The Texas Natural Resource Conservation Commission (commission) adopts amendments to §§331.68, 331.121, 331.122, 331.142-331.144, and 331.171 and adopts the repeal of §§331.141 and 331.145-331.147, concerning Underground Injection Control. Sections 331.142 and 331.171 are adopted with changes to the proposed text as published in the October 22, 1999 issue of the *Texas Register* (24 TexReg 9201). The remaining sections are adopted without changes and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

Changes have been adopted in Chapter 331 as the result of ongoing efforts by the commission for regulatory reform. This rulemaking focuses on financial assurance and is based upon a two-step process. The first step involved identification of all commission programs which contain a financial assurance component and transferred those requirements into 30 TAC Chapter 37. The second step involved processing of the rules to eliminate redundant requirements, to remove duplicative mechanisms, and to consolidate provisions whenever possible. Modifications are simultaneously coordinated with changes adopted in 30 TAC Chapters 37, 305, 324, 330, 334, 335, and 336. Entities who are required to provide financial assurance are specifically instructed to do so in each relevant, technical chapter. Those requirements that are overseen by the commission's technical program staff, such as the calculation of closure, post closure, and corrective action costs, will remain in the technical rule chapters. Each technical chapter refers the reader to Chapter 37 for the rules pertaining to financial assurance and to the financial assurance mechanisms.

The financial assurance rules being adopted are being consolidated in accordance with the commission's ongoing regulatory reform initiative. For example, previously, several programs had rules with a separate subchapter concerning financial assurance and the allowed mechanisms. Frequently, the requirements were repetitive and often identical. These rules consolidate financial requirements to reduce duplicative language while retaining the integrity of the previous requirements. The owner or operator must comply with the requirements of closure, the requirements of post closure, and the requirements of corrective action, or any combination of the three, as is appropriate for the particular activity conducted at the type of facility or site being considered. The mere consolidation, or inclusion, of all three types of activities in a single rule section does not alter the scope of the applicability of the rule, nor does it impose a more or less stringent regulation.

The adopted amendments to the financial assurance rules are also for the purpose of clarification, in accordance with the commission's ongoing regulatory reform initiative. For example, the adoptions clarify and use cross-references to indicate that the owner or operator is subject to the provisions of the relative technical chapters, the general subchapters of Chapter 37, the mechanism requirements, the mechanism wordings, and the specific program subchapters of Chapter 37.

The rule adoption is for simplification and clarification and involves few substantive changes in the procedures and criteria to be used by the commission and the regulated community for providing financial assurance and other associated activities that are regulated under this chapter. Substantive changes are minimal and occur, when necessary, for the purposes of consolidation, clarification, compatibility and consistency with commission and federal requirements, and protection of human

health and the environment. Substantive changes in the regulations were specifically articulated in the proposal preamble published in the October 22, 1999 issue of the *Texas Register* to make those instances easily identifiable. In general, these rule amendments involve organization, editorial modifications, reordering requirements into a more logical sequence, and correcting cross-reference citations.

Texas law requires the commission to adopt rules requiring financial assurance for various program areas including Texas Water Code (TWC), §27.073 for underground injection well facilities; and Texas Health and Safety Code (HSC), §361.085 for solid waste, hazardous waste, and permitted facilities.

The purpose of the financial assurance requirements is to assure that adequate funds will be readily available to cover the costs of closure, post closure, and corrective action associated with certain types of facilities. Financial assurance is important for two primary reasons. First, to prevent delays in addressing environmental needs at facilities, owners and operators need to have funds that are readily available. Moreover, if the owner or operator lacks sufficient funds, environmental needs may have to be addressed through state or federal cleanup funds rather than by the entity responsible for the facility. Additionally, some programs require liability coverage to protect third parties from bodily injury and property damage that may result from a permittee's waste management activities.

The adopted amendments are necessary to maintain consistency of commission rules and to fulfill the statutory mandates requiring financial assurance.

SECTION BY SECTION DISCUSSION

Corrections to the proposed rules for Chapter 331 were published in the *Texas Register* on November 26, 1999 (24 TexReg 10606). The changes were primarily to include a statutory authority reference. The corrections are included in the adopted rule text. Additionally, the commission adopts §331.142(b) with a change to correct a cross-reference from "§305.154(11)" to "§305.154(a)(11)" and adopts §331.171 with a change in a reference from the "Texas Water Commission" to the "commission."

FINAL REGULