurisdiction over the transportation of radioactive materials and radioactive waste in Texas.

The Texas Department of Health rule, 25 TAC §289.257, sets forth state requirements for packaging, shipment preparation, and transportation of radioactive material, including radioactive waste, and provides that the state requirements are in addition to, not a substitute for, other federal requirements. The commission's authority does not include general regulation of the transport of LLRW or emergency response; therefore, the commission made no change in response to these comments.

Containerization Issues

TRWDF stated that it is unclear whether uncontainerized wastes will be permitted. This requirement should be clarified to bar uncontainerized wastes.

Disposal of uncontainerized Class A LLRW may be permitted at a licensed land disposal facility in Texas in some cases. Some Class A LLRW shipments will be required to be both containerized and placed in an additional containment barrier due to high external radiation levels, as provided in the definition of "Containerized Class A waste" in §336.702(5). Additionally, some Class A LLRW will be required to be containerized, but not placed in an additional barrier, based on the half-life of the radionuclides in the waste or for greater protection against inadvertent intruders in the future as required in §336.733(b). Each of these specific types of waste will require disposal in reinforced concrete containers. Class B and Class C LLRW require containerization and placement in an additional containment barrier in all circumstances. The commission made no change in response to this comment.

One individual stated that the commission should consult all of the scientific studies conducted on Yucca Mountain by the NRC and the EPA before deciding container issues.

Yucca Mountain is proposed as a federal disposal facility for high-level radioactive waste. The site-specific and waste-specific studies that are being conducted as part of the Yucca Mountain evaluation have little applicability to a design of a Texas site for the disposal of LLRW. Specific methods of disposal employed at a repository for high-level radioactive waste would not be appropriate or necessary for the disposal of LLRW. The commission made no change in response to this comment.

Two individuals stated that the commission should ensure that containers will not leak.

Waste emplaced in reinforced concrete containers should not leak during the design life of the container. Radioactive waste characteristics provided in §336.362(b)(2) are intended to ensure that the waste meets minimum requirements for stability to avoid future slumping, collapse, or other failure of disposal units. Furthermore, §336.362(b)(1) contains specific waste characteristics that must be met in order for waste to be acceptable for near-surface land disposal, including restrictions on liquid waste and waste packaging. The commission made no change in response to this comment.

One individual stated that the commission should require that waste materials be deposited in long-lasting containers. Another individual stated that the NRC requires that low-level waste be in solid form and placed in secure containers.

Only certain types of waste are required to be disposed of in reinforced concrete containers. NRC requirements for stabilization or containerization are limited to Class B and Class C LLRW. Texas requirements for containerization extend to some Class A LLRW, as well as all Class B and Class C LLRW. Some Class A LLRW shipments will be required to be both containerized and placed in an additional containment barrier due to high external radiation levels, as provided in the definition of "Containerized Class A waste" in §336.702(5). Additionally, some Class A LLRW will be required to be containerized, but not placed in an additional barrier, based on the half-life of the radionuclides in the waste or for greater protection against inadvertent intruders in the future as required in §336.733(b). Each of these specific types of waste will require disposal in reinforced concrete containers. Class B and Class C LLRW require containerization and placement in an additional containment barrier in all circumstances. The commission made no change in response to this comment.

One individual stated that the waste should be put into containers because relying on the geography of the site for containment is either foolish or criminal. One individual stated that proper containerization is the key to ensuring that the goal of no leaks is attained.

An important part of the federally-mandated performance objectives for disposal of LLRW involves natural site characteristics. Site characteristics, such as frequency and amount of rainfall, surface drainage patterns, subsurface geology, and moisture movement in site soils, greatly influence the long-term performance of an LLRW land disposal facility. Containers can only be relied upon for the design life of the containers, whereas the natural site characteristics will necessarily be relied upon for a much longer term. The commission made no change in response to this comment.

Containerization Issues - Waste Classification

WCS commented that the provision in §336.733(b) should be deleted because the criteria are related to radiation levels or hazard. WCS commented that §336.733(b) is a reclassification of radioactive waste from Class A waste to Class B/C waste and burdens the generator and disposal facility operator without identifying health and safety benefit by the reclassification.

This existing provision is necessary for long-term protection of human health and safety, and the environment. There is no reclassification of Class A LLRW provided in §336.733(b). The classification of LLRW in Texas regulations are consistent with the federal classification standards. The overpack requirements of §336.733(b) are part of the existing rule specifying the use of a container for waste containing radionuclides with half-lives greater than 35 years, including wastes consisting of transuranic radionuclides in concentrations of less than ten nanocuries per gram. Additional containment requirements for transuranic radionuclides and radionuclides with long half-lives are essential and appropriate to ensure that the performance

objectives for the land disposal facility are met. Specifically, the use of overpack containers addresses inadvertent intruder scenarios for this waste beyond the institutional control period of a maximum of 100 years and up to the design life of the overpack container. This protection standard in existing rules allows for further decay of the specific radionuclides in the waste prior to any scenario for potential dose to the public. The commission has modified the existing rule to allow greater regulatory flexibility when considering disposal requirements for wastes with very low concentrations of transuranic radionuclides or other radionuclides with long half-lives. The executive director may consider a licensee's request for an alternative to the containerization requirement on a case-by-case basis. This consideration will be based on the magnitude of the source term and how any alternative disposal method proposed by the licensee will impact the performance objective for the disposal site.

Containerization Issues - Structural Stability

WCS commented that it supports the language added to §336.730(b)(1), and that the provision should be harmonized with existing §336.362(b)(2) structural stability requirements. WCS recommended modifying §336.730(b)(1) to provide: "within a reinforced concrete container and within a reinforced concrete barrier, or within containment structures made of materials technologically equivalent or superior to reinforced concrete to provide stability after disposal in order to meet the performance objectives *in a manner consistent with the requirements of §336.362(b)(2)* of this title."

The commission partially agrees with this comment. Requirements related to structural stability specified in existing §336.362(b)(2) apply to all wastes disposed of at an LLRW land disposal

facility. The requirements specified in §336.730(b)(1) are separate requirements for the use of concrete containers and barriers mandated by statute that are in addition to the waste stability standards specified in §336.362(b)(2). Therefore, §336.730(b)(1) has been modified to eliminate any confusion dealing with the separate requirements for structural stability. Section 336.730(b)(1) as modified now provides for the statutorily-mandated provisions for concrete containers plus additional barriers. The statutorily-mandated barrier requirements do not affect the NRC structural stability requirements.

Containerization Issues - Concrete Containers Insufficient

TRWDF stated that there is no requirement in the rules that any of the containers be designed to prevent leakage. The proposed rules should be revised to require the use of the containers designed to prevent leakage, not merely to maintain their gross physical shape.

The commission disagrees with this comment. Structural stability of the waste is an essential factor in preventing waste migration beyond the institutional control period. Radioactive waste characteristics provided in §336.362(b)(2) are intended to ensure that the waste meets minimum requirements for stability to avoid future slumping, collapse, or other failure of disposal units. Stability requirements ensure that waste does not degrade and affect the overall stability of the site and thereby lead to water infiltration. Furthermore, §336.362(b)(1) contains specific waste characteristics that must be met in order for waste to be acceptable for near-surface land disposal, including restrictions on liquid waste and waste packaging. The commission made no change in response to this comment.

Peak Dose Modeling

WCS commented that the sentence proposed to be added in §336.709 is not appropriate to be included in the regulation because it is not in the federal regulations and is addressed at some length by the NRC in guidance (NUREG-1573). WCS commented that the following should be used for the last sentence in §336.709(1): "*The calculated maximum dose for the period of 10,000 years after closure should be compared to the performance objective in §336.724 for compliance determination. The calculated dose and any peaks for the period beyond 10,000 years shall be used to evaluate the necessity of imposing limits on the inventory received at the land disposal facility*."

Modeling for maximum or "peak" dose is an appropriate approach to performance assessment. In order to evaluate the site-specific maximally exposed individual, the best estimate of maximum dose must be known. Federal requirements place no upper limit to the time frame in which maximum dose must be evaluated. Although the maximum dose period of 10,000 years after closure is discussed in federal guidance documents, federal guidance also discusses any peak dose that may be observed beyond that time frame. Because calculating dose until eternity for all pathways is not a prudent use of resources, an alternative of calculating peak dose time frames is more useful. The commission made no change in response to this comment.

TRAB stated that the term "peak dose" should be better defined.

"Peak dose" is defined as the highest annual dose projected to be received by the reasonably maximally exposed individual. The term as used in §336.709(1) is consistent with federal rules. The commission made no change in response to this comment.

TRWDF urged the agency to maintain the site performance assessment time period at 1,000 years or the time to peak exposure, whichever is longer.

The commission agrees with this comment. Section 336.709(1), relating to technical and environmental analysis, specifically provides for protection of the general population by analysis for "a minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer, is required as the period of analysis to capture the peak dose from the more mobile long-lived radionuclides and to demonstrate the relationship of site suitability to the performance objective in §336.724, (relating to Protection of the General Population from Releases of Radioactivity)." Further, modeling for maximum or "peak" dose is an appropriate approach to performance assessment. In order to evaluate the site-specific maximally exposed individual, the best estimate of maximum dose must be a known. The commission made no change in response to this comment.

Performance Objectives

210 individuals stated that the history of such facilities offers no encouragement that anything less than extraordinarily high standards can offer real security to Texans and Texas.

Historically, LLRW disposal facilities in the United States have leaked. These historical facilities were opened and operated under standards that were much less protective than today's standards. The siting requirements and performance objectives that are federally mandated for proposed LLRW land disposal facilities are the direct result of failed sites and insufficient environmental protection standards that were used in the past.

Two individuals requested that the commission establish standards in Texas that are equal to those in California that require storage vessels made to last 500 years.

HB 1567, §401.218, contains prescriptive and detailed containerization requirements for LLRW. Specifically, some Class A, all Class B, and all Class C LLRW disposed of in Texas must be first placed in reinforced concrete containers and also placed within additional reinforced barriers or structures. The statutorily-mandated inclusion of an additional reinforced barrier or structure in Texas regulations goes beyond provisions for disposal in other states or in federal requirements. The commission made no change in response to this comment.

U.S. Ecology recommended that any license issued include maximum curie limits based on the assumed source term and performance assessment.

The commission agrees with this comment. In meeting the performance objectives, the commission may impose curie limits as part of a license condition. The commission acknowledges the importance of establishing a realistic source term for the site that includes waste

characteristics from Texas Compact generators as well as from federal facilities, if applicable. A desirable source term includes curie concentration values that are based on good data and that can be projected in a conservative fashion. This reliable source term is then the foundation of developing confidence in a performance assessment that estimates potential dose to the public over the long term. The commission made no change in response to this comment.

One individual stated that Texans deserve better than to have this danger forced upon them without strict guidelines on containment, clean-up responsibility, security, material quantities, kinds of materials, and where the site is located.

Existing rules in §336.724 specifically provide for protection of the public by establishing dose limits as a result of any release. The provisions of §336.724 are federally mandated. Performance assessment of an LLRW land disposal facility considers the natural conditions of the proposed site, a detailed waste characterization which includes the projected amounts and concentrations of radionuclides that are planned to be disposed, and inadvertent intruder scenarios, as well as unusual event or accident scenarios. These parameters are then measured against the radiation protection standard of 25 millirem whole body exposure, 75 millirem to the thyroid, or 25 millirem to any other organ of any member of the public. The commission made no change in response to this comment.

LWV-Dallas stated the commission should require a mobility study for tritium and chlorine 36 in the soil moisture below the site.

The commission partially agrees with this comment. Existing rules in §336.708 specifically provide for area and site characteristics including natural radiation background. The evaluation of the unsaturated zone below the site at arid locations is an important part of site-specific characterization performed by an applicant. An administratively complete application for LLRW disposal would include unsaturated zone evaluations based on data collected on a proposed site. Further, the rules under §336.707 require evaluation of technical criteria needed to demonstrate that performance objectives and other applicable technical requirements of Chapter 336, Subchaper H, are met. These evaluations shall include potential for mobility of radionuclides. The commission made no change in response to this comment.

U.S. Ecology commented that requiring information relating to previous disposal of radioactive material at a proposed site is critical in developing a suitable source term for performance assessment.

The commission agrees with this comment. A reliable source term that includes all potentially migrating radionuclides from a site is critical to a defensible and protective performance assessment. Section 336.707(6) includes the required description of any prior disposal of radioactive material at the site. Existing language in §336.708(6) requires consideration of compatibility with current land uses of a proposed site. This requirement is also in federal standards. Texas Health and Safety Code, §401.231(7), includes a requirement for "characterization of the area and disposal facility site . . . for current land uses." The commission made no change in response to this comment.

LWV-Dallas and LWV-Texas urged the commission to require a site design with engineered features capable of preventing leakage for 500 years, instead of the current 100 years.

The commission agrees with this comment. Existing rules in §336.727, relating to stability of the disposal site after closure, specifically provide for long-term stability of the disposal site beyond 500 years. In addition, existing rules in §336.729, relating to disposal site design for near-surface land disposal, specifically provide for site design features intended to achieve long-term stability of the site. The 100-year time period only relates to institutional control and does not apply to the long-term stability of the site. During the institutional control period, the custodial agency provides monitoring and minor maintenance. The commission made no change in response to this comment.

LWV-Dallas and LWV-Texas expressed grave concern about acceptance of mixed waste, hazardous waste, and LLRW at the same disposal site.

HB 1567 specifically provides in Texas Health and Safety Code, §401.221, for the acceptance of mixed waste at the Compact waste disposal facility and the federal facility waste disposal facility. The commission made no change in response to this comment.

LWV-Dallas and LWV-Texas urged the commission to include wording in the rules that requires the use of best management practices and most recent technical information available when designing the site.

The use of relevant, current data and best management practices are keystone principles to engineering practice under 22 TAC §131.151. All design-related documents are required to be sealed by a Texas professional engineer, and accordingly, must adhere to this standard. Application submissions are subject to both the Texas Engineering Practice Act, Texas Occupations Code, Chapter 1001, and the Texas Geoscience Practice Act, Texas Civil Statutes, Article 3271b, as provided by §305.45(a)(8). The commission made no changes in response to this comment.

LWV-Dallas and LWV-Texas expressed concern about potential leakage from a hazardous waste disposal site adjacent to an LLRW disposal site.

Section 336.707(6) includes the required description of any prior disposal of radioactive material at the site. Existing language in §336.708(6) requires consideration of compatibility with current land uses of a proposed site. This requirement is also in federal standards. Texas Health and Safety Code, §401.231(7), includes a requirement for "characterization of the area and disposal facility site. . . for current land uses." "Area" is a broad term that includes nearby facilities that could potentially impact the site. The current or previous disposal of radioactive material, in any concentration, is a relevant consideration in evaluating a proposed site location. Further, potential leakage from an adjacent hazardous waste disposal site is addressed by commission rules in Chapter 335. The commission made no change in response to these comments.

Performance Objectives - Source Term

WCS commented that if the commission intends the use of the term "site" in §336.707(6), the proposed subsection may require a detailed inventory of all radioactive material that has been previously disposed of at the land disposal facility and at any nearby facilities with distance and vicinity undefined. WCS commented that this interpretation is inconsistent with NRC regulations and places an undue burden on any potential applicant whose property is located near existing waste management facilities. WCS commented that §336.728(k) already requires an applicant to evaluate the activities at nearby facilities to show that the impacts of those activities will not affect the ability of the disposal site to meet performance objectives. WCS commented that the final two sentences of §336.707(6) should be modified as: "This description shall include any prior disposal containing *licensed* radioactive material at the *land disposal facility*. This description shall include performance criteria for form and packaging of the waste or radioactive material that has been previously received and will be received *at the land disposal facility*."

The commission disagrees with this comment. The use of the term "site" maintains compatibility with federal regulations for the consideration of the land uses at and near a proposed site. "Site" is defined in §336.702. Texas Health and Safety Code, §401.231(7), requires that an applicant must provide a thorough characterization of the site. This characterization includes a description of previous disposals containing radioactive materials at the site, whether or not licensed by the commission. It is important to have a detailed knowledge of the site, including background radiation and radiation attributed to previous activities. The commission made no change in response to this comment.

Performance Objectives - Performance Assessments

TRWDF recommended improvements to the performance assessments, including issues of background site conditions, waste inventories, potential employee misfeasance or malfeasance, militant intruder scenarios, and radiation protection standards.

The commission disagrees with this comment. Section 336.708 specifically provides for area and site characteristics including natural radiation background. In addition, §336.723 establishes performance objectives related to protection of the public, inadvertant intrusion, and long-term site stability. The applicant must provide a description of the operating plans and physical security systems, under §336.707. Furthermore, §336.707(6) specifically addresses requirements for a description of the types, quantities, and specifications of radioactive material proposed to be received and disposed. Under §336.709, a performance assessment of an LLRW land disposal facility includes consideration of the natural conditions of the proposed site, a detailed waste characterization which includes the projected amounts and concentrations of radionuclides that are planned to be disposed, and intruder, as well as unusual event or accident scenarios. An example of a possible unusual event scenario is an intentionally set fire or explosion of a piece of on-site equipment. All of these parameters are then measured against the radiation protection standard of 25 millirem whole body exposure, 75 millirem to the thyroid, or 25 millirem to any other organ of any member of the public. The commission made no change in response to this comment.

Performance Objectives - Synergistic Effects

TRWDF stated that the synergistic effects of burying chemical and radioactive wastes must be considered, particularly the enhanced migration rates caused by chelating and other complexing agents. TRWDF recommended that the disposal of wastes that include chelating and other complexing materials be prohibited. TRWDF further recommended that consideration of such materials and their effects, should they be inadvertently accepted at a facility, be mandatory components of a facility's performance assessments.

Assessment of the chemical and radiological nature of LLRW proposed for disposal is important in evaluating the overall performance of the disposal site. Section 336.707(6) requires a description of physical, chemical, and radiological characterization of waste to be received, processed, and disposed of at a site. Section 336.707(5) requires characterization of wastes containing chelating agents which may be disposed in an LLRW land disposal facility. Section 336.362(b)(1)(E) prohibits waste readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures or of explosive reaction with water. The commission made no change in response to this comment.

Performance Objectives - Site Testing

TRWDF recommended that prior to licensing, sensitive tests be conducted for tritium (down to one tritium unit) and chlorine-36 in soil beneath the prospective site down to the location of the proposed waste emplacement and below that into the deeper vadose zone.

The commission partially agrees with this comment. Section 336.708 specifically provides for area and site characteristics including natural radiation background. The evaluation of vadose (unsaturated) zone at arid sites is an important part of site-specific characterization performed by a potential applicant. An administratively complete application for LLRW disposal would include vadose zone evaluations based on data collected on a proposed site. The commission made no change in response to this comment.

Performance Objectives - Site Characteristics

TRO stated that it has concerns regarding hydrological criteria and geological suitability requirements. TRO wants the rules to be more specific and to include consideration of both major and minor aquifer formations.

The commission disagrees with this comment. The rules under §§336.707, 336.708, and 336.709 require evaluation of technical criteria for site suitability including hydrology and geology. The evaluation of site-specific geology, including groundwater formations, is part of the site-specific characterization performed by an applicant. In order to complete a technical review of an LLRW disposal application, the commission must have assurance that groundwater protection can be demonstrated. Furthermore, §336.728 requires that the hydrogeologic unit used for disposal cannot discharge groundwater to the surface within the disposal site, and requires that the disposal site provide sufficient depth to the water table so that groundwater shall not intrude into the waste. This section also provides that areas that are the recharge areas of sole source aquifers shall be avoided unless it can be demonstrated that the disposal site will be designed, constructed,

operated, and closed without an unreasonable risk to an aquifer. The commission made no change in response to this comment.

TRWDF stated that the core issue is that the rules should be modified to require site features capable of preventing radionuclide migration to the environment - groundwater, surface water, surface soil, and air. TRWDF recommended that the site characteristics should independently be sufficient so that if the facility design fails to prevent leakage, no radioactivity can reach groundwater, surface water, surface soil, or other aspects of the human environment. One individual stated that it is much easier to contaminate groundwater with radiation than to decontaminate it, and that it is essential to the health and welfare of all Texans who will be drinking and using the groundwater that it not be contaminated. One individual stated that groundwater is not something we have enough of to spare for contamination by radioactive waste, especially in West Texas.

The commission partially agrees with these comments. Site characteristics preventing the migration of radionuclides to the environment are important factors in the protection of public health and safety, and the environment. Section 336.707 requires evaluation of technical criteria needed to demonstrate that performance objectives and applicable technical requirements of Chapter 336, Subchapter H, are met. Section 336.728 requires that the hydrogeologic unit used for disposal cannot discharge groundwater to the surface within the disposal site, and requires that the disposal site provide sufficient depth to the water table so that groundwater shall not intrude into the waste. This section also provides that areas that are the recharge areas of sole source aquifers shall be avoided unless it can be demonstrated that the disposal site will be

designed, constructed, operated, and closed without an unreasonable risk to an aquifer. Section 336.728(d) precludes waste disposal in a 100-year flood plain, a coastal high-hazard area, or a wetland. The evaluation of site-specific geology, including groundwater formations, is part of the site-specific characterization to be performed by an applicant. In order to complete a technical review of an LLRW disposal application, the commission must have assurance that groundwater protection can be demonstrated. Groundwater assessment is specified in §336.708(a)(3), impact to groundwater is specified in §336.705(5), and health impacts associated with groundwater consumption are specified in §336.724. Under §336.709, a performance assessment of an LLRW land disposal facility includes consideration of the natural conditions of the proposed site, detailed waste characterization which includes the projected amounts and concentrations of radionuclides that are planned to be disposed, and an inadvertent intruder scenario, as well as an unusual event or accident scenarios. These parameters are then measured against the radiation protection standard of 25 millirem whole body exposure, 75 millirem to the thyroid, or 25 millirem to any other organ of any member of the public. The commission made no change in response to these comments.

Performance Objectives - Facility Design

TRWDF recommended that the rules be amended to require that prospective violations of the rules, which have occurred frequently at past LLRW sites, be considered as part of the site requirements. The site should be robust enough that even if the rules are violated, no impact on groundwater or the environment should result.

Section 336.716 requires compliance with statutes, rules, and regulations. Compliance with license conditions should be sufficient to prevent impacts to human health and safety, and the environment. The commission may take enforcement actions to remedy violations of commission rules or the license. The commission made no change in response to this comment.

TRWDF stated that a review of the history of past radioactive waste facilities (Farrallon Islands, Maxey Flats, Sheffield, West Valley, Barnwell, Richland, and Beatty) indicates that every one of them failed to keep radioactive waste from migrating into the environment. TRWDF recommended that the rules be revised to require the facility design be based on prevention of leakage and zero tolerance for leakage.

The commission appreciates this comment. Sections 336.707 - 336.709 require evaluation of technical criteria for site suitability including hydrology and geology. Furthermore, these technical criteria are compatible with federal standards that were adopted to address problems at historical sites. The commission made no change in response to this comment.

TRWDF stated that, as drafted, the rules allow designs anticipated to leak, and that leaks occurred far sooner and traveled farther than predicted at other disposal sites. TRWDF recommended that significant conservatism be built into the rules to compensate for the tendency of applicants to under-design and over-predict performance of their facilities. 208 individuals expressed concern that the basic design of the disposal site, as outlined in the rules, assumes that leaking of radioactive materials is acceptable.

One individual stated that all plans for containing nuclear waste are only temporary and that one good rain will spread all the nuclear waste across the Texas plains where it will seep into the aquifer and make the Texas crops unsaleable. The individual requested that the commission contain the waste and monitor the site for leaks. One individual expressed concern that the proposed rules for an LLRW disposal facility may not protect against long-term leaks into the groundwater tables. The individual stated that although West Texas seems desolate at times, one can hardly travel any distance at all without seeing evidences of agriculture which is dependent upon groundwater supplies for its existence. The individual also stated that drinking water is also related, and requested that the commission establish regulations that address long-term leakage from these dump sites. One individual urged the commission to establish regulations that would be sufficient to prevent leakage, which at the very least should require such dangerous materials be stored in a way that leaks can be detected quickly, not after they contaminate a large area or an aquifer. Two individuals requested that the commission ensure that the site is built aboveground for access if and when there is leakage. One individual expressed a belief that the possibility of leakage is high and urged the commission to set strict regulations regarding possible leakage of radioactive waste. One individual expressed concern regarding the safeguarding of deposited wastes, and stated that the commission should require that waste materials be deposited in long-lasting containers and that the entire site be contained to the limit of current engineering capability. 206 individuals stated that the waste is not required to be containerized in a manner that would prevent leaks, nor do the rules take into account the fact that previous predictions of how soon and how fast leaks would occur have all been grossly inaccurate. 206 individuals stated that Texas should have a facility, if any, that is designed not to leak. One individual expressed concern that the facilities where

waste is dumped are not required to be leak proof, and asked if any of the waste disposal company owners would allow this to happen near their home or even in their state?

Site characteristics preventing the migration of radionuclides to the environment are important factors in the protection of public health and safety, and the environment. The applicant is required to incorporate appropriate design features and factors of safety to protect human health and the environment, including factors related to leakage. While a leak-free design is most desirable, leakage is often assumed as a part of a worst-case scenario analysis. The commission will review all engineering design specifications in order to verify that the applicant's proposed design will meet the performance objectives as stated in §336.723. The commission made no change in response to these comments.

One individual expressed concern that the disposal of this type of waste does not have more stringent regulations. The individual stated that although there appears to be nothing but sand in the hinterlands, there are pockets of oil, gas, and other minerals that could cause problems in the storage safety of this material. In addition, although the land has limited population, there are people in close proximity to the area and there are already high incidents of cancer. The individual stated that it does not appear that there will be any studies planned to monitor the potential of increased cancer rates.

Texas Health and Safety Code, §401.223, requires that the Texas Department of Health, the commission, and local public health officials develop a health surveillance survey for the population located in the vicinity of the site. Therefore, monitoring of potential cancers in the

area surrounding an LLRW site will be conducted by state agencies. Additionally, the licensee is required to monitor the perimeter surrounding the site with very sensitive radiation detectors. The licensee is also required to monitor surface water, groundwater, and air which may be migrating from the facility for any releases above prescribed levels. This is required to ensure that dose levels to the public are maintained at levels less than regulatory limits. Maintaining dose levels that are less than regulatory limits will minimize the likelihood of developing cancer. Furthermore, the use of natural resources near the LLRW site, such as oil and gas, and the impact that such use has on human health and the environment is specifically addressed in §336.728. The commission made no change in response to this comment.

Performance Objectives - Radiation Protection Standard

TRWDF stated that the rules would license a facility where doses to the public would result in one fatal cancer in every 1,000 people exposed. Numerous studies indicate that the risk figures relied upon underestimate the true risk by an order of magnitude, resulting in the true risk being 1:50. Most carcinogens are regulated at a one in a million lifetime risk of cancer incidence. TRWDF recommended that the standard should be no leakage, or the standard of permissible exposure and risk should be tightened to be comparable to the hazardous wastes, aiming at a one in a million permissible risk level.

The commission disagrees with this comment. Section 336.724 specifically provides for protection of the public by establishing dose limits as a result of any release. This dose limit is federally-mandated and is a compatibility issue for maintaining Agreement State status. Texas is an

"Agreement State" for the regulation of LLRW disposal under the Atomic Energy Act. As part of that agreement, the rules and policies of Texas must remain compatible with federal standards, subject to federal review. The federal radiation protection standard of 25 millirem whole body exposure, 75 millirem to the thyroid, or 25 millirem to any other organ of any member of the public is required as a matter of compatibility for regulation of maximum permissible dose at an LLRW land disposal facility. The commission made no change in response to this comment.

Site Security

TRWDF recommended that the performance assessments should explicitly require consideration of the impacts of terrorists acts. TRWDF stated that inspectors should have significant duties in assuring that security at the site is adequate to assure protection against terrorism or theft of radioactive materials that could be used for "dirty bomb" purposes. 206 individuals stated that site security ought to be of great importance in these times, especially because a lack of security at current radioactive waste storage facilities was cited as a reason for having an LLRW site. 209 individuals expressed a belief that the LLRW facility ought to have at least the same level of security as a nuclear power plant, and that we cannot afford to be complacent about guarding such toxic substances that are an enormous potential threat to public safety. One individual stated that the physical security at the site must be rigorous. One individual expressed concern that HB 1567 was flawed in that it failed to adequately address issues of "homeland security" in radioactive waste rules.

Site-specific operational and emergency plans are reviewed as part of the comparative review and detailed technical review of the license application. The licensee is required to provide site

security as part of any operations plan. Related to this issue, the NRC is taking the lead to investigate common defense and security at all sites that possess radioactive materials, including those in Texas. Special requirements are being mandated directly by the NRC to many licensees as a result of post-September 11th efforts focused on common defense and security. The commission anticipates that tighter security requirements will be mandated by the NRC for the storage of radioactive material, including radioactive waste. The licensee will be subject to future changes of the Texas Radiation Control Act and the rules of the commission. The commission made no change in response to these comments.

Site Operations - Duties of Resident Inspectors

TRWDF stated that it is important that a strong and effective load check program be instituted, requiring the resident inspectors to independently check the waste that is received to assure that it is as labeled and meets all restrictions.

Duties of the resident inspectors will include checking waste manifesting and packaging, including the accuracy and correctness of shipment labeling and placarding. Waste will not be accepted at the site until a commission-employed resident inspector approves the shipment. The commission made no change in response to this comment.

Concepts

The NRC commented that the commission needed to clarify §336.703 to provide that the concepts of 10 CFR §61.7 guide the application of the rules because "consideration" is not equivalent to adopting by incorporation. TRAB also commented that the provision should be clarified.

The commission agrees with the comment. Section 336.703 has been modified to provide that the concepts and requirements provided in 10 CFR §61.7 guide the application of rules in Subchapter H.

Specific Definitions

WCS commented that the term "hazardous waste" is defined in the rules in two different ways in the definition of "Hazardous waste" and the definition of "Mixed waste." WCS recommended that the definition of "Mixed waste" be modified so that hazardous waste reflects the definition in §335.1 of the commission's rules.

The commission agrees with the comment. The definition of "Mixed waste" in §336.2 was modified to refer to the definition of hazardous waste in Chapter 335.

TRAB recommended adding "1 DAC-hour = 2.5mrem" to the definition of "Individual monitoring" in §336.2.

The commission disagrees with this comment. The definition of "Individual monitoring" is a matter of compatibility with the federal definition. Furthermore, the relationship of DAC-hour to millirem is given in the federal definition of "derived air concentration-hour" in 10 CFR Part 20 and in the state definition of "Derived air concentration-hour (DAC-hour)" in §336.2. The commission made no change in response to this comment.

TRAB stated, insert the words "naturally-occurring" between the words "the" and "background," in the definition of "Distinguishable from background"; otherwise, the definition allows the inclusion of pre-existing man-made radioactivity in the area of interest.

The commission disagrees with this comment. The definition of "Distinguishable from background" is a matter of compatibility with the federal definition. The federal definition of "Distinguishable from background" is provided in 10 CFR Part 20. The commission made no change in response to this comment.

TRAB stated that the definition "Demand respirator" in §336.2(31) is most commonly referred to as an "air purifying respirator."

The commission disagrees with this comment. Demand respirator and air-purifying respirator are separately defined terms in federal regulations. "Demand respirator" is the term used by the NRC in 10 CFR §20.1003. Consistency between state and federal definitions is required for program compatibility. The commission made no change in response to this comment.

WCS commented that the statutory definition of "disposal facility site" should be codified in the definitions in §336.2(36) as *"Disposal facility site–The tract of land on which is located the compact waste disposal facility and the federal facility waste disposal facility, if applicable. The term includes the immediate area surrounding the facility or facilities."*

The commission disagrees with this comment. The term "disposal facility site" may be confused with the existing defined terms "Land disposal facility" and "Disposal site." The commission has added a new definition of "Site" in §336.702 that is consistent with the term "disposal facility site." References to disposal facility site have been changed to defined terms as appropriate.

WCS commented that the definition of "Federal facility waste disposal facility" in §336.2(50) should be revised to clarify that the federal facility waste disposal facility is licensed under both Subchapters H *and J* of Chapter 336.

The commission agrees with this comment. The commission defines federal facility waste disposal facility in §336.2 as an LLRW land disposal facility for the disposal of federal facility waste licensed under Chapter 336, Subchapters H and J. For consistency, the commission defines "Compact waste disposal facility" in §336.2 as an LLRW land disposal facility licensed by the commission under Chapter 336, Subchapter H.

WCS commented that the definition of "Land disposal facility" in §336.2(68) should be modified by adding at the end of the proposed definition: *"The terms "facility" and "disposal facility" are equivalent*

terms when used in this chapter. The compact waste disposal facility and the federal facility waste disposal facility each is a land disposal facility."

The commission partially disagrees with this comment. Land disposal facility is an NRC-defined term that has been designated as an element that Agreement states must maintain as essentially identical; therefore, the definition of "Land disposal facility" cannot be amended. Other commission rules have been modified to use defined terms, such as "Site," "Land disposal facility," and "Disposal site" as appropriate. The commission made no change in response to this comment.

TRAB recommended that the commission add "and low-level radioactive waste" to the end of the sentence in the definition for "Mixed waste" in §336.2(80).

The commission disagrees with this recommendation. The terms "compact waste" and "federal facility waste" are defined to be forms of LLRW. The commission made no change in response to this comment.

TRAB commented that the commission should delete the words "Radiation and" from the term "Radiation and Perpetual Care Account." TRAB recommended that the commission delete "radiation and" for consistency from the term "perpetual care account." TRAB stated that the definition "Radiation and perpetual care account" should be deleted.

The commission disagrees with this recommendation. Definitions are retained for "Perpetual care account" and "Radiation and perpetual care account" in §336.2 because these terms are used interchangeably in HB 1678. HB 1678 states that the radiation and perpetual care account is the perpetual care account. The commission made no change in response to this comment.

TRAB stated that in the definition of "Special nuclear material in quantities not sufficient to form a critical mass" in §336.2, a desired ratio limit of "1" should not be replaced by the word "one" because it implies no level of desired precision. TRAB also stated in the definition of "DAC-hour" the word "five" should be changed to the integer "5."

The commission agrees with these comments and changed the word "one" to the integer "1" in the definition of "Special nuclear material in quantities not sufficient to form a critical mass," and changed the word "five" to the integer "5" in the definition of "Derived air concentration-hour."

WCS commented that the definition of "Containerized Class A waste" in §336.702(5) should be renamed as *"high activity Class A waste"* to avoid confusion with lower activity Class A waste that may be received in containers, but is not required to be managed in the same manner as Class B or Class C waste.

WCS commented that the level specified in the proposed definition of "Containerized Class A waste" in §336.702(5) could be unnecessarily low because it does not appear to be related to waste type, radionuclide inventory, or other stated considerations. WCS commented that the radiation level used to

define high activity waste should be related to and based upon the main principle of disposal, the isolation of the waste, and that the commission should reconsider the level specified and provide a basis for the level that is determined to be appropriate.

The commission disagrees with these comments. High radioactivity waste does not necessarily correspond to a high external dose rate received from waste containers. The term "containerized Class A waste" is not intended to reflect containerization prior to receipt at the site. Rather, "containerized Class A waste" refers to the use of overpacks and additional barriers that must be used during disposal operations. The definition of "Containerized Class A waste" was derived from the definition of "high radiation area" to afford protection to workers and the public. Containerization for disposal will be required of all Class A waste that meets the definition of "Containerized Class A waste." This provision implements Texas Health and Safety Code, §401.218(c), by requiring containerization and use of an additional barrier for certain Class A wastes. The commission made no change in response to this comment.

WCS commented that the phrase "disposal facility" in §336.706(a)(1)(D) and (2)(D) should refer to the defined term "*land disposal facility*." WCS commented that the word "facilities" in §336.706(a)(3) should refer to the "*buildings and structures*" located at the "*land disposal facility*."

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission did not propose changes to §336.706 and therefore cannot make

changes at adoption. Facilities as used in §336.706(a)(3) may include, but is not limited to, buildings and structures. The commission made no change in response to these comments.

WCS commented that the term "on-site" in §336.707(5) should be deleted because the term is ambiguous as it applies to the "land disposal facility" and not all contiguous land that may be owned by an applicant.

The commission disagrees with the comment. The term "on-site" is defined in §336.2 and does not result in any ambiguity. The commission made no change in response to this comment.

WCS commented that the term "site" in §336.707(6) should be "*land disposal facility*."

The commission disagrees with this comment. The use of the term "site" as defined in §336.702 is correct. The commission made no change in response to this comment.

WCS commented that the term "facility" in §336.707(11) should be "*land disposal facility*."

The commission disagrees with this comment; however, the term "facility" has been deleted from §336.707(11) to avoid the use of an undefined term.

WCS commented that the term "site" in §336.708(a)(1) should be "*disposal facility site*" and that "facility" should be "*land disposal facility*."

The commission disagrees with the comment; however, the term "facility" as used in §336.708(a)(1) has been changed to the term "site" to avoid the use of an undefined term. The term "site" is defined in §336.702.

WCS commented that the term "facility" in §336.708(a)(2) should be "*land disposal facility*."

The commission agrees with this comment and changed the term "facility" to the term "land disposal facility" in §336.708(a)(2) to avoid the use of an undefined term.

WCS commented that the term "site" in §336.708(a)(3) should be "*disposal site*."

The commission disagrees with this comment. The use of the term "site" as defined in §336.702 is correct. The commission made no change in response to this comment.

WCS commented that the term "site" in §336.708(a)(6) should be "disposal facility site."

The commission disagrees with this comment. The use of the term "site" as defined in §336.702 is correct. The commission made no change in response to this comment.

TRAB stated that the commission should define the term "reasonable assurance" in §336.709(1).

The use of the term "reasonable assurance" in §336.709 is consistent with the NRC's use of the same term in 10 CFR §61.40, General requirement. Consistency in language and use of terms between federal and state rules is important for program compatibility. The applicant has the burden of proof in demonstrating compliance with the federally-mandated performance objectives. The commission made no change in response to this comment.

WCS commented that term "facilities" in §336.715 is equivalent to "buildings and structures."

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission did not propose changes to §336.715 and therefore cannot make changes at adoption. The term "facilities" as used in §336.715 may include, but is not limited to, buildings and structures. The commission made no change in response to these comments.

WCS commented that the term "facility" in §336.716(d) should be "*land disposal facility*."

The commission agrees with this comment and changed the term "facility" to the term "land disposal facility" in §336.716(d) to avoid the use of an undefined term.

WCS commented that the use of the word "site" in §336.717(a) may be ambiguous and should refer to the "*compact waste disposal facility*." WCS suggested that the following sentence be added to the end of the subsection: "*For purposes of this subsection, the term site refers to the compact waste disposal*

facility." TRAB commented that the last sentence of §336.717(a) should direct the reader to the location of the requirements on the federal facility waste facility.

The commission disagrees with these comments. The term "site" is defined in §336.702; however, the commission changed the term "disposal facility" to the term "compact waste disposal facility" in §336.717(a) to avoid the use of undefined terms. Chapter 336, Subchapter J, provides the requirements for the licensing of the disposal of federal facility waste as set out in §336.901.

WCS commented that the term "site" in §336.718(a) should be "*disposal site*." Alternatively, WCS commented that the phrase "*site closure and stabilization*" should be used.

The commission disagrees with this comment. The use of the term "site" as defined in §336.702 is correct. "Disposal site" as defined in §336.702 refers only to that portion of a land disposal facility which is used for disposal of waste. The commission made no change in response to this comment.

WCS commented that the term "site" in §336.720(a) should be "*disposal site*." Alternatively, WCS commented that the phrase "*site closure and stabilization*" should be used.

The commission disagrees with this comment. The use of the term "site" as defined in §336.702 is correct. "Disposal site" as defined in §336.702 refers only to that portion of a land disposal

facility which is used for disposal of waste. The commission made no change in response to this comment.

TRAB commented that the commission should define the term "reasonable assurance" in §336.723. TRWDF recommended that the criterion for accepting a license application should be higher than the "reasonable assurance" of the proposed rules. The standard should be that the agency has high confidence that the facility can operate without leakage.

The use of the term "reasonable assurance" in §336.723 is consistent with the NRC use of the same term in 10 CFR §61.40, General requirement. Consistency in language and use of terms between federal and state rules is important for program compatibility. The applicant has the burden of proof in demonstrating compliance with the federally-mandated performance objectives. The commission made no change in response to this comment.

WCS commented that the term "site" in §336.725 should be "*disposal site*."

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission did not propose changes to §336.725 and therefore cannot make changes at adoption. The term "site" is defined in §336.702. The commission made no change in response to these comments.

WCS commented that the term "disposal facility" in §336.727 should be "*land disposal facility*."

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission did not propose changes to §336.727 and therefore cannot make changes at adoption. The commission made no change in response to these comments.

WCS commented that §336.728 should be revised in favor of defined terms. The use of "facility" in §336.728(b) should be "*land disposal facility*." The use of "site" in §336.728(k) should be "*disposal site*." The use of "disposal site" in §336.728(m) - (p) should be "*disposal facility site*" consistent with Texas Radiation Control Act, §401.217.

The commission partially agrees with this comment. The terms "facility" and "disposal facility" in §336.728(b) have been changed to the term "land disposal facility" to avoid the use of undefined terms. The commission disagrees with the suggested change in §336.728(k). The use of "site" in §336.728(k) is consistent with that term as defined in §336.702. The use of the term "disposal site" in §336.728(m) - (p) should be the term "site" which is consistent with the term "disposal facility site" in Texas Radiation Control Act, §401.217, and these changes have been made.

WCS commented that the term "site" in §336.729(a) should be "*disposal site*."

The commission disagrees with this comment. The use of the term "site" as defined in §336.702 is correct. "Disposal site" as defined in §336.702 refers only to that portion of a land disposal facility which is used for disposal of waste. The commission made no change in response to this comment.

WCS commented that the term "facility" in §336.729(g) should be "*land disposal facility*."

The commission agrees with this comment and changed the term "disposal facility" to the term "land disposal facility" in §336.729(g) to avoid the use of an undefined term.

WCS commented that the term "site" in §336.730(f) should be "*disposal site*."

The commission disagrees with this comment. The use of the term "site" as defined in §336.702 is correct. "Disposal site" as defined in §336.702 refers only to that portion of a land disposal facility which is used for disposal of waste. The commission made no change in response to this comment.

WCS commented that the term "facility" in §336.731(b) should be "*land disposal facility*."

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission did not propose changes to §336.731 and therefore cannot make

changes at adoption. The term "facility" in the second sentence of §336.731(b) refers to the land disposal facility in the first sentence. The commission made no change in response to these comments.

WCS commented that the term "land disposal facility site" in §336.731(b) should be "*land disposal facility*."

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission did not propose changes to §336.731 and therefore cannot make changes at adoption. The commission made no change in response to these comments.

WCS commented that the term "unplanned events" is not defined in the Texas Radiation Control Act or the commission's rules and creates uncertainty in determining the amount of financial assurance required under the provision. WCS recommended that the following be added to subsection §336.738(a): "*For purposes of this section, the term 'unplanned events' means those processes and events affecting the disposal facility site that are judged not to be reasonably likely to occur during the period the intended performance objective must be achieved, but which are nevertheless sufficiently credible to warrant consideration. Unplanned events may be either natural processes or events or processes and events initiated by human activities other than those activities licensed under this chapter. Processes and events initiated by human activities may only be found to be sufficiently credible to warrant consideration if it is assumed that: (1) The post closure intruder barriers provided pursuant to*

this chapter are sufficiently permanent to serve their intended purpose; (2) the value to future generations of potential resources within the land disposal facility can be assessed adequately under the applicable provisions of this chapter; (3) an understanding of the nature of radioactivity, and an appreciation of its hazards, have been retained in some functioning institutions; (4) institutions are able to assess risk and to take remedial action at a level of social organization and technological competence equivalent to, or superior to, that which was applied in initiating the processes or events concerned; and (5) relevant records are preserved, and remain accessible, for several hundred years after permanent closure."

The term "unplanned events" is taken directly from Texas Health and Safety Code, §401.241. The statute provided no specific guidance; however, unplanned events would include site-specific evaluation for such occurrences as tornados, hurricanes, earthquakes, etc. These criteria will be evaluated on an application-by-application basis as part of the comparative merit and technical reviews. The commission made no change in response to this comment.

WCS commented that the term "site" in §336.740(h)(2)(E) should be "*disposal site*."

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. The commission did not propose changes to §336.740 and therefore cannot make changes at adoption. The term "Site" is defined in §336.702. The commission made no change in response to these comments.

WCS commented that the term "licenses" in §336.801 is ambiguous and should be replaced with the term "*compact waste disposal facility*."

The commission partially agrees with this comment. The term "licenses" has been changed to "license" because only one license may be issued. The term "compact waste disposal facility" would not be correct. Other changes were made to §336.801(a) to specify that Subchapter I only applies to the initial application process. Additionally, part of a sentence that was inadvertently left out at proposal was added to describe the license authorization for the disposal of federal facility waste.

WCS commented that the phrase "facility or facilities for disposal of LLRW" in §336.803 should be "compact waste disposal facility."

The commission partially agrees with this comment. The term "compact waste disposal facility" would not be correct. The phrase "facility or facilities" has been changed to "Compact waste disposal facility and a federal facility waste disposal facility, if applicable." This change was made to reflect what operations are applicable to a license application.

TRAB stated that the rules reference "reasonable" and asked for some examples so that there is an indication of what is considered "reasonable." TRAB also asked if qualifiers can be given? TRAB stated the term "reasonableness" in §336.805(3) provides a weak standard and should be modified to provide a more objective standard.

The language in §336.805(3) is taken verbatim from Texas Health and Safety Code, §401.219. Further, what constitutes "reasonableness" will be determined by the commission on a case-by-case basis; thus, no qualifiers can be given for these site-specific subjective criteria. The commission made no change in response to this comment.

WCS commented that the term "disposal unit" in §336.901 should be "land disposal facility." WCS also commented that the phrase "and distinct" should be added after "separate" in §336.901.

The commission partially agrees with this comment and has changed the wording in §336.901 to "a separate land disposal facility on the same site." The change provides consistency with Texas Health and Safety Code, §401.216, and the definition changes made in response to comment. The compact waste disposal facility and a federal facility waste disposal facility, if authorized, would be separate, adjacent land disposal facilities at the same site.

Volume Limitation of Federal Facility Waste

WCS commented that §336.905(b) is inconsistent with the Texas Radiation Control Act and places an impermissible burden on an applicant that seeks authorization as part of its original license application for a federal facility waste disposal facility with an overall capacity of more than 3,000,000 cubic yards and less than 6,000,000 cubic yards. WCS commented that Texas Radiation Control Act, §401.216(c), is clear: the capacity of the federal facility waste disposal facility shall increase unless an affirmative finding to the contrary is made by the commission. WCS commented that requiring an amendment application to increase the licensed capacity, even where the disposal of federal facility waste has been

conducted without incident, is burdensome on an applicant who seeks to authorize as part of its original license application a federal facility waste disposal capacity of more than 3,000,000 cubic yards and up to 6,000,000 cubic yards. WCS also commented that the proposed language is inconsistent with common regulatory approaches which require an applicant to declare in the initial application the full extent of the authority to be sought and shields the public from the full intentions of an applicant wishing to ultimately dispose of the 6,000,000 cubic yards authorized by the Texas Radiation Control Act. WCS commented that the rule should provide that the commission must review and offer public comment on, the protectiveness of the facility assuming the total volume of the waste (up to 6,000,000 cubic yards) that the applicant anticipates will be accepted at the site. WCS also commented that the rule should provide that if the agency concludes that the facility will be protective if the maximum amount of waste authorized by the statute is accepted, the permit must include a provision that on the fifth anniversary of the date of issuance will increase the amount authorized to be accepted at the facility up to 6,000,000 cubic yards.

The commission disagrees with this comment. Texas Health and Safety Code, §401.216(c), establishes a stair-step approach to volume limitations at a proposed Texas LLRW land disposal facility. The statute identifies the first step of this approach as an initial volume limitation of 3,000,000 cubic yards, with further limitations on containerized waste of 300,0000 cubic yards. The site performance under this initial step would be closely evaluated during the first five years of facility operations to determine the impact of a potential increase in the volume of federal facility waste. One of the unknown parameters that must be part of this stair-step evaluation of site performance is the impact of the receipt of Compact waste. Compact waste has no statutory

volume limitations in the first five years of site operations, including no limit on radionuclide concentrations or the type of LLRW received. Therefore, the actual inventory of radionuclides from Compact waste may impact the ability of the site to increase the receipt of certain types of waste from federal facilities. An initial volume limitation of 6,000,000 cubic yards for an LLRW land disposal facility in Texas is not the limitation imposed by the statute. Doubling of the capacity of an LLRW land disposal facility requires a major evaluation of the most current data available from the operating site. This process requires the commission to be able to support its finding with a thorough and defensible technical review.

Waste Classification

LWV-Dallas stated that no waste greater than Class C should be allowed. TRWDF recommended that no waivers or exemptions from the prohibition of wastes greater than Class C wastes should be permitted. NRC commented that the definition of federal facility waste should exclude greater than Class C waste to meet compatibility requirements because Texas cannot regulate the disposal of this waste. Moreover, the disposal of greater than Class C waste is the responsibility of the federal government under the Low-level Radioactive Waste Policy Act. TRWDF stated that the rules should either eliminate the distinction between minor and non-minor license amendments, or specify in clear terms the universe of changes that may be characterized as a minor amendment. The rules should also state that a minor amendment may never authorize disposal of special wastes, disposal of greater than Class C wastes, changes in the waste profile of either facility, or changes in waste packaging requirements.

The commission partially agrees with these comments. Greater than Class C LLRW is generally unacceptable for near-surface disposal. Furthermore, the disposal of greater than Class C waste is a federal responsibility. The rules do not contemplate the acceptance of greater than Class C LLRW for disposal at a site licensed by the commission. Section 336.1(a)(1) already excludes application of the state requirements to persons subject to regulation by the NRC or to radioactive material in the possession of federal agencies. In response to the NRC comment, the commission changed the definition of "Federal facility waste" in §336.2 to exclude greater than Class C LLRW for disposal at a site licensed by the commission. Additionally, the commission changed §336.701(b) to add a new paragraph (5) to exclude greater than Class C LLRW for disposal at a site licensed by the commission. The category of "special waste" in the commission rules does not apply to LLRW.

Under the Texas Administrative Procedure Act, the commission is required to provide interested persons a reasonable opportunity to comment on a proposed rule or proposed changes to an existing rule. Minor amendment is defined by reference in §305.62(c)(2); however, the commission did not propose changes to §305.62 and therefore cannot make changes at adoption. By definition, a minor amendment can only be an amendment that improves or maintains the permitted quality or method of disposal of waste. Whether an amendment may be classified as minor will be determined by the commission on a case-by-case basis.

LWV-Dallas stated that waste "averaging" should be prohibited. TRWDF recommended that concentration averaging to get around the greater than Class C prohibition should be barred. TRWDF

stated that the rules should state that a minor amendment may never authorize averaging of wastes to reduce activity concentrations.

The commission disagrees with these comments. Existing rules in §336.362(a)(8) allow for concentration averaging and are consistent with NRC regulations in 10 CFR §61.55(a)(8). The use of appropriate averaging techniques will be evaluated by the commission on a case-by-case basis as part of the review of waste acceptance criteria. The commission made no change in response to these comments.

LWV-Dallas stated that limits should be placed on the amounts of certain nuclides. 208 individuals stated that the types and amounts of radioactive waste are practically unrestricted by these rules, and that they were disturbed by the idea that Texas is going to be the guinea pig for an unprecedented combination and concentration of radioactive materials mixed, in some cases, with hazardous waste. One individual stated an impression that the amount and radioactivity levels of the wastes allowed exceed any reasonable level and need to be severely limited. One individual stated that the law does nothing to cap existing regulations and thus does not regulate how much or how many types of radioactive substances that can be transported through Texas, past many homes and businesses, and be disposed near someone's hometown.

There are concentration limitations by radionuclide incorporated into the classification system required in §336.362(a) in Appendix E for LLRW. There are concentration limitations above which waste is classified as greater than Class C LLRW. Greater than Class C LLRW is

generally unacceptable for near-surface disposal. Furthermore, the disposal of greater than Class C waste is a federal responsibility. The rules do not contemplate the acceptance of greater than Class C LLRW for disposal at a site licensed by the commission. In response to an NRC comment, the commission changed the definition of "Federal facility waste" in §336.2 to exclude greater than Class C LLRW for disposal at a site licensed by the commission. Additionally, the commission changed §336.701(b) to add a new paragraph (5) to exclude greater than Class C LLRW for disposal at a site licensed by the commission.

Texas Health and Safety Code, §401.216(c), establishes a stair-step approach to volume limitations at a proposed Texas LLRW land disposal facility for the disposal of federal facility waste. The statute identifies the first step of this approach as an initial volume limitation of 3,000,000 cubic yards, with further limitations on containerized waste of 300,000 cubic yards. The site performance under this initial step would be closely evaluated during the first five years of facility operations to determine the impact of a potential increase in the volume of federal facility waste. An increase to 6,000,000 cubic yards of federal facility waste after the first five years is possible with a major amendment to the license application.

U.S. Ecology recommended that any application projecting significant volumes of DOE waste describe the procedures, processes, and related quality assurance program elements proposed at both the generator location and the disposal site to ensure that DOE waste classification, form, packaging, and disposal complies with 10 CFR §61.55.

The commission agrees with the comment that a license application for LLRW disposal should include reliable waste characterization information for federal facility waste planned for disposal, if applicable. Section 336.733(a) requires that all waste received for disposal, including DOE waste, comply with equivalent standards in 10 CFR §61.55.

212 individuals stated that the levels of radioactivity to be allowed in wastes at this facility are extremely dangerous and remain so for so many years as to be beyond realistic contemplation, and that there needs to be much more stringent restrictions on amounts, concentrations, and radioactivity of the wastes disposed.

Section 336.707(6), relating to specific technical information, requires a complete description of the types, quantities, and specifications of the wastes to be received. This provision ensures that the performance objectives for protection of the public and the environment will be met. In addition, existing rules impose limits on long-lived radionuclides and require that the waste be structurally stable or in concrete containers prior to disposal. The commission made no change in response to this comment.

Waste Classification - No Radionuclide or Concentration Limitations

TRWDF stated that no radionuclide is barred from disposal no matter how toxic or long-lived. TRWDF recommended that the regulations be changed to permit disposal in LLRW facilities of only those radionuclides that are truly low-level in terms of toxicity and longevity. An appropriate standard would be that no radionuclide with a hazardous life (20 half-lives) greater than the institutional control period should be permitted in the facility. TRWDF stated that the lack of limits on the amounts of individual radionuclides is of concern in estimating potential impacts on humans because of the vast difference in toxicity and longevity of various isotopes. TRWDF recommended that quantity limits be established, limits that would keep the wastes in an LLRW facility to actual low-level wastes. This would be in keeping with the low level of design and site requirements proposed, in comparison to those of a high level repository. TRWDF recommended that the rules include concentration limits for all radionuclides, limits that would actually restrict the concentrations to genuinely low-level wastes. TRWDF recommended that the concentration limits for the radionuclides for which limits are currently contemplated be markedly reduced so as to reflect genuinely low-level radioactive waste. The levels for cesium-137, plutonium-239, and other long-lived transuranics and strontium-90 should be reduced by approximately three orders of magnitude.

The commission disagrees with this comment. Concentration limitations are imposed in §336.362 on long-lived radionuclides. Section 336.733(b), relating to waste classification, characteristics, and labeling, provides for additional disposal requirements for certain types of waste such as concrete canisters or equivalent containment structures. There are concentrations above which waste is classified as greater than Class C LLRW. Greater than Class C LLRW is generally

unacceptable for near-surface disposal. Furthermore, the disposal of greater than Class C waste is a federal responsibility. The rules do not contemplate the acceptance of greater than Class C LLRW for disposal at a site licensed by the commission. In response to an NRC comment, the commission changed the definition of "Federal facility waste" in §336.2 to exclude greater than Class C LLRW for disposal at a site licensed by the commission. Additionally, the commission changed §336.701(b) to add a new paragraph (5) to exclude greater than Class C LLRW for disposal at a site licensed by the commission. Low-level radioactive waste is a statutorily-defined classification of radioactive waste. The definition of "low-level radioactive waste" is provided in Texas Health and Safety Code, §401.004. The Texas definition is consistent with the federal definition of LLRW as a matter of compatibility.

SUBCHAPTER A: GENERAL PROVISIONS

§§336.1, 336.2, 336.9, 336.11

STATUTORY AUTHORITY

The amendments and new section are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The amendments and new section are also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.1. Scope and General Provisions.

(a) Except as otherwise specifically provided, the rules in this chapter apply to all persons who dispose of radioactive substances, except byproduct material defined by §336.2(13)(B) of this title (relating to Definitions).

(1) However, nothing in these rules shall apply to any person to the extent that person is subject to regulation by the United States Nuclear Regulatory Commission (NRC) or to radioactive material in the possession of federal agencies.

(2) Any United States Department of Energy contractor or subcontractor or any NRC contractor or subcontractor of the following categories operating within the state, is exempt from the rules in this chapter, with the exception of any applicable fee set forth in Subchapter B of this chapter, to the extent that such contractor or subcontractor under his contract receives, possesses, uses, transfers, or acquires sources of radiation:

(A) prime contractors performing work for the United States Department of Energy at a United States government-owned or controlled site, including the transportation of radioactive material to or from the site and the performance of contract services during temporary interruptions of transportation;

(B) prime contractors of the United States Department of Energy performing research in or development, manufacture, storage, testing, or transportation of atomic weapons or components thereof;

(C) prime contractors of the United States Department of Energy using or operating nuclear reactors or other nuclear devices in a United States government-owned vehicle or vessel; and

(D) any other prime contractor or subcontractor of the United States Department of Energy or the NRC when the state and the NRC jointly determine that:

(i) the exemption of the prime contractor or subcontractor is authorized by law; and

(ii) under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety or the environment.

(3) Radioactive material that is physically received from the federal government by a non-federal facility is subject to state jurisdiction except as provided in paragraph (2) of this subsection.

(4) The rules of this chapter do not apply to transportation of radioactive materials. This provision does not exempt a transporter from other applicable requirements.

(5) The rules in this chapter do not apply to the disposal of radiation machines as defined in this subchapter or electronic devices which produce non-ionizing radiation.

(b) Regulation by the State of Texas of source material, byproduct material, and special nuclear material in quantities not sufficient to form a critical mass is subject to the provisions of the agreement between the State of Texas and the NRC and to Part 150 of Title 10 Code of Federal Regulations (10 CFR Part 150) (Exemptions and Continued Regulatory Authority in Agreement States and in Offshore Waters Under Section 274). (A copy of the Texas agreement, "Articles of Agreement between the United States Nuclear Regulatory Commission and the State of Texas for Discontinuance of Certain Commission Regulatory Authority and Responsibility Within the State Pursuant to Section 274 of the Atomic Energy Act of 1954, as Amended" (Agreement), may be obtained from this commission.) Under the Agreement and 10 CFR Part 150, the NRC retains certain regulatory authorities over source material, byproduct material, and special nuclear material in the State of Texas. Persons in the State of Texas are not exempt from the regulatory requirements of the NRC with respect to these retained authorities.

(c) No person may receive, possess, use, transfer, or dispose of radioactive material, which is subject to the rules in this chapter, in such a manner that the standards for protection against radiation prescribed in these rules are exceeded.

(d) Each person licensed by the commission under this chapter shall confine possession, use, and disposal of licensed radioactive material to the locations and purposes authorized in the license.

(e) No person may cause or allow the release of radioactive material, which is subject to the rules in this chapter, to the environment in violation of this chapter or of any rule, license, or order of the Texas Commission on Environmental Quality (commission).

(f) No person shall:

(1) dispose of low-level radioactive waste on site, except as authorized under §336.501(b) of this title (relating to Scope and General Provisions);

(2) receive low-level radioactive waste from other persons for the purpose of disposal, except for a person specifically licensed for the disposal of low-level radioactive waste; or

(3) dispose of radioactive materials other than low-level radioactive waste, except for diffuse naturally occurring radioactive material waste having concentrations of less than 2000 pCi/g radium-226 or radium-228.

(g) For the purpose of this chapter, any time the term “low-level radioactive waste” is used, the provision also applies to accelerator-produced radioactive material.

§336.2. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, or as described in Chapter 3 of this title (relating to Definitions), unless the context clearly indicates otherwise. Additional definitions used only in a certain subchapter will be found in that subchapter.

(1) **Absorbed dose** - The energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the rad and the gray (Gy).

(2) **Accelerator-produced radioactive material** - Any material made radioactive by exposing it to the radiation from a particle accelerator.

(3) **Activity** - The rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).

(4) **Adult** - An individual 18 or more years of age.

(5) **Agreement state** - Any state with which the United States Nuclear Regulatory Commission (NRC) or the Atomic Energy Commission has entered into an effective agreement under the Atomic Energy Act of 1954, §274b, as amended through October 24, 1992 (Public Law 102-486).

(6) **Airborne radioactive material** - Any radioactive material dispersed in the air in the form of dusts, fumes, particulates, mists, vapors, or gases.

(7) **Airborne radioactivity area** - A room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exist in concentrations:

(A) in excess of the derived air concentrations (DACs) specified in §336.359, Appendix B, Table I, Column 1, of this title (relating to Annual Limits on Intake (ALI) and Derived Air Concentrations (DAC) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sanitary Sewerage); or

(B) to a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6% of the ALI or 12 DAC-hours.

(8) **Air-purifying respirator -** A respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

(9) **Annual limit on intake (ALI)** - The derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the "reference man" that would result in a

committed effective dose equivalent of 5 rems (0.05 sievert) or a committed dose equivalent of 50 rems (0.5 sievert) to any individual organ or tissue. ALI values for intake by ingestion and by inhalation of selected radionuclides are given in Table I, Columns 1 and 2, of §336.359, Appendix B, of this title.

(10) **As low as is reasonably achievable (ALARA)** - Making every reasonable effort to maintain exposures to radiation as far below the dose limits in this chapter as is practical, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of ionizing radiation and licensed radioactive materials in the public interest.

(11) **Assigned protection factor (APF)** - The expected workplace level of respiratory protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

(12) **Atmosphere-supplying respirator** - A respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

(13) **Background radiation** - Radiation from cosmic sources; non-technologically enhanced naturally-occurring radioactive material, including radon (except as a decay product of source or special nuclear material) and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee. "Background radiation" does not include radiation from radioactive materials regulated by the commission, Texas Department of Health, NRC, or an Agreement State.

(14) **Becquerel (Bq)** - See §336.4 of this title (relating to Units of Radioactivity).

(15) **Bioassay** - The determination of kinds, quantities, or concentrations, and, in some cases, the locations of radioactive material in the human body, whether by direct measurement (in vivo counting) or by analysis and evaluation of materials excreted or removed from the human body. For purposes of the rules in this chapter, "radiobioassay" is an equivalent term.

(16) **Byproduct material** -

(A) A radioactive material, other than special nuclear material, that is produced in or made radioactive by exposure to radiation incident to the process of producing or using special nuclear material; or

(B) The tailings or wastes produced by or resulting from the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes, and other tailings having similar radiological characteristics. Underground ore bodies depleted by these solution extraction processes do not constitute "byproduct material" within this definition.

(17) **CFR** - Code of Federal Regulations.

(18) **Class** - A classification scheme for inhaled material according to its rate of clearance from the pulmonary region of the lung. Materials are classified as D, W, or Y, which applies to a range of clearance half-times: for Class D (Days) of less than ten days, for Class W (Weeks) from 10 to 100 days, and for Class Y (Years) of greater than 100 days. For purposes of the rules in this chapter, "lung class" and "inhalation class" are equivalent terms.

(19) **Collective dose** - The sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

(20) **Committed dose equivalent ($H_{T,50}$) (CDE)** - The dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

(21) **Committed effective dose equivalent ($H_{E,50}$) (CEDE)** - The sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues.

(22) **Compact** - The Texas Low-Level Radioactive Waste Disposal Compact established under Texas Health and Safety Code, §403.006 and Texas Low-Level Radioactive Waste Disposal Compact Consent Act, Public Law Number 105 - 236 (1998).

(23) **Compact waste** - Low-level radioactive waste that:

(A) is generated in a host state or a party state; or

(B) is not generated in a host state or a party state, but has been approved for importation to this state by the compact commission under §3.05 of the compact established under Texas Health and Safety Code, §403.006.

(24) **Compact waste disposal facility** - The low-level radioactive waste land disposal facility licensed by the commission under Subchapter H of this chapter (relating to Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste) for the disposal of compact waste.

(25) **Constraint (dose constraint)** - A value above which specified licensee actions are required.

(26) **Critical group** - The group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(27) **Curie (Ci)** - See §336.4 of this title.

(28) **Declared pregnant woman** - A woman who has voluntarily informed the licensee, in writing, of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

(29) **Decommission** - To remove (as a facility) safely from service and reduce residual radioactivity to a level that permits:

(A) release of the property for unrestricted use and termination of license; or

(B) release of the property under restricted conditions and termination of the license.

(30) **Deep-dose equivalent (H_d) (which applies to external whole-body exposure)** - The dose equivalent at a tissue depth of one centimeter (1,000 milligrams/square centimeter).

(31) **Demand respirator** - An atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

(32) **Depleted uranium** - The source material uranium in which the isotope uranium-235 is less than 0.711%, by weight, of the total uranium present. Depleted uranium does not include special nuclear material.

(33) **Derived air concentration (DAC)** - The concentration of a given radionuclide in air which, if breathed by the "reference man" for a working year of 2,000 hours under conditions of light work (inhalation rate of 1.2 cubic meters of air/hour), results in an intake of one ALI. DAC values are given in Table I, Column 3, of §336.359, Appendix B, of this title.

(34) **Derived air concentration-hour (DAC-hour)** - The product of the concentration of radioactive material in air (expressed as a fraction or multiple of the derived air concentration for each radionuclide) and the time of exposure to that radionuclide, in hours. A licensee shall take 2,000 DAC-hours to represent one ALI, equivalent to a committed effective dose equivalent of 5 rems (0.05 sievert).

(35) **Disposal** - With regard to low-level radioactive waste, the isolation or removal of low-level radioactive waste from mankind and mankind’s environment without intent to retrieve that low-level radioactive waste later.

(36) **Disposable respirator -** A respirator for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent exhaustion, physical damage, or end-of-service-life renders it unsuitable for use. Examples of this type of respirator are a disposable half-mask respirator or a disposable escape-only self-contained breathing apparatus (SCBA).

(37) **Distinguishable from background** - The detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

(38) **Dose** - A generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of the rules in this chapter, "radiation dose" is an equivalent term.

(39) **Dose equivalent (H_T)** - The product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the rem and sievert (Sv).

(40) **Dose limits** - The permissible upper bounds of radiation doses established in accordance with the rules in this chapter. For purposes of the rules in this chapter, "limits" is an equivalent term.

(41) **Dosimetry processor** - An individual or organization that processes and evaluates individual monitoring devices in order to determine the radiation dose delivered to the monitoring devices.

(42) **Effective dose equivalent (H_E)** - The sum of the products of the dose equivalent to each organ or tissue (H_T) and the weighting factor (w_T) applicable to each of the body organs or tissues that are irradiated.

(43) **Embryo/fetus** - The developing human organism from conception until the time of birth.

(44) **Entrance or access point** - Any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed radioactive materials. This includes portals of sufficient size to permit human access, irrespective of their intended use.

(45) **Exposure** - Being exposed to ionizing radiation or to radioactive material.

(46) **Exposure rate** - The exposure per unit of time.

(47) **External dose** - That portion of the dose equivalent received from any source of radiation outside the body.

(48) **Extremity** - Hand, elbow, arm below the elbow, foot, knee, and leg below the knee. The arm above the elbow and the leg above the knee are considered part of the whole body.

(49) **Federal facility waste** - Low-level radioactive waste that is the responsibility of the federal government under the Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (42 United States Code, §2021b - 2021j). Excluded from this definition is low-level radioactive waste that is classified as greater than Class C in §336.362 of this title (relating to Appendix E. Classification and Characteristics of Low-Level Radioactive Waste).

(50) **Federal facility waste disposal facility** - A low-level radioactive waste land disposal facility for the disposal of federal facility waste licensed under Subchapters H and J of this chapter.

(51) **Filtering facepiece (dust mask)** - A negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, not equipped with elastomeric sealing surfaces and adjustable straps.

(52) **Fit factor** - A quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

(53) **Fit test** - The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

(54) **General license** - An authorization granted by an agency under its rules which is effective without the filing of an application with that agency or the issuance of a licensing document to the particular person.

(55) **Generally applicable environmental radiation standards** - Standards issued by the EPA under the authority of the Atomic Energy Act of 1954, as amended through October 4, 1996, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

(56) **Gray (Gy)** - See §336.3 of this title (relating to Units of Radiation Exposure and Dose).

(57) **Hazardous waste** - Hazardous waste as defined in §335.1 of this title (relating to Definitions).

(58) **Helmet** - A rigid respiratory inlet covering that also provides head protection against impact and penetration.

(59) **High radiation area** - An area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 millisievert) in one hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

(60) **Hood -** A respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

(61) **Host state** - A party state in which a compact facility is located or is being developed. The State of Texas is the host state under the Texas Low-Level Radioactive Waste Disposal Compact, §2.01, established under Texas Health and Safety Code, §403.006.

(62) **Individual** - Any human being.

(63) **Individual monitoring** - The assessment of:

(A) dose equivalent by the use of individual monitoring devices; or

(B) committed effective dose equivalent by bioassay or by determination of the time-weighted air concentrations to which an individual has been exposed, that is, DAC-hours; or

(C) dose equivalent by the use of survey data.

(64) **Individual monitoring devices** - Devices designed to be worn by a single individual for the assessment of dose equivalent such as film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, and personal ("lapel") air sampling devices.

(65) **Inhalation class** - See "Class."

(66) **Inspection** - An official examination and/or observation including, but not limited to, records, tests, surveys, and monitoring to determine compliance with the Texas Radiation Control Act (TRCA) and rules, orders, and license conditions of the commission.

(67) **Internal dose** - That portion of the dose equivalent received from radioactive material taken into the body.

(68) **Land disposal facility** - The land, buildings and structures, and equipment which are intended to be used for the disposal of low-level radioactive wastes into the subsurface of the land. For purposes of this chapter, a "geologic repository" as defined in 10 CFR §60.2 as amended through October 27, 1988 (53 FR 43421) (relating to Definitions - high-level radioactive wastes in geologic repositories) is not considered a "land disposal facility."

(69) **Lens dose equivalent (LDE)** - The external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm^2).

(70) **License -** See "Specific license."

(71) **Licensed material** - Radioactive material received, possessed, used, processed, transferred, or disposed of under a license issued by the commission.

(72) **Licensee** - Any person who holds a license issued by the commission in accordance with the Texas Health and Safety Code, Chapter 401 (Radioactive Materials and Other Sources of Radiation) and the rules in this chapter. For purposes of the rules in this chapter, "radioactive material licensee" is an equivalent term. Unless stated otherwise, "licensee" as used in the rules of this chapter means the holder of a "specific license."

(73) **Licensing state** - Any state with rules equivalent to the Suggested State Regulations for Control of Radiation relating to, and having an effective program for, the regulatory control of naturally occurring or accelerator-produced radioactive material (NARM) and which has been designated as such by the Conference of Radiation Control Program Directors, Inc.

(74) **Loose-fitting facepiece** - A respiratory inlet covering that is designed to form a partial seal with the face.

(75) **Lost or missing licensed radioactive material** - Licensed material whose location is unknown. This definition includes material that has been shipped but has not reached its planned destination and whose location cannot be readily traced in the transportation system.

(76) **Low-level radioactive waste** -

(A) Except as provided by subparagraph (B) of this paragraph, low-level radioactive waste means radioactive material that:

(i) is discarded or unwanted and is not exempt by a Texas Department of Health rule adopted under the Texas Health and Safety Code, §401.106;

(ii) is waste, as that term is defined by 10 CFR §61.2; and

(iii) is subject to:

(I) concentration limits established under this chapter; and

(II) disposal criteria established under this chapter.

(B) Low-level radioactive waste does not include:

(i) high-level radioactive waste defined by 10 CFR §60.2;

(ii) spent nuclear fuel as defined by 10 CFR §72.3;

(iii) transuranic waste as defined in this section;

(iv) byproduct material as defined by paragraph (16)(B) of this section;

(v) naturally occurring radioactive material (NORM) waste; or

(vi) oil and gas NORM waste.

(C) When used in this section, the references to 10 CFR sections mean those CFR sections as they existed on September 1, 1999, as required by Texas Health and Safety Code, §401.005.

(77) **Lung class** - See "Class."

(78) **Member of the public** - Any individual except when that individual is receiving an occupational dose.

(79) **Minor** - An individual less than 18 years of age.

(80) **Mixed waste** - A combination of hazardous waste, as defined in 30 TAC §335.1 of this title (relating to Definitions) and low-level radioactive waste. The term includes compact waste and federal facility waste containing hazardous waste.

(81) **Monitoring -** The measurement of radiation levels, radioactive material concentrations, surface area activities, or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of the rules in this chapter, "radiation monitoring" and "radiation protection monitoring" are equivalent terms.

(82) **Naturally occurring or accelerator-produced radioactive material (NARM)** - Any naturally occurring or accelerator-produced radioactive material except source material or special nuclear material.

(83) **Naturally occurring radioactive material (NORM) waste** - Solid, liquid, or gaseous material or combination of materials, excluding source material, special nuclear material, and byproduct material, that:

(A) in its natural physical state spontaneously emits radiation;

(B) is discarded or unwanted; and

(C) is not exempt under rules of the Texas Department of Health adopted under Texas Health and Safety Code, §401.106.

(84) **Near-surface disposal facility** - A land disposal facility in which low-level radioactive waste is disposed of in or within the upper 30 meters of the earth's surface.

(85) **Negative pressure respirator (tight fitting)** - A respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

(86) **Nonstochastic effect** - A health effect, the severity of which varies with the dose and for which a threshold is believed to exist. Radiation-induced cataract formation is an example of a nonstochastic effect. For purposes of the rules in this chapter, "deterministic effect" is an equivalent term.

(87) **Occupational dose** - The dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation and/or to radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. Occupational dose does not include dose received from background radiation, as a patient from medical practices, from voluntary participation in medical research programs, or as a member of the public.

(88) **Oil and gas naturally occurring radioactive material (NORM) waste** - Naturally occurring radioactive material (NORM) waste that constitutes, is contained in, or has contaminated oil and gas waste as that term is defined in the Texas Natural Resources Code, §91.1011.

(89) **On-site** - The same or geographically contiguous property that 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 that the property owner controls and to which the public does not have access, is also considered on-site property.

(90) **Party state** - Any state that has become a party to the compact in accordance with Article VII of the Texas Low-Level Radioactive Waste Disposal Compact, established under Texas Health and Safety Code, §403.006.

(91) **Perpetual care account** - The radiation and perpetual care account as defined in this section.

(92) **Personnel monitoring equipment** - See "Individual monitoring devices."

(93) **Planned special exposure** - An infrequent exposure to radiation, separate from and in addition to the annual occupational dose limits.

(94) **Positive pressure respirator** - A respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

(95) **Powered air-purifying respirator (PAPR)** - An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

(96) **Pressure demand respirator** - A positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

(97) **Principal activities** - Activities authorized by the license which are essential to achieving the purpose(s) for which the license is issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

(98) **Public dose** - The dose received by a member of the public from exposure to radiation and/or radioactive material released by a licensee, or to any other source of radiation under the control of the licensee. It does not include occupational dose or doses received from background radiation, as a patient from medical practices, or from voluntary participation in medical research programs.

(99) **Qualitative fit test (QLFT)** - A pass/fail test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

(100) **Quality factor (Q)** - The modifying factor listed in Table I or II of §336.3 of this title that is used to derive dose equivalent from absorbed dose.

(101) **Quantitative fit test (QNFT)** - An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

(102) **Quarter (Calendar quarter)** - A period of time equal to one-fourth of the year observed by the licensee (approximately 13 consecutive weeks), providing that the beginning of the first quarter in a year coincides with the starting date of the year and that no day is omitted or duplicated in consecutive quarters.

(103) **Rad** - See §336.3 of this title.

(104) **Radiation** - Alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of the rules in this chapter, "ionizing radiation" is an equivalent term. Radiation, as used in this chapter, does not include non-ionizing radiation, such as radio- or microwaves or visible, infrared, or ultraviolet light.

(105) **Radiation and Perpetual Care Account** - An account in the general revenue fund established for the purposes specified in the Texas Health and Safety Code, §401.305.

(106) **Radiation area** - Any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 millisievert) in

one hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

(107) **Radiation machine** - Any device capable of producing ionizing radiation except those devices with radioactive material as the only source of radiation.

(108) **Radioactive material** - A naturally-occurring or artificially-produced solid, liquid, or gas that emits radiation spontaneously.

(109) **Radioactive substance** - Includes byproduct material, radioactive material, low-level radioactive waste, source material, special nuclear material, source of radiation, and NORM waste, excluding oil and gas NORM waste.

(110) **Radioactivity -** The disintegration of unstable atomic nuclei with the emission of radiation.

(111) **Radiobioassay** - See "Bioassay."

(112) **Reference man** - A hypothetical aggregation of human physical and physiological characteristics determined by international consensus. These characteristics shall be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base. A description of "reference man" is contained in the International

Commission on Radiological Protection report, ICRP Publication 23, "Report of the Task Group on Reference Man."

(113) **Rem** - See §336.3 of this title.

(114) **Residual radioactivity** - Radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR Part 20.

(115) **Respiratory protection equipment** - An apparatus, such as a respirator, used to reduce an individual's intake of airborne radioactive materials. For purposes of the rules in this chapter, "respiratory protective device" is an equivalent term.

(116) **Restricted area** - An area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building shall be set apart as a restricted area.

(117) **Roentgen (R)** - See §336.3 of this title.

(118) **Sanitary sewerage** - A system of public sewers for carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned or operated by the licensee.

(119) **Sealed source** - Radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions that are likely to be encountered in normal use and handling.

(120) **Self-contained breathing apparatus (SCBA)** - An atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

(121) **Shallow-dose equivalent (H_s) (which applies to the external exposure of the skin of the whole body or the skin of an extremity)** - The dose equivalent at a tissue depth of 0.007 centimeter (seven milligrams/square centimeter).

(122) **SI** - The abbreviation for the International System of Units.

(123) **Sievert (Sv)** - See §336.3 of this title.

(124) **Site boundary** - That line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee.

(125) **Source material** -

(A) Uranium or thorium, or any combination thereof, in any physical or chemical form; or

(B) ores that contain, by weight, 0.05% or more of uranium, thorium, or any combination thereof. Source material does not include special nuclear material.

(126) **Special form radioactive material** - Radioactive material which is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule and which has at least one dimension not less than five millimeters and which satisfies the test requirements of 10 CFR §71.75 as amended through September 28, 1995 (60 FR 50264) (Transportation of License Material).

(127) **Special nuclear material** -

(A) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the NRC, under the provisions of the Atomic Energy Act of 1954, §51, as amended through November 2, 1994 (Public Law 103 - 437), determines to be special nuclear material, but does not include source material; or

(B) any material artificially enriched by any of the foregoing, but does not include source material.

(128) **Special nuclear material in quantities not sufficient to form a critical mass -** Uranium enriched in the isotope 235 in quantities not exceeding 350 grams of contained uranium-235; uranium-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of these in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed 1. For example, the following quantities in combination would not exceed the limitation: (175 grams contained U-235/350 grams) + (50 grams U-233/200 grams) + (50 grams Pu/200 grams) = 1.

(129) **Specific license** - A licensing document issued by an agency upon an application filed under its rules. For purposes of the rules in this chapter, "radioactive material license" is an equivalent term. Unless stated otherwise, "license" as used in this chapter means a "specific license."

(130) **State** - The State of Texas.

(131) **Stochastic effect** - A health effect that occurs randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose

without threshold. Hereditary effects and cancer incidence are examples of stochastic effects. For purposes of the rules in this chapter, "probabilistic effect" is an equivalent term.

(132) **Supplied-air respirator (SAR) or airline respirator** - An atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

(133) **Survey** - An evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, and/or presence of radioactive materials or other sources of radiation. When appropriate, this evaluation includes, but is not limited to, physical examination of the location of radioactive material and measurements or calculations of levels of radiation or concentrations or quantities of radioactive material present.

(134) **Termination** - As applied to a license, a release by the commission of the obligations and authorizations of the licensee under the terms of the license. It does not relieve a person of duties and responsibilities imposed by law.

(135) **Tight-fitting facepiece -** A respiratory inlet covering that forms a complete seal with the face.

(136) **Total effective dose equivalent (TEDE)** - The sum of the deep-dose equivalent for external exposures and the committed effective dose equivalent for internal exposures.

(137) **Total organ dose equivalent (TODE)** - The sum of the deep-dose equivalent and the committed dose equivalent to the organ receiving the highest dose as described in §336.346(a)(6) of this title (relating to Records of Individual Monitoring Results).

(138) **Transuranic waste** - For the purposes of this chapter, wastes containing alpha emitting transuranic radionuclides with a half-life greater than five years at concentrations greater than 100 nanocuries/gram.

(139) **Type A quantity (for packaging)** - A quantity of radioactive material, the aggregate radioactivity of which does not exceed A_1 for special form radioactive material or A_2 for normal form radioactive material, where A_1 and A_2 are given in or shall be determined by procedures in Appendix A to 10 CFR Part 71 as amended through September 28, 1995 (60 FR 50264) (Packaging and Transportation of Radioactive Material).

(140) **Type B quantity (for packaging)** - A quantity of radioactive material greater than a Type A quantity.

(141) **Unrefined and unprocessed ore** - Ore in its natural form before any processing, such as grinding, roasting, beneficiating, or refining.

(142) **Unrestricted area** - Any area that is not a restricted area.

(143) **User seal check (fit check) -** An action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

(144) **Very high radiation area** - An area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose in excess of 500 rads (five grays) in one hour at one meter from a source of radiation or one meter from any surface that the radiation penetrates.

(145) **Violation** - An infringement of any provision of the Texas Radiation Control Act (TRCA) or of any rule, order, or license condition of the commission issued under the TRCA or this chapter.

(146) **Week** - Seven consecutive days starting on Sunday.

(147) **Weighting factor (w_T) for an organ or tissue (T)** - The proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of w_T are:

Figure: 30 TAC §336.2(147)

Organ Dose Weighting Factors

Organ or Tissue	W_T
Gonads	0.25
Breast	0.15
Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder	0.30[1]
Whole body	1.00[2]

1. The value 0.30 results from 0.06 for each of five remainder organs, excluding the skin and the lens of the eye, that receive the highest doses.

2. For the purpose of weighting the external whole body dose (for adding it to the internal dose) a single weighting factor, $w_T = 1.0$, has been specified. The use of other weighting factors for external exposure will be approved on a case-by-case basis until such time as specific guidance is issued.

(148) **Whole body** - For purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knee.

(149) **Worker** - An individual engaged in activities under a license issued by the commission and controlled by a licensee, but does not include the licensee.

(150) **Working level (WL)** - Any combination of short-lived radon daughters in one liter of air that will result in the ultimate emission of 1.3×10^5 million electron volts (MeV) of potential alpha particle energy. The short-lived radon daughters are: for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

(151) **Working level month (WLM)** - An exposure to one working level for 170 hours (2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month).

(152) **Year** - The period of time beginning in January used to determine compliance with the provisions of the rules in this chapter. The licensee shall change the starting date of the year used to determine compliance by the licensee provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

§336.9. Deliberate Misconduct.

(a) Any licensee, applicant for a license, employer of a licensee or applicant, or any contractor (including a supplier or consultant), subcontractor, employee of a contractor, or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this chapter, may not:

(1) engage in deliberate misconduct that causes or would have caused if not detected, a licensee or applicant to be in violation of any rule, regulation, or order, or any term, condition, or limitation of any license issued by the commission; or

(2) deliberately submit to the commission, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the commission.

(b) A person who violates subsection (a)(1) or (2) of this section may be subject to enforcement action under Texas Health and Safety Code, §401.393 and Texas Water Code, Chapter 7.

(c) For the purposes of subsection (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the commission; or

(2) constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

§336.11. Memorandum of Understanding With the Texas Department of Health Regarding Radiation Control Functions.

The Memorandum of Understanding between the Texas Department of Health and the Texas Natural Resource Conservation Commission Regarding Radiation Control Functions is adopted by reference in §7.118 of this title (relating to Memorandum of Understanding between the Texas Department of Health and the Texas Natural Resource Conservation Commission Regarding Radiation Control Functions). However, the full text of the memorandum of understanding can be found only in Texas Department of Health rule 25 TAC §289.101 (relating to Memorandum of Understanding between the Texas Department of Health and the Texas Natural Resource Conservation Commission Regarding Radiation Control Functions). If a copy of this document is required and cannot be obtained from the Internet, a copy can be requested from the Texas Commission on Environmental Quality, Chief Clerk's Office, P.O. Box 13087, Austin, Texas 78711-3087, (512) 239-3300.

SUBCHAPTER B: RADIOACTIVE SUBSTANCE FEES

§§336.103, 336.111, 336.113

STATUTORY AUTHORITY

The amendments are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The amendments are also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.103. Schedule of Fees for Subchapter H Licenses.

(a) An application for a low-level radioactive waste disposal site license under Subchapter H of this chapter (relating to Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste) shall be accompanied by a nonrefundable application processing fee of $500,000. If the commission's costs in processing an application under Subchapter H of this chapter (relating to Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste) exceed the $500,000 application processing fee, the commission may assess and collect additional fees from the applicant to recover the costs. Recoverable costs include costs incurred by the commission for administrative review, technical review, and hearings associated with the application.

(b) An applicant shall submit an annual fee for the actual costs incurred by the commission for hearings associated with an application for a low-level radioactive waste disposal site under Subchapter H of this chapter. The executive director shall send an invoice for the amount of the costs incurred during the period September 1 through August 31 of each year. Payment shall be made within 30 days following the date of the invoice.

(c) A holder of a license for a low-level radioactive waste disposal site issued under Subchapter H of this chapter shall submit an annual license fee for the services received. This fee shall recover for the state the actual expenses arising from the regulatory activities associated with the license. This fee shall include reimbursement for the salary and other expenses of the resident inspectors as provided by §336.743 of this title (relating to Resident Inspector). The executive director shall send an invoice for

the amount of the costs incurred during the period September 1 through August 31 of each year. Payment shall be made within 30 days following the date of the invoice.

§336.111. Method of Payment of Fees.

Fee payments prescribed by this subchapter shall be made in cash or by check or money order made payable to the Texas Commission on Environmental Quality. The payments may be made by personal delivery to the Financial Administration Cashier Office, Texas Commission on Environmental Quality, in Austin, Texas, or mailed to the Texas Commission on Environmental Quality, Cashier's Office, MC 214, P.O. Box 13088, Austin, Texas 78711-3088.

§336.113. Failure to Pay Prescribed Annual Fees.

(a) A licensee failing to make payment of the fees when due under this chapter shall be assessed penalties and interest in accordance with Chapter 12 of this title (relating to Payment of Fees).

(b) In any case where the executive director finds that a licensee has failed to pay a fee prescribed by this subchapter by the due date, the executive director may implement compliance procedures.

(c) In any case where the executive director finds that a fixed nuclear facility has failed to pay fees for emergency response activities, including training, within 90 days following the date of the

invoice, the executive director may recommend and the commission may issue an order to show cause why those services should not be terminated.

SUBCHAPTER C: GENERAL DISPOSAL REQUIREMENTS

§§336.203, 336.207, 336.209, 336.211

STATUTORY AUTHORITY

The amendments are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The amendments are also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.203. License Required.

No person shall dispose of radioactive material unless that person has a license from the Texas Commission on Environmental Quality, or an exemption from the Texas Department of Health under Texas Health and Safety Code, §401.106(a).

§336.207. General Requirements for Issuance of a License.

An application may be approved if the commission determines that the requirements set forth in the applicable subchapter of this chapter and Chapter 305, Subchapter C of this title (relating to Application for Permit) have been met and that:

(1) the applicant is qualified by training and experience to conduct the proposed radioactive material disposal activities in accordance with the rules in this chapter in such a manner as to protect and minimize danger to the public health and safety and the environment;

(2) the applicant's proposed equipment, facilities, and procedures are adequate to protect and minimize danger to the public health and safety and the environment;

(3) the issuance of the license will not be inimical to public health and safety nor have a long-term detrimental impact on the environment;

(4) the applicant has acquired the title to and any interest in land and buildings, including the surface and mineral estates, on which the facility or facilities are to be located by either having acquired:

(A) an undivided ownership of the buildings, surface estate, and mineral estate in fee simple through purchase or completed condemnation; or

(B) an undivided ownership of the buildings and surface estate, along with an exemption, granted by the commission in accordance with federal law for use of a surface use agreement, in lieu of acquiring fee simple title to the mineral estate; and

(5) if applicable, the applicant has demonstrated financial capability to conduct the proposed activity, including all costs associated with decommissioning, decontamination, disposal, reclamation, and any long-term care and surveillance.

§336.209. Issuance of License.

Upon a determination that an application meets the requirements of the Texas Health and Safety Code, Chapter 401 and the commission rules relating to radioactive material licensing, the commission may issue a license authorizing the proposed activity.

§336.211. General Requirements for Radioactive Material Disposal.

(a) Unless otherwise exempted, a licensee shall dispose of licensed material, as appropriate to the type of licensed material, only:

(1) by transfer to an authorized recipient as provided in §336.331(g) and (h) of this title (relating to Transfer of Radioactive Material) or in Subchapter H of this chapter (relating to Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste);

(2) by transfer to a recipient authorized in another state by license issued by the United States Nuclear Regulatory Commission or an Agreement State or to the United States Department of Energy;

(3) by decay in storage as authorized by law;

(4) by release in effluents within the limits specified in §336.313 of this title (relating to Dose Limits for Individual Members of the Public);

(5) as authorized under §336.213 of this title (relating to Method of Obtaining Approval of Proposed Disposal Procedures);

(6) as authorized under §336.215 of this title (relating to Disposal by Release into Sanitary Sewerage);

(7) as authorized under §336.225 of this title (relating to Disposal of Specific Wastes); or

(8) as specifically authorized by commission license issued under this chapter.

(b) A person must be specifically licensed to receive waste containing licensed material from other persons for:

(1) treatment prior to disposal;

(2) treatment by incineration;

(3) decay in storage; or

(4) disposal at a land disposal facility.

(c) The processing and storage of radioactive material is subject to applicable rules of the Texas Department of Health (TDH), except as provided in subsection (d) of this section.

(d) The receipt, storage, and/or processing of radioactive materials, except for byproduct material under the jurisdiction of the TDH and oil and gas naturally occurring radioactive material waste, received at a licensed commercial radioactive material disposal facility for the explicit purpose of disposal at that facility shall be regulated in accordance with 25 TAC §289.101(d)(1) (relating to Memorandum of Understanding Between the Texas Department of Health and the Texas Natural Resource Conservation Commission Regarding Radiation Control Functions).

(e) The on-site disposal of low-level radioactive waste is prohibited, except as provided by this section. The commission may, on request or its own initiative, authorize on-site disposal of low-level radioactive waste on a specific basis at any facility at which licensed low-level radioactive waste disposal operations began before September 1, 1989, if, after evaluation of the specific characteristics of the waste, the disposal site, and the method of disposal, the commission finds that the continuation of the disposal activity will not constitute a significant risk to public health and safety and to the environment. Persons subject to this subsection shall be licensed under Subchapter F of this chapter (relating to Licensing of Alternative Methods of Disposal of Radioactive Material).

(f) The disposal of low-level radioactive waste received from other persons is prohibited, except by a person that is specifically licensed under Subchapter H of this chapter.

SUBCHAPTER D: STANDARDS FOR PROTECTION AGAINST RADIATION

§336.305, §336.363

STATUTORY AUTHORITY

The amendments are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The amendments are also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.305. Occupational Dose Limits for Adults.

(a) The licensee shall control the occupational dose to individual adults, except for planned special exposures under §336.310 of this title (relating to Planned Special Exposures), to the following dose limits:

(1) an annual limit, which is the more limiting of:

(A) the total effective dose equivalent being equal to 5 rems (0.05 sievert); or

(B) the sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 50 rems (0.5 sievert).

(2) the annual limits to the lens of the eye, to the skin of the whole body, and to the skin of the extremities, which are:

(A) a lens dose equivalent of 15 rems (0.15 sievert), and

(B) a shallow-dose equivalent of 50 rems (0.5 sievert) to the skin of the whole body or to the skin of any extremity.

(b) Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, shall be subtracted from the limits for planned special exposures that the individual may receive during the current year and during the individual's lifetime. See §336.310(5)(A) and (B) of this title (relating to Planned Special Exposures).

(c) The assigned deep-dose equivalent must be for the part of the body receiving the highest exposure. The assigned and shallow-dose equivalent must be the dose averaged over the contiguous ten square centimeters of skin for the part of the body receiving the highest exposure. The deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure or the results of individual monitoring are unavailable.

(d) Derived air concentration (DAC) and annual limit on intake (ALI) values are specified in Table I of §336.359, Appendix B, of this title (relating to Annual Limits on Intake (ALI) and Derived Air Concentrations (DAC) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sanitary Sewerage) and may be used to determine the individual's dose and to demonstrate compliance with the occupational dose limits. See §336.346 of this title (relating to Records of Individual Monitoring Results).

(e) In addition to the annual dose limits, the licensee shall limit the soluble uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity. See note 3 of §336.359,

Appendix B, of this title (relating to Annual Limits on Intake (ALI) and Derived Air Concentrations (DAC) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sanitary Sewerage).

(f) The licensee shall reduce the dose that an individual may be allowed to receive in the current year by the amount of occupational dose received while employed by any other person. See §336.309(e) of this title (relating to Determination of Prior Occupational Dose).

§336.363. Appendix F. Requirements for Receipt of Low-Level Radioactive Waste for Disposal at Licensed Land Disposal Facilities and Uniform Manifests.

(a) Manifest requirements for shipments received at licensed land disposal facilities.

(1) Manifest forms required.

(A) The operator of a licensed low-level radioactive waste land disposal facility shall not receive for disposal any waste which does not have a completed manifest which reflects the information requested on applicable United States Nuclear Regulatory Commission (NRC) Forms 540 (Uniform Low-Level Radioactive Waste Manifest (Shipping Paper)) and 541 (Uniform Low-Level Radioactive Waste Manifest (Container and Waste Description)) and, if necessary, on an applicable NRC Form 542 (Uniform Low-Level Radioactive Waste Manifest (Manifest Index and Regional Compact Tabulation)), as those forms and requirements are prescribed in 10 Code of Federal

Regulations (CFR) §61.80, as amended (relating to Licensing Requirements for Land Disposal of Radioactive Waste) and 10 CFR §20.2006, as amended (relating to Standards for Protection Against Radiation). The NRC Forms 540 and 540A must be completed and must physically accompany the waste shipment received at the licensed land disposal facility. Upon agreement between the shipper and the licensed land disposal facility, NRC Forms 541 and 541A and 542 and 542A may be completed, transmitted, and stored in electronic media with the capability for producing legible, accurate, and complete records on the respective forms.

(B) Copies of manifests required by this appendix may be legible carbon copies, photocopies, or computer printouts that reproduce the data in the format of the uniform manifest.

(C) This appendix includes information requirements of the United States Department of Transportation (DOT), as codified in 49 CFR Part 172. Specific information on hazardous, medical, or other waste that is required to meet EPA rules, as codified in 40 CFR Parts 259, 261, or elsewhere, is not addressed in this appendix and must be provided on the required EPA forms. However, the required EPA forms must accompany the Uniform Low-Level Radioactive Waste Manifest required by this appendix.

(2) Definitions. Terms used in this appendix have the definitions set forth as follows:

(A) Computer-readable medium - Means that the regulatory agency's computer can transfer the information from the medium into its memory.

(B) NRC Forms 540, 540A, 541, 541A, 542, and 542A - Official NRC forms referenced in this appendix, as those forms and requirements are prescribed in 10 CFR §61.80, as amended and 10 CFR §20.2006, as amended. Forms received by the licensed land disposal facility need not be the originals of these forms provided that any substitute forms are equivalent to the original documentation in respect to content, clarity, size, and location of information. Upon agreement between the shipper and the licensed land disposal facility, NRC Forms 541 (and 541A) and 542 (and 542A) may be completed, transmitted, and stored in electronic media. The electronic media must have the capability for producing legible, accurate, and complete records in the format of the uniform manifest.

(C) Shipper - For purposes of the rules in this appendix, the waste generator, waste collector, or waste processor who offers low-level radioactive waste for transportation and consigns the waste to a licensed land disposal facility operator.

(D) Shipping paper - NRC Form 540 and, if required, NRC Form 540A, as those forms and requirements are prescribed in 10 CFR §61.80, as amended, which include the information required by DOT in 49 CFR Part 172.

(E) Uniform Low-Level Radioactive Waste Manifest or uniform manifest - The combination of NRC Forms 540, 541, and, if necessary, 542, and their respective continuation sheets (Forms 540A, 541A, and 542A) as needed, or equivalent, as those forms and requirements are prescribed in 10 CFR §61.80, as amended.

(3) Information requirements. The uniform manifest for waste received for disposal at a licensed land disposal facility shall include all information required by instructions accompanying the forms and by 10 CFR §61.80, as amended. This information shall include, as appropriate, general information, shipment information, disposal container and waste information, uncontainerized waste information, multi-generator disposal container information, and certifications.

(b) Control and tracking.

(1) The licensed land disposal facility operator shall acknowledge receipt of the waste within one week of receipt by returning, as a minimum, a signed copy of NRC Form 540 to the shipper, as this form and requirements are prescribed in 10 CFR §61.80, as amended and 10 CFR §20.2006 as amended through March 27, 1995 (60 FR 15663). The shipper to be notified is that who last possessed the waste and transferred the waste to the operator. If a discrepancy exists between materials listed on the uniform manifest and materials received, copies or electronic transfer of the affected forms must be returned indicating the discrepancy.

(2) The land disposal facility operator shall maintain copies of all completed manifests and electronically store the information required by §336.740(i) of this title (relating to Maintenance of Records and Reports) until the commission terminates the license.

(3) The land disposal facility operator shall notify the shipper, the Texas Department of Health, and the executive director when any shipment, or part of a shipment, has not arrived within 60 days after receipt of an advance manifest, unless notified by the shipper that the shipment has been canceled.

SUBCHAPTER F: LICENSING OF ALTERNATIVE METHODS OF DISPOSAL OF RADIOACTIVE MATERIAL

§336.501

STATUTORY AUTHORITY

The amendment is adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The amendment is also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.501. Scope and General Provisions.

(a) This subchapter establishes alternative criteria, terms, and conditions under which the commission may issue, amend, or renew a license for on-site disposal of radioactive material generated in the person's activities, not otherwise specifically authorized in this chapter.

(b) Except as provided by this subsection, the commission shall not authorize new or additional facilities or the expansion of existing facilities for the on-site disposal of low-level radioactive waste, except to a person specifically authorized by law for low-level radioactive waste disposal. The commission may, on request or its own initiative, authorize, under this subchapter, on-site disposal of low-level radioactive waste on a specific basis at any facility at which low-level radioactive waste disposal operations began before September 1, 1989, if after evaluation of the specific characteristics of the waste, the disposal site, and the method of disposal, the commission finds that the continuation of the disposal activity will not constitute a significant risk to the public health and safety and to the environment.

(c) No person authorized to dispose of radioactive material under this subchapter shall receive radioactive material for the purpose of disposal from other persons, sources, other facilities owned or operated by the applicant or licensee, or any other off-site locations.

SUBCHAPTER H: LICENSING REQUIREMENTS FOR NEAR-SURFACE LAND DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

§§336.701 - 336.705, 336.707 - 336.709, 336.711, 336.716 - 336.718, 336.720, 336.723, 336.728 - 336.730, 336.733, 336.735 - 336.738, 336.743

STATUTORY AUTHORITY

The amendments and new sections are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The amendments and new sections are also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.701. Scope and General Provisions.

(a) This subchapter establishes the procedures, criteria, and terms and conditions upon which the commission issues a license for the near-surface land disposal of low-level radioactive wastes and accelerator-produced radioactive material received from other persons. The rules in this subchapter apply to disposal of low-level radioactive waste and accelerator-produced radioactive material as defined in §336.2 of this title (relating to Definitions). For the purpose of this subchapter, the term "low-level radioactive waste" includes accelerator-produced radioactive material. If there is a conflict between the rules of the commission and the rules of this subchapter, the rules of this subchapter shall prevail. No person shall engage in disposal of low-level radioactive waste received from other persons except as authorized in a specific license issued under this subchapter. A licensee under this subchapter shall conduct processing of low-level radioactive waste received for disposal at the licensed site, incidental to the disposal of that waste, in accordance with provisions of the commission license which authorizes the disposal.

(b) A licensee authorized to dispose of low-level radioactive waste under the rules in this subchapter shall not accept for disposal:

(1) high-level radioactive waste as defined in 10 Code of Federal Regulations (CFR) §60.2 as amended through October 27, 1988 (53 FR 43421) (Definitions - high-level radioactive wastes in geologic repositories);

(2) byproduct material as defined in §336.2(13)(B) of this title;

(3) spent or irradiated nuclear fuel;

(4) waste that is not generally acceptable for near-surface disposal as specified in §336.362 of this title (relating to Appendix E. Classification and Characteristics of Low-Level Radioactive Waste); or

(5) waste that exceeds Class C limitations as specified in §336.362 of this title.

(c) In addition to the requirements of this subchapter, all licensees, unless otherwise specified, are subject to the requirements of Subchapters A - E and G of this chapter (relating to General Provisions; Radioactive Substance Fees; General Disposal Requirements; Standards for Protection Against Radiation; Notices, Instructions, and Reports to Workers and Inspections; and Decommissioning Standards). For Subchapter H licensees, the decommissioning and license termination criteria in Subchapter G of this chapter applies only to the ancillary surface facilities.

(d) On-site disposal of low-level radioactive waste at any site authorized under §336.501(b) of this title (relating to Scope and General Provisions), is not subject to licensing under this subchapter.

(e) Shipment and transportation of low-level radioactive waste to a licensed land disposal facility in Texas is subject to applicable rules of the Texas Department of Health, United States

Department of Transportation, and United States Nuclear Regulatory Commission. Each shipment of low-level radioactive waste to a licensed land disposal facility in Texas is subject to inspection by the Texas Department of Health before shipment.

§336.702. Definitions.

Terms used in this subchapter are defined in §336.2 of this title (relating to Definitions). Additional terms used in this subchapter have the following definitions.

(1) **Active maintenance** - Any significant remedial activity needed during the period of institutional control to maintain a reasonable assurance that the performance objectives in §336.724 of this title (relating to Protection of the General Population from Releases of Radioactivity) and §336.725 of this title (relating to Protection of Individuals from Inadvertent Intrusion) are met. Active maintenance includes ongoing activities such as the pumping and treatment of water from a disposal unit or one-time measures such as replacement of a disposal unit cover. Active maintenance does not include custodial activities such as repair of fencing, repair or replacement of monitoring equipment, revegetation, minor additions to soil cover, minor repair of disposal unit covers, and general disposal site upkeep such as mowing grass.

(2) **Buffer zone** - A portion of the disposal site that is controlled by the licensee and that lies under the disposal units and between the disposal units and the boundary of the disposal site.

(3) **Chelating agent** - A chemical or complex which causes an ion, usually a metal, to be joined in the same molecule by relatively stable bonding, e.g., amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxycarboxylic acids, and polycarboxylic acids (e.g., citric acid, carbolic acid, and gluconic acid).

(4) **Commencement of major construction** - Any clearing of land, excavation, or other substantial action that would adversely affect the environment of a land disposal facility. The term does not mean disposal site exploration, necessary roads for disposal site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the disposal site or the protection of environmental values.

(5) **Containerized Class A waste** - Class A low-level radioactive waste which presents a hazard because of high radiation levels. High radiation levels are radiation levels from an unshielded container that could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 millisievert) in one hour at 30 centimeters from any surface of the container that the radiation penetrates.

(6) **Custodial agency** - A government agency designated to act on behalf of the government owner of the disposal site.

(7) **Disposal site** - That portion of a land disposal facility which is used for disposal of waste. It consists of disposal units and a buffer zone.

(8) **Disposal unit** - A discrete portion of the disposal site into which waste is placed for disposal. For near-surface disposal, the disposal unit is usually a trench.

(9) **Engineered barrier** - A man-made structure or device that is intended to improve the land disposal facility's ability to meet the performance objectives in this subchapter.

(10) **Explosive material** - Any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

(11) **Government agency** - Any executive department, commission, independent establishment, or corporation, wholly or partly owned by the United States of America or the State of Texas and which is an instrumentality of the United States or the State of Texas; or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the government.

(12) **Hydrogeologic unit** - Any soil or rock unit or zone which by virtue of its porosity or permeability, or lack thereof, has a distinct influence on the storage or movement of groundwater.

(13) **Inadvertent intruder** - A person who might occupy the disposal site after closure and engage in normal activities, such as agriculture, dwelling construction, or other pursuits in which the person might be unknowingly exposed to radiation from the waste.

(14) **Intruder barrier** - A sufficient depth of cover over the waste that inhibits contact with waste and helps to ensure that radiation exposures to an inadvertent intruder meet the performance objectives set forth in this subchapter, or engineered structures that provide equivalent protection to the inadvertent intruder.

(15) **Monitoring** - Observing and making measurements to provide data to evaluate the performance and characteristics of the disposal site.

(16) **Pyrophoric material** -

(A) Any liquid that ignites spontaneously in dry or moist air at or below 130 degrees Fahrenheit (54.5 degrees Celsius); or

(B) Any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

(17) **Reconnaissance-level information** - Any information or analysis that can be retrieved or generated without the performance of new comprehensive site-specific investigations. Reconnaissance-level information includes, but is not limited to, relevant published scientific literature;

drilling records required by the commission or other state agencies, such as the Railroad Commission of Texas and the Texas Natural Resources Information System; and reports of governmental agencies.

(18) **Site** - The contiguous land area where any land disposal facility or activity is physically located or conducted including adjacent land used in connection with the land disposal facility or activity, and includes soils and groundwater contaminated by radioactive material. Activity includes the receipt, storage, processing, or handling of radioactive material for purposes of disposal at a land disposal facility.

(19) **Site closure and stabilization** - Those actions that are taken upon completion of operations that prepare the disposal site for custodial care and that assure that the disposal site remain stable and not need ongoing active maintenance.

(20) **Stability** - Structural stability.

(21) **Surveillance** - Observation of the disposal site for purposes of visual detection of need for maintenance, custodial care, evidence of intrusion, and compliance with other license and regulatory requirements.

(22) **Waste** - See "low-level radioactive waste" as defined in §336.2 of this title.

§336.703. Concepts.

The concepts and requirements provided in 10 Code of Federal Regulations §61.7, as amended, guide the application of rules in this subchapter.

§336.704. Applications for License of Compact Waste Disposal Facility.

(a) Notwithstanding any other section in this chapter, an application for a license to receive, possess, and dispose of low-level radioactive waste from others at the compact waste disposal facility shall be subject to the application selection process in Subchapter I of this chapter (relating to Compact Waste Disposal Facility Application Selection Process). The license issued under this chapter is the license for the compact waste disposal facility. The commission may not issue more than one license for a single compact waste disposal facility. Licensing of the disposal of federal facility waste must meet the requirements of Subchapters H and J of this chapter (relating to Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste; and Federal Facility Waste Disposal Facility).

(b) The compact waste disposal facility licensed under this subchapter is the regional disposal facility established and operated under the compact established under Texas Health and Safety Code, Chapter 403, for purposes of the federal Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (42 United States Code, §2021b - 2021j).

§336.705. Content of Application.

An application for a license to receive, possess, and dispose of low-level radioactive waste from other persons by near-surface land disposal shall consist of, but is not limited to, the information specified in Chapter 305 of this title (relating to Consolidated Permits), §336.706 of this title (relating to General Information), §336.707 of this title (relating to Specific Technical Information), §336.708 of this title (relating to Environmental Information), §336.709 of this title (relating to Technical and Environmental Analyses), §336.710 of this title (relating to Institutional Information), and §336.711 of this title (relating to Financial Information).

§336.707. Specific Technical Information.

The specific technical information in the application shall include the following information needed for demonstration that the performance objectives and the applicable technical requirements of this subchapter will be met:

(1) a description of the principal design criteria and their relationship to the performance objectives;

(2) a description of the design basis natural events or phenomena and their relationship to the principal design criteria;

(3) a description of codes and standards which the applicant has applied to the design and which will apply to construction of the land disposal facilities;

(4) a description of the design features of the land disposal facility and the disposal units. For near-surface disposal, the description shall include those design features related to infiltration of water; integrity of covers for disposal units; structural stability of backfill, wastes, and covers; contact of wastes with standing water; disposal site drainage; disposal site closure and stabilization; elimination to the extent practicable of long-term disposal site maintenance; inadvertent intrusion; occupational exposures; disposal site monitoring; and adequacy of the size of the buffer zone for monitoring and potential mitigative measures;

(5) a description of the construction and operation of the land disposal facility. The description shall include, as a minimum, the methods of construction of disposal units; waste emplacement; the procedures for and areas of waste segregation; accurate drawings and descriptions of on-site buildings including, but not limited to, construction, foundation details, ventilation, plumbing and fire suppression systems, and proximity to creeks or culverts; types of intruder barriers; onsite traffic and drainage systems; physical security system; survey control program; methods and areas of waste storage; facilities for and methods of processing waste including improperly packaged shipments; and methods to control surface water and groundwater access to the wastes. The description shall also include the methods to be employed in the handling and disposal of wastes containing chelating agents or other nonradiological substances that might affect meeting the performance objectives of this subchapter;

(6) a description of the types, chemical and physical forms, quantities, classification, and specifications of the radioactive material proposed to be received, possessed, processed, and

disposed of at the land disposal facility. This description shall include any prior disposal containing radioactive material at the site. This description shall include performance criteria for form and packaging of the waste or radioactive material that has been previously received and will be received;

(7) a description of the quality assurance program, tailored to disposal of low-level radioactive waste, developed and applied by the applicant for the determination of natural disposal site characteristics and for quality assurance during the design, construction, operation, and closure of the land disposal facility and during the receipt, handling, and emplacement of waste;

(8) a description of the radiation safety program for control and monitoring of radioactive effluents to ensure compliance with the performance objective in §336.724 of this title (relating to Protection of the General Population from Releases of Radioactivity) and occupational radiation exposure to ensure compliance with the requirements of Subchapter D of this chapter (relating to Standards for Protection Against Radiation) and to control contamination of personnel, vehicles, equipment, buildings, and the disposal site. Both routine operations and accidents shall be addressed. The program description shall include procedures, instrumentation, facilities, and equipment;

(9) an Operating and Emergency Procedures Manual that shall provide detailed procedures for receiving, handling, storing, processing, and disposal of waste. Emergency procedures shall include a spill detection and cleanup program for the site and associated transportation of waste;

(10) a description of the administrative procedures that the applicant must apply to control activities at the land disposal facility, including hours of proposed operation; and

(11) a description of the electronic recordkeeping system as required in §336.740(i) of this title (relating to Maintenance of Records and Reports).

§336.708. Environmental Information.

(a) The application shall include site-specific environmental information (or reconnaissance-level information when appropriate) which addresses and quantifies to the extent practicable the following:

(1) a statement of need and a description of the proposed activities identifying the location of the proposed site, the character of the proposed activities, and any plans for use of the site for purposes other than processing and disposal of waste;

(2) proposed time schedules for construction, receipt, processing, and disposal of waste at the proposed land disposal facility;

(3) area and site characteristics including ecology, geology (including geotechnical features), seismology, geochemistry, soils, topography, hydrology, air quality, natural radiation

background, meteorology, climatology, historical and cultural landmarks, archaeology, demography, and current land uses;

(4) an identification of the known natural resources at the site, whose exploitation could result in inadvertent intrusion into the wastes after removal of active institutional control;

(5) a flow diagram of waste processing and disposal operations, a description and accurate drawings of processing equipment, and any special handling techniques to be employed;

(6) site selection process, including considerations of the interrelationships between location of waste generators, transportation costs and means, site characteristics, and compatibility with current land uses;

(7) project alternatives, including a discussion of the alternatives considered by the applicant for processing and disposal of waste;

(8) radiological and nonradiological impacts of the proposed action, including:

(A) surface and groundwater impacts;

(B) socioeconomic impacts;

(C) short- and long-term impacts on public health and safety; and

(D) impacts resulting from irreversible or irretrievable commitments of resources;

(9) environmental effects of postulated operational and transportation accidents;

(10) a description of baseline, operational, and long-term environmental monitoring programs, including radioactive and chemical characteristics, and the plan for taking corrective measures if migration of radionuclides or chemical constituents is indicated;

(11) decommissioning and site closure and stabilization plan, including those design features which are intended to facilitate disposal site closure and to eliminate the need for ongoing active maintenance after closure and an estimated date of site closure, which is to be updated as required; and

(12) a list of all governmental permits, licenses, approvals, and other entitlements obtained in connection with the proposed action.

(b) The applicant shall provide an environmental report under the requirements of 10 Code of Federal Regulations, §§51.45, 51.62, and 61.10, as amended.

§336.709. Technical and Environmental Analyses.

The specific technical and environmental information in the application shall also include the following analyses needed to demonstrate that the performance objectives of this subchapter, referenced in §336.723 of this title (relating to Performance Objectives), will be met:

(1) Pathways analyzed in demonstrating protection of the general population from releases of radioactivity shall include air, soil, groundwater, surface water, plant uptake, and exhumation by animals. The analyses shall clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses shall clearly demonstrate that there is reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits specified in §336.724 of this title (relating to Protection of the General Population from Releases of Radioactivity). A minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer, is required as the period of analysis to capture the peak dose from the more mobile long-lived radionuclides and to demonstrate the relationship of site suitability to the performance objective in this section to the performance objective in §336.724 of this title.

(2) Analyses of the protection of individuals from inadvertent intrusion shall include demonstration that there is reasonable assurance that the waste classification and segregation requirements will be met and that adequate barriers to inadvertent intrusion will be provided, as required in §336.725 of this title (relating to Protection of Individuals from Inadvertent Intrusion).

(3) Analyses of the protection of individuals during operations shall include assessments of expected exposures due to routine operations and likely accidents during handling, storage, and disposal of waste. The analyses shall provide reasonable assurance that exposures will be controlled to meet the requirements of Subchapter D of this chapter (relating to Standards for Protection Against Radiation) and §336.726 of this title (relating to Protection of Individuals during Operations).

(4) Analyses of the long-term stability of the disposal site and the need for ongoing active maintenance after closure shall be based upon analyses of active natural processes such as erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal units and adjacent soils, and surface drainage of the disposal site. The analyses shall provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure, as required in §336.727 of this title (relating to Stability of the Disposal Site after Closure).

§336.711. Financial Information.

The financial information in the application shall be sufficient to demonstrate that the financial qualifications of the applicant are adequate to carry out the activities for which the license is sought, in accordance with §336.735 of this title (relating to Applicant Qualifications and Assurances), and meet other financial assurance requirements of this subchapter, including §336.736 of this title (relating to Liability Coverage and Funding for Disposal Site Closure and Stabilization), §336.737 of this title (relating to Funding for Institutional Control), §336.738 of this title (relating to Funding for Corrective Action), and Chapter 37 of this title (relating to Financial Assurance).

§336.716. Terms and Conditions of License.

(a) At any time before termination of the license, the licensee shall submit written statements under oath upon request of the commission or executive director to enable the commission to determine whether or not the license should be modified, suspended, or revoked.

(b) The license will be transferred to the custodial agency only on the full implementation of the final closure plan as approved by the commission, including post-closure observation and maintenance.

(c) The licensee shall be subject to the applicable provisions of Texas Health and Safety Code, Chapter 401, also known as the Texas Radiation Control Act (TRCA) now or hereafter in effect and to

applicable rules and orders of the commission. The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to the TRCA or by reason of rules and orders issued in accordance with terms of the TRCA.

(d) Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or any statement of fact required under provisions of the TRCA, or because of conditions revealed by any application or statement of fact or any report, record, or inspection or other means that would warrant the commission to refuse to grant a license on the original application, or for failure to operate the land disposal facility in accordance with the terms of the license, or for any violation of or failure to observe any of the terms and conditions of the TRCA or the license or of any rule order of the commission.

(e) Each person licensed by the commission under this subchapter shall confine possession and use of radioactive materials to the locations and purposes authorized in the license.

(f) No waste may be disposed of until the executive director has inspected the land disposal facility and has found it to be in conformance with the description, design, and construction described in the application for a license. No waste may be received for disposal at the site until the executive director has approved financial assurance.

(g) The commission may incorporate in any license at the time of issuance, or thereafter, by appropriate rule or order, additional requirements and conditions with respect to the licensee's receipt, possession, and disposal of waste as it deems appropriate or necessary in order to:

(1) protect the health and safety of the public and the environment; and

(2) require reports and recordkeeping and to provide for inspections of activities under the license that may be necessary or appropriate to effectuate the purposes of the TRCA and rules thereunder.

(h) Each license shall be issued for an initial term of 15 years from the date of issuance. After the initial 15 years, the commission may renew the license for one or more terms of ten years. The authority to dispose of waste expires on the date stated in the license except as provided in §336.718(a) of this title (relating to Application for Renewal or Closure).

(i) The compact waste disposal facility license must require the license holder to indemnify the state for any liability imposed on the state under state or federal law, as required by the commission for the disposal of federal facility waste.

(j) All records maintained by the licensee in accordance with §336.740 of this title (relating to Maintenance of Records and Reports) are public information, unless otherwise exempt from public disclosure.

§336.717. Conveyance of Waste.

(a) The compact waste disposal facility license holder shall convey, at no cost to the state, the title to the compact waste delivered to the compact waste disposal facility for disposal at the time the waste is accepted at the site. Acceptance occurs when the acceptance criteria specified in the license have been satisfied. This section does not apply to federal facility waste accepted at a federal facility waste disposal facility.

(b) The title and all related rights and interest in compact waste conveyed under this section are the property of the commission on the state's behalf. The commission may administer the waste as property in the name of the state.

§336.718. Application for Renewal or Closure.

(a) Any expiration date on a license applies only to the aboveground activities and to the authority to dispose of waste. Failure to renew the license shall not relieve the licensee of responsibility for completing site closure, post-closure observation, and transfer of the license to the custodial agency. An application for renewal or an application for closure under §336.719 of this title (relating to Content of Application for Closure) shall be filed at least one year before license expiration.

(b) Applications for renewal of a license shall be filed in accordance with Chapter 305 of this title (relating to Consolidated Permits), §336.705 of this title (relating to Content of Application),

§336.706 of this title (relating to General Information), §336.707 of this title (relating to Specific Technical Information), §336.708 of this title (relating to Environmental Information), §336.709 of this title (relating to Technical and Environmental Analyses), §336.710 of this title (relating to Institutional Information), §336.711 of this title (relating to Financial Information), and the rules of the commission. Applications for closure shall be filed in accordance with §336.719 of this title and the rules of the commission.

(c) In any case in which a licensee has timely filed an application for renewal of a license, the license for continued receipt and disposal of licensed materials shall not expire until the commission has taken final action on the application for renewal.

§336.720. Post-closure Observation and Maintenance.

(a) Following completion of closure authorized in §336.719 of this title (relating to Content of Application for Closure), the licensee shall observe, monitor, and carry out necessary maintenance and repairs at the disposal site until the site closure is complete and the license is transferred by the commission in accordance with §336.721 of this title (relating to Transfer of License to Custodial Agency). Responsibility for the disposal site shall be maintained by the licensee for five years. A shorter or longer time period for post-closure observation and maintenance may be established and approved as part of the site closure plan, based on site-specific conditions.

(b) Upon transfer of the license to the custodial agency and transfer of the financial assurance to the perpetual care account, the licensee will be released from the requirements of liability coverage under Chapter 37, Subchapter T of this title (relating to Financial Assurance for Near-Surface Land Disposal of Low-Level Radioactive Waste).

§336.723. Performance Objectives.

Land disposal facilities shall be sited, designed, operated, closed, and controlled after closure so that reasonable assurance exists that exposures to humans are within the limits established in the performance objectives in §336.724 of this title (relating to Protection of the General Population from Releases of Radioactivity), §336.725 of this title (relating to Protection of Individuals from Inadvertent Intrusion), §336.726 of this title (relating to Protection of Individuals during Operations), and §336.727 of this title (relating to Stability of the Disposal Site after Closure).

§336.728. Disposal Site Suitability Requirements for Near-Surface Land Disposal.

(a) The disposal site shall be capable of being characterized, modeled, analyzed, and monitored.

(b) Within the region where the land disposal facility is to be located, a disposal site should be selected so that projected population growth and future developments are not likely to affect the ability of the land disposal facility to meet the performance objectives of this subchapter.

(c) Areas shall be avoided that have known natural resources which, if exploited, would result in failure to meet the performance objectives of this subchapter.

(d) The disposal site shall be generally well drained and free of areas of flooding or frequent ponding. Waste disposal shall not take place in a 100-year flood plain, coastal high-hazard area, or wetland, as defined in Executive Order 11988, "Floodplain Management Guidelines."

(e) Upstream drainage areas shall be minimized to decrease the amount of runoff which could erode or inundate disposal units.

(f) The disposal site shall provide sufficient depth to the water table so that groundwater, perennial or otherwise, shall not intrude into the waste.

(g) Areas shall be avoided that are the recharge areas of sole source aquifers unless it can be demonstrated with reasonable assurance that the disposal site shall be designed, constructed, operated, and closed without an unreasonable risk to an aquifer.

(h) The hydrogeologic unit used for disposal shall not discharge groundwater to the surface within the disposal site.

(i) Areas shall be avoided where tectonic processes such as faulting, folding, seismic activity, or vulcanism may occur with such frequency and extent to significantly affect the ability of the disposal

site to meet the performance objectives of this subchapter or may preclude defensible modeling and prediction of long-term impacts.

(j) Areas shall be avoided where surface geologic processes such as mass wasting, erosion, slumping, landsliding, or weathering occur with such frequency and extent to significantly affect the ability of the disposal site to meet the performance objectives of this subchapter or may preclude defensible modeling and prediction of long-term impacts.

(k) The disposal site shall not be located where nearby facilities or activities could adversely impact the ability of the site to meet the performance objectives of this subchapter or significantly mask the environmental monitoring program. If activities involving radioactive material were previously performed on the site, the applicant shall evaluate the contribution of those activities that may impact the ability of the site to meet performance objectives.

(l) The disposal site shall not be located in areas where soil conditions are such that spill cleanup would be impracticable.

(m) The site shall not be located in a county any part of which is located 62 miles or less from an international boundary.

(n) The site shall not be located in a county in which the average annual rainfall is greater than 20 inches.

(o) The site shall not be located in a county that adjoins river segment 2309, 2310, or 2311 as identified by the commission in the Texas Surface Water Quality Standards in §307.10(3) of this title (relating to Appendices A - E). These river segments are identified as follows:

(1) river segment 2309 is the Devil's River;

(2) river segment 2310 is the lower Pecos River; and

(3) river segment 2311 is the upper Pecos River.

(p) The site shall not be located less than 20 miles upstream of or up-drainage from the maximum elevation of the surface of a reservoir project that:

(1) has been constructed or is under construction by the United States Bureau of Reclamation or the United States Army Corps of Engineers; or

(2) has been approved for construction by the Texas Water Development Board as part of the state water plan under Texas Water Code, Subchapter C, Chapter 16.

§336.729. Disposal Site Design for Near-Surface Land Disposal.

(a) Site design features shall be directed toward long-term isolation and avoidance of the need for continuing active maintenance after site closure.

(b) The disposal site design and operation shall be compatible with the disposal site closure plan and lead to disposal site closure that provides reasonable assurance that the performance objectives of this subchapter will be met.

(c) The disposal site shall be designed to complement and improve, where appropriate, the ability of the disposal site's natural characteristics to assure that the performance objectives of this subchapter will be met.

(d) Covers shall be designed to minimize water infiltration, to direct percolating or surface water away from the disposed waste, and to resist degradation by surface geologic processes and biotic activity.

(e) Surface features shall direct surface water drainage away from disposal units at velocities and gradients which will not result in erosion that will require ongoing active maintenance.

(f) The disposal site shall be designed to minimize the contact of water with waste during storage, the contact of standing water with waste during disposal, and the contact of percolating or standing water with wastes after disposal.

(g) The design of a land disposal facility should incorporate, to the extent practicable, safeguards against hazards resulting from local meteorological conditions, including phenomena such as hurricanes, tornados, violent storms, and susceptibility to flooding, as well as geologic phenomena such as earthquakes and earth tremors.

§336.730. Near-Surface Land Disposal Facility Operation and Disposal Site Closure.

(a) Wastes designated as Class A under §336.362(a) of this title (relating to Appendix E. Classification and Characteristics of Low-Level Radioactive Waste) shall be segregated from other wastes by placing the Class A wastes in disposal units which are sufficiently separated from disposal units for the other waste classes so that any interaction between Class A wastes and other wastes shall not result in the failure to meet the performance objectives specified in §336.723 of this title (relating to Performance Objectives). This segregation is not necessary for Class A wastes if they meet the stability requirements in §336.362(b)(2) of this title.

(b) Wastes designated as containerized Class A, Class B, or Class C under §336.362(a) of this title or §336.702 of this title (relating to Definitions) shall be disposed of in the following manner:

(1) within a reinforced concrete container and within a reinforced concrete barrier, or within containment structures made of materials technologically equivalent or superior to reinforced concrete;

(2) in such a manner that the waste can be monitored and retrieved; and

(3) so that the top of the waste is a minimum of five meters below the top surface of the cover or shall be disposed of with intruder barriers that are designed to protect against an inadvertent intrusion for at least 500 years.

(c) Wastes shall be emplaced in a manner that maintains the package integrity during emplacement, minimizes the void spaces between packages, and permits the void spaces to be filled.

(d) Void spaces between waste packages shall be filled with earth or other material to reduce future subsidence within the fill.

(e) Waste shall be placed and covered in a manner that limits the radiation dose rate at the surface of the cover to levels that at a minimum will permit the licensee to comply with all provisions of §336.313 of this title (relating to Dose Limits for Individual Members of the Public) and §336.314 of this title (relating to Compliance with Dose Limits for Individual Members of the Public) at the time the license is transferred under §336.721 of this title (relating to Transfer of License to Custodial Agency).

(f) The boundaries and locations of each disposal unit shall be accurately located and mapped by means of land survey. Disposal units shall be marked in such a way that the boundaries of each unit can be easily defined. Three permanent survey marker control points, referenced to United States Geological Survey (USGS) or National Geodetic Survey (NGS) survey control stations, shall be established on the site to facilitate surveys. The USGS or NGS control stations shall provide horizontal and vertical controls as checked against USGS or NGS record files.

(g) A buffer zone of land shall be maintained between any buried waste and the disposal site boundary and beneath the disposed waste. The buffer zone shall be of adequate dimensions to carry out environmental monitoring activities specified in §336.731(c) of this title (relating to Environmental Monitoring) and to take mitigative measures if needed.

(h) Closure and stabilization measures as set forth in the approved site closure plan shall be carried out as each disposal unit is filled and covered.

(i) Active waste disposal operations shall not have an adverse effect on completed closure and stabilization measures.

(j) Only wastes containing or contaminated with radioactive materials shall be disposed of at the disposal site.

§336.733. Waste Classification, Characteristics, and Labeling.

(a) All low-level radioactive waste and mixed waste received for disposal by the licensee shall be classified in accordance with §336.362(a), of this title (relating to Appendix E. Classification and Characteristics of Low-Level Radioactive Waste), shall meet the applicable characteristics of §336.362(b) of this title, and shall be labeled in accordance with §336.362(c) of this title.

(b) The special criteria specified in this subsection shall apply to the disposal of wastes consisting of radionuclides with half-lives greater than 35 years and wastes consisting of transuranic radionuclides which are acceptable for disposal under this subchapter, that is, transuranic radionuclides in concentrations of less than ten nanocuries/gram. All those wastes that are determined to be Class A shall be placed in reinforced concrete canisters or equivalent containment structures to provide stability after disposal or shall meet the stability requirements set forth in §336.362(b)(2) of this title. These special criteria are in addition to the minimum requirements for Class A wastes set forth in §336.362(b)(1) of this title. The executive director may consider a licensee's request for an alternative from this special criteria on a case-by-case basis.

(c) In addition to the requirements of this chapter, the licensee shall comply with the requirements of Chapter 335 of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste) for the disposal of mixed waste. The licensee may not dispose of mixed waste unless the licensee is specifically licensed for the disposal of mixed waste under this chapter and permitted under Chapter 335 of this title.

§336.735. Applicant Qualifications and Assurances.

The applicant shall show that it either possesses the necessary funds or has reasonable assurance of obtaining the necessary funds, or by a combination of the two, to cover the estimated costs of conducting all licensed activities over the planned operating life of the project, including costs of construction and disposal. The applicant shall provide proof of funds sufficient to cover any annual license fee and any agency costs of processing the application that may exceed the $500,000 application processing fee.

§336.736. Liability Coverage and Funding for Disposal Site Closure and Stabilization.

(a) The applicant shall provide assurance 60 days prior to the initial receipt of waste that sufficient funds will be available to carry out disposal site closure and stabilization, including:

(1) decontamination or dismantlement of land disposal facility structures;

(2) disposal of any radioactive material remaining at the site at closure; and

(3) closure and stabilization of the disposal site so that, following transfer of the disposal site to the custodial agency, the need for ongoing active maintenance is eliminated to the extent practicable and only minor custodial care, surveillance, and monitoring are required.

(b) The assurance shall be based on cost estimates approved by the executive director which reflect the commission-approved plan for disposal site closure and stabilization. The applicant's cost estimates shall take into account total costs that would be incurred if an independent contractor were hired to perform the closure and stabilization work.

(c) The licensee's financial assurance mechanism and cost estimates shall be reviewed annually by the commission at an open meeting to assure that sufficient funds are available for completion of the closure plan, assuming that the work has to be performed by an independent contractor.

(d) The amount of financial assurance should change in accordance with the predicted cost of future closure and stabilization. Factors affecting cost estimates for closure and stabilization include inflation, increases in the amount of disturbed land, changes in engineering plans, closure and stabilization that have already been accomplished, and any other conditions affecting costs. This shall yield a closure amount that is at least sufficient at all times to cover the costs of closure of the disposal units that are expected to be used before the next annual review.

(e) Sixty days prior to the initial receipt of waste, the licensee shall provide financial assurance for bodily injury and property damage to third parties caused by sudden and non-sudden accidental occurrences arising from operations of the compact waste disposal facility and/or federal facility waste disposal facility in a manner that meets the requirements of Chapter 37 of this title (relating to Financial Assurance).

(f) Financial assurance mechanisms submitted to comply with this section shall meet the requirements specified in Chapter 37, Subchapter T of this title (relating to Financial Assurance for Near-Surface Land Disposal of Radioactive Waste).

§336.737. Funding for Institutional Control.

(a) The licensee shall pay into the perpetual care account an amount determined by the executive director to be adequate to provide surveillance, monitoring, any required maintenance, and other care of the disposal site on a continuing basis during the institutional control period. Unless otherwise specified, the amount of funding provided shall be an amount necessary to provide perpetual surveillance, monitoring, any required maintenance, and other care of the disposal site and the administration of the fund by the state. The amount of funds necessary to provide perpetual care during the institutional control period shall be based upon a real annual rate of interest, above inflation, of 2% (i.e., the amount required is calculated by expressing all costs at an annual rate and multiplying the total annual cost by 50 to calculate an amount that will be self-perpetuating at a real annual interest rate of 2%).

(b) Sixty days prior to the initial receipt of waste, the licensee shall provide the total amount of required funding by means approved by the executive director, such as a combination of periodic payments into the fund and financial assurance covering the remainder of the total amount. Any changes to institutional control proposed by the licensee shall be submitted to the commission in the form of an application for a license amendment. Financial assurance mechanisms shall meet the

requirements of Chapter 37, Subchapter T of this title (relating to Financial Assurance for Near-Surface Land Disposal of Low-Level Radioactive Waste).

(c) The commission at an open meeting shall review annually the amount paid into the fund and shall adjust the amount, if necessary, to ensure the payment schedule is adequate to cover the costs of surveillance, monitoring, any required maintenance, and other care of the disposal site during the institutional control period. The amount may be adjusted to reflect inflation, changes in activities performed, and any other conditions affecting costs.

§336.738. Funding for Corrective Action.

(a) Sixty days prior to the initial receipt of waste, the licensee shall provide financial assurance for corrective action to address unplanned events that pose a risk to public health, safety, and the environment that may occur after the decommissioning and closure of the compact waste disposal facility or federal facility waste disposal facility.

(b) The payment schedule and amount shall be determined by the executive director. The amount shall not be less than $20 million at the time the disposal facility site is decommissioned. The commission at an open meeting shall review annually the amount for corrective action.

(c) Financial assurance under this section shall be established and maintained in accordance with Chapter 37, Subchapter T of this title (relating to Financial Assurance for Near-Surface Land Disposal of Low-Level Radioactive Waste).

§336.743. Resident Inspectors.

The commission may require at any disposal site that the licensee provide facilities for two or more resident inspectors employed by the commission. The licensee shall reimburse the commission for the salary and other expenses of the inspectors, as provided in Subchapter B of this chapter (relating to Radioactive Substance Fees).

SUBCHAPTER H: LICENSING REQUIREMENTS FOR NEAR-SURFACE LAND DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

§336.703

STATUTORY AUTHORITY

The repeal is adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The repeal is also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.703. License Required.

SUBCHAPTER I:

COMPACT WASTE DISPOSAL FACILITY APPLICATION SELECTION PROCESS

§§336.801, 336.803, 336.805, 336.807 - 336.809,

336.811, 336.813, 336.815, 336.817, 336.819, 336.821, 336.823, 336.825

STATUTORY AUTHORITY

The new sections are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The new sections are also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.801. Applicability.

(a) Initial license applications to receive, possess, and dispose of low-level radioactive waste from others at the compact waste disposal facility are subject to the application selection process set out in this subchapter. Applications for a license under this subchapter will be processed as set forth in this subchapter in addition to any procedural requirements applicable to radioactive material licensing in this title. In the event of a conflict between the procedural requirements of this subchapter and other procedural requirements in this title, the requirements of this subchapter shall prevail. The radioactive material license authorizing the receipt, possession, and disposal of low-level radioactive waste at the compact waste disposal facility must meet all of the requirements provided in Subchapter H of this chapter (relating to Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste). The license authorizing the disposal of federal facility waste must meet the requirements of Subchapter J of this chapter (relating to Federal Facility Waste Disposal Facility) in addition to the requirements of Subchapter H of this chapter. License applications under Subchapters F and G of this chapter (relating to Licensing of Alternative Methods of Disposal of Radioactive Material, and Decommissioning Standards) are not subject to this subchapter.

(b) This subchapter addresses the application selection process for the licensing of the disposal of low-level radioactive waste at the compact waste disposal facility. Applications for other authorizations and permits issued by the commission required by the compact waste disposal facility are not subject to the application selection process provided in this subchapter.

§336.803. Receipt of License Applications.

(a) License applications subject to this subchapter will be received by the commission for a 30-day period, beginning 180 days after the date of the *Texas Register* notice publication for receipt of applications for the siting, construction, and operation of a compact waste disposal facility and a federal facility waste disposal facility, if applicable, for disposal of low-level radioactive waste. The executive director shall not evaluate applications received after the 30-day application period.

(b) The commission shall post on its Web site the identity of all applicants filing applications and the Web address link required by §336.805 of this title (relating to Application Requirements.)

§336.805. Application Requirements.

In addition to the application requirements provided elsewhere in this title, an applicant for a license subject to this subchapter must:

(1) comply with Texas Health and Safety Code, Chapter 401, the rules under this title, and any other applicable requirement in the executive director's discretion;

(2) include a nonrefundable $500,000 application processing fee as provided in §336.103(a) of this title (relating to Schedule of Fees for Subchapter H Licenses);

(3) provide evidence relating to the reasonableness of any technique for managing low-level radioactive waste to be practiced at the proposed land disposal facility or facilities including:

(A) studies of alternate techniques of waste processing and reduction at the site of waste generation; and

(B) studies of the use of aboveground isolation facilities; and

(4) provide a complete copy of the application, including all amendments and/or supplements to the application, on a publicly accessible Web site, and provide the commission with the Web address link for the application materials.

§336.807. Administrative Review.

(a) Not later than the 45th day after the date an application is received under this subchapter, the executive director shall issue an administrative notice of deficiency to each applicant whose application is timely submitted, but is determined by the executive director to be administratively incomplete.

(b) The executive director shall provide an applicant, for whom an administrative notice of deficiency is issued, not more than three 30-day opportunities to correct the noted deficiencies in the application. For each 30-day opportunity, the executive director will evaluate the information received

in response to a notice of deficiency within 30 days. If the required information is not received from the applicant within 30 days of the date of receipt of the deficiency notice, the executive director shall return the incomplete application to the applicant.

(c) The executive director shall reject any application that, after the period for correcting deficiencies has expired, is not administratively complete.

(d) In determining if an application is administratively complete, the executive director shall consider whether the application contains sufficient information that will allow the technical review of the application, including, but not limited to:

(1) the identity and qualifications of the applicant;

(2) a description of the proposed land disposal facility or facilities and site;

(3) a description of the character of the proposed activities and the types and quantities of waste to be managed at the disposal facility or facilities;

(4) a description of the proposed schedules for construction, receipt of waste, and closure;

(5) a description of the financial assurance mechanism to be used;

(6) a description of the design features of the facility or facilities, along with a description of the methods of construction and operation of the facility or facilities;

(7) a characterization of the area and site characteristics, including ecology, geology, soils, hydrology, natural radiation background, climatology, meteorology, demography, and current land uses;

(8) a description of the safety programs to be used at the proposed land disposal facility or facilities;

(9) a copy of the warranty deed or other conveyance showing that the right, title, and interest in the land on which the land disposal facility or facilities are proposed to be located is owned in fee by the applicant as required by Texas Health and Safety Code, §401.204;

(10) an application processing fee of $500,000 as provided in §336.103(a) of this title (relating to Schedule of Fees for Subchapter H Licenses) and proof of additional funds sufficient to cover any further costs of processing the application as estimated by the commission; and

(11) a copy of a resolution of support of the proposed land disposal facility or facilities from the commissioners court of the county in which the land disposal facility or facilities are proposed to be located.

§336.808. Ownership of Land and Buildings.

(a) A license application to receive, possess, and dispose of low-level radioactive waste from others at the compact waste disposal facility may not be considered administratively complete unless the applicant has acquired the title to and any interest in land and buildings on which the facility or facilities are to be located. Except as provided in subsection (b) or (c) of this section or for land and buildings already owned in fee by the state or federal government, the applicant must demonstrate ownership of an undivided interest in fee simple title of the land and buildings, including the surface and mineral estates, on which the land disposal facility or facilities are to be located.

(b) If an applicant is unsuccessful in acquiring undivided ownership of the mineral estate in fee simple of the land on which the facility or facilities are proposed to be located, the applicant may, to the extent permissible under federal law, request an exemption of the requirement under §336.5 of this title (relating to Exemptions). The application for exemption must be submitted with the license application in order to satisfy the requirements of the administrative review of the application. In addition to the requirements of §336.5 of this title, the applicant must demonstrate that the surface use agreement is permissible under federal law and consistent with the *Agreement Between the United States Nuclear Regulatory Commission And the State of Texas for Discontinuance of Certain Commission Regulatory Authority and Responsibility within the State Pursuant to Section 274 of the Atomic Energy Act of 1954,* as amended. If the requirement of ownership of the mineral estate in fee simple title is exempted under this subsection, the applicant must have entered into a surface use agreement that restricts access to natural resources, including slant drilling and subsurface mining, to the extent necessary to prevent

intrusion into the site. The surface use agreement shall prohibit the use of the surface in the development and access of the natural resources in perpetuity by the owner of the mineral estate, heirs, and successors and shall be assigned to and be enforceable by the state or federal government upon conveyance of the property under §336.710(2) of this title (relating to Institutional Information).

(c) If an applicant cannot reach a surface use agreement and cannot otherwise obtain fee simple title to the mineral estate of the land on which the facility or facilities are proposed to be located, the applicant may petition the commission under §1.8 of this title (relating to Initiation of Proceeding) to request the attorney general to institute condemnation proceedings as provided under Texas Property Code, Chapter 21, to acquire fee simple interest in the mineral rights. The petition to request initiation of condemnation proceedings shall include a description of the communications between the applicant and the mineral estate interest owner, a demonstration of the applicant's good faith effort to acquire the mineral rights or to enter into a surface use agreement as provided in subsection (b) of this section, an appraisal of the fair market value of the mineral interest, a demonstration that the petitioner's application has been selected as the application with the highest technical merit under §336.813(d) of this title (relating to Evaluation of Applications), and a demonstration by the applicant of the ability to pay for all costs in obtaining the mineral interests in condemnation proceedings, including legal fees. The applicant shall provide a copy of the petition under this subsection to the owner of the mineral interest. If the petition is granted and the commission requests the attorney general to initiate condemnation proceedings, the applicant shall pay for all costs incurred by the commission in the process of obtaining the mineral interests, whether or not the mineral interests are successfully condemned.

§336.809. Notice of Declaration of Administrative Completeness.

When an application under this subchapter has been declared administratively complete, notice shall be provided under §39.702 of this title (relating to Notice of Declaration of Administrative Completeness). The applicant shall pay for all costs of issuing notice under this subchapter. The commission shall post on its Web site notice of the application(s) declared administratively complete.

§336.811. Public Meeting.

(a) The executive director shall conduct at least one public meeting in the county or counties where a compact waste disposal facility or federal facility waste disposal facility is proposed to be located to receive public comments on the administratively complete applications as provided in §55.253 of this title (relating to Public Comment Processing). The applicant shall pay for the costs of providing notice of the public meeting and for the costs of holding the public meeting.

(b) The applicant shall publish notice of the public meeting in accordance with §39.405(f)(1) of this title (relating to General Notice Provisions), once each week during the three weeks preceding the public meeting. The notice shall include:

(1) the applicant's name;

(2) a description of the proposed activity;

(3) the proposed location of the compact waste disposal facility;

(4) the location and availability of the application;

(5) the location, date, and time of the public meeting; and

(6) the name, address, and telephone number of the contact person for the applicant from whom interested persons may obtain further information.

(c) The chief clerk shall mail notice of the public meeting to persons listed in §39.413 of this title (relating to Mailed Notice).

§336.813. Evaluation of Applications.

(a) The executive director shall prepare a written evaluation of each administratively complete application in terms of the criteria established under §§336.815, 336.817, 336.819, and 336.821 of this title (relating to Tier 1 Criteria, Tier 2 Criteria, Tier 3 Criteria, and Tier 4 Criteria).

(b) The executive director may issue a request for further information to each applicant whose administratively complete application is determined by the executive director to be insufficient for the purposes of the evaluation required in this section. An applicant, for whom a request for further

information is issued, may be provided two 30-day opportunities to respond to the request at the discretion of the executive director.

(c) The executive director shall use the written evaluations and application materials to evaluate each application according to the criteria established by §§336.815, 336.817, 336.819, and 336.821 of this title. The executive director shall evaluate each application for each criterion for purposes of comparing the relative merit of the application, giving:

(1) equal weight to each criterion within a tier of criteria; and

(2) the greatest weight to Tier 1 criteria, greater weight to Tier 2 criteria than to Tier 3 criteria, and the least weight to Tier 4 criteria.

(d) Not later than the 270th day after receipt of the last timely filed application, the executive director, based on the written evaluations and application materials, shall select the application that has the highest comparative merit for technical review under §336.823 of this title (relating to Technical Review). If the selected application is rejected or denied by the commission, the executive director may select the application with the next highest comparative merit and proceed with the technical review under §336.823 of this title.

§336.815. Tier 1 Criteria.

(a) The commission shall consider as Tier 1 criteria:

(1) the natural characteristics of the site for a proposed land disposal facility or facilities;

(2) the adequacy of the proposed land disposal facility or facilities and activities to safely isolate, shield, and contain low-level radioactive waste from mankind and mankind's environment; and

(3) the adequacy of financial assurance related to the proposed activities.

(b) Natural characteristics of the site include:

(1) the suitability of the site for the proposed activities, including the site's:

(A) geological characteristics;

(B) topography, including features relating to erosion;

(C) surface and underground hydrology;

(D) meteorological factors; and

(E) natural hazards;

(2) the compatibility of disposal activities with any uses of land near the site that could affect the natural performance of the site or that could affect monitoring of the land disposal facility or facilities and site;

(3) the adequacy of plans for the collection of prelicense monitoring data and background monitoring plans for the site, including analysis of the ambient conditions of the site and established trends of the site's natural parameters, including:

(A) natural background radioactivity levels;

(B) radon gas levels;

(C) air particulate levels;

(D) soil characteristics, including chemical characteristics;

(E) surface water and groundwater characteristics; and

(F) flora and fauna at the site;

(4) the possible effects of disposal activities on flora and fauna at or near the site; and

(5) the ease of access to the site.

(c) Adequacy of the proposed land disposal facility or facilities and activities includes:

(1) the capability of the proposed land disposal facility or facilities and activities to isolate, shield, and contain low-level radioactive waste in conformity with federal standards;

(2) acceptable operational safety; and

(3) acceptable long-term safety as demonstrated by analysis or study.

(d) Financial assurance criteria include:

(1) adequacy of the applicant's financial qualifications to:

(A) conduct the licensed activities as proposed, including:

(i) any required decontamination, decommissioning, reclamation, or disposal; and

(ii) control and maintenance of the site and land disposal facility or facilities after the cessation of active operations; and

(B) address any unanticipated extraordinary events that would pose a risk to public health and safety and the environment and that may occur at the site after decommissioning and closure of the land disposal facility or facilities;

(2) the adequacy of the applicant's financial assurance in an amount and type acceptable to the commission and adequate to cover potential injury to any property or person;

(3) the adequacy of the applicant's financial security, as required by commission rules; and

(4) the degree of certainty that the applicant will be able to maintain adequate financial security.

§336.817. Tier 2 Criteria.

The commission shall consider as Tier 2 criteria:

(1) the suitability of land disposal facilities at the site that are associated with proposed activities and the adequacy of their engineering and design; and

(2) the suitability of the proposed land disposal facility or facilities for the chemical, radiological, and biological characteristics of the low-level radioactive waste as classified under the system established under Texas Health and Safety Code, §401.053.

§336.819. Tier 3 Criteria.

The commission shall consider as Tier 3 criteria the applicant's:

(1) technical qualifications to receive, store, process, and dispose of low-level radioactive waste;

(2) experience in management and disposal of low-level radioactive waste and other radioactive materials;

(3) previous operating practices in this state and elsewhere, including the practices of a parent, subsidiary, or affiliated entity of the applicant, related to radioactive materials;

(4) record of compliance with environmental statutes, rules, and licenses in this state and in any other jurisdiction, including the records of a parent or subsidiary of the applicant,

subject to Texas Health and Safety Code, §401.243;

(5) training programs proposed for its employees whose duties relate to the proposed site and activities;

(6) monitoring, recordkeeping, and reporting plans;

(7) low-level radioactive waste spill detection and clean-up plans for the proposed site and activities;

(8) decommissioning and post-closure plans;

(9) security plans;

(10) monitoring and protection plans for workers;

(11) emergency plans;

(12) plans for background monitoring during the license period, including analysis of the ambient conditions of the site and analysis of established trends of the site's natural parameters, including:

(A) natural background radioactivity levels;

(B) radon gas levels;

(C) air particulate levels;

(D) soil characteristics, including chemical characteristics;

(E) surface water and groundwater characteristics; and

(F) flora and fauna at the site; and

(13) ability to adequately manage the proposed land disposal facility or facilities and activities for the term of the license.

§336.821. Tier 4 Criteria.

The commission shall consider as tier 4 criteria:

(1) the compatibility of uses of land near the proposed site that could be affected by the construction and operation of the land disposal facility or facilities; and

(2) possible socioeconomic effects on communities in the host county of:

(A) the proposed land disposal facility or facilities;

(B) the operation of the proposed land disposal facility or facilities; and

(C) related transportation of low-level radioactive waste to the land disposal facility or facilities.

§336.823. Technical Review.

Upon selection of the application that has the highest comparative merit in accordance with §336.813 of this title (relating to Evaluation of Applications), the executive director shall begin the technical review of the selected application in accordance with §281.19 of this title (relating to Technical Review). The executive director shall give priority to the review of the selected application over all other radioactive materials licensing and registration matters pending before the commission. The executive director shall post on the commission Web site notice of the application selected for technical review.

§336.825. Delegation.

The commission delegates to the executive director the authority to review and evaluate applications for radioactive materials licenses under this subchapter and to select the one application under §336.813 of this title (relating to Evaluation of Applications) for further technical review. A decision by the executive director under §336.813 of this title is not appealable to the commission until the commission makes a final decision on the selected license application.

SUBCHAPTER J: FEDERAL FACILITY WASTE DISPOSAL FACILITY

§§336.901, 336.903, 336.905, 336.907, 336.909

STATUTORY AUTHORITY

The new sections are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the state. The new sections are also adopted under Texas Health and Safety Code, Chapter 401, concerning Radioactive Materials and Other Sources of Radiation, also known as the Texas Radiation Control Act; §401.011, concerning Radiation Control Agency, which authorizes the commission to regulate and license the disposal of radioactive substances; §401.051, concerning Adoption of Rules and Guidelines, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, concerning Rules and Guidelines for Licensing and Registration, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, concerning Licensing and Registration rules, which requires the commission to provide rules for licensing for the disposal of radioactive material; §401.201, concerning Regulation of Low-Level Radioactive Waste Disposal, which authorizes the commission to regulate the disposal of LLRW; and §401.412, concerning Commission Licensing Authority, which authorizes the commission to issue licenses for the disposal of radioactive substances.

§336.901. Applicability.

This subchapter provides additional licensing requirements to the requirements of Subchapter H of this chapter (relating to Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste); and other rules of this title for the disposal of federal facility waste at a separate land disposal facility on the same site. Applications for the licensing of the disposal of federal facility waste shall demonstrate compliance with the provisions of this subchapter in addition to other application requirements of this title. The commission may license federal facility waste disposal only at a separate and distinct land disposal facility on the same site that is operated exclusively for the disposal of federal facility waste and that is adjacent to the compact waste disposal facility.

§336.903. Receipt of Waste.

(a) The compact waste disposal facility license holder may not accept federal facility waste for disposal unless the compact waste disposal facility license holder is licensed for the disposal of federal facility waste under the requirements of this subchapter and other licensing requirements of this title.

(b) The licensee may not accept federal facility waste at a federal facility waste disposal facility until the licensee begins accepting compact waste at the compact waste disposal facility. "Begins accepting" means accepting compact waste at a licensed and constructed compact waste disposal facility that the executive director has approved for acceptance and disposal of low-level radioactive waste.

§336.905. Volume Limitation.

(a) For the first five years after a license is issued under this subchapter, the license shall limit the overall capacity of the federal facility waste disposal facility to not more than 3,000,000 cubic yards. Of that amount, the total volume of low-level radioactive waste accepted at the federal facility waste disposal facility that must be disposed of in accordance with §336.730 of this title (relating to Near-Surface Land Disposal Facility Operation and Disposal Site Closure) shall be limited to not more than 300,000 cubic yards.

(b) Upon application for license amendment under §305.62 of this title (relating to Amendment) and after five years from the date of licensing of the disposal of federal facility waste under this subchapter, the capacity of the federal facility waste disposal facility may be increased by 3,000,000 cubic yards for a total capacity of 6,000,000 cubic yards upon a determination by the commission that increasing the capacity of the federal facility waste disposal facility would not pose a significant risk to human health, public safety, or the environment. Of the increased amount, the volume of waste that must be disposed of in accordance with §336.730 of this title may be increased by not more than 300,000 cubic yards for a total volume of 600,000 cubic yards.

§336.907. Prohibition of Commingling of Waste.

The commingling of compact waste and federal facility waste is prohibited. If licensed to dispose of federal facility waste, the licensee shall maintain separate waste transport, acceptance, storage, processing, and disposal of compact waste and federal facility waste.

§336.909. Additional Responsibilities.

If licensed to dispose of federal facility waste, the licensee shall:

(1) arrange for and pay the costs of management, control, stabilization, and disposal of federal facility waste and the decommissioning of the licensed federal facility waste disposal activity;

(2) before accepting federal facility waste, submit to the commission a written agreement, acceptable to the executive director and signed by the United States secretary of energy, stating that the federal government will assume all right, title, and interest in land and buildings acquired under §336.710 of this title (relating to Institutional Information) for the disposal of federal facility waste, together with requisite rights of access to the land and buildings;

(3) before termination of the license, formally convey to the federal government the right, title, and interest in federal facility waste located at the federal facility waste disposal facility;

(4) transfer federal facility waste, land, and buildings to the federal government without cost to the state or federal government, other than the administrative and legal costs incurred in making the transfer; and

(5) indemnify the state, and its officers and agents, for any liability imposed on the state under state or federal law for damages, removal, or remedial action with respect to the land, the facility, or the waste accepted, stored, or disposed of, because the transfer does not relieve a license holder of liability for any act or omission before or following the transfer. This indemnification does not relieve the license holder of providing financial assurance for decommissioning, institutional control, and after decommissioning, corrective action.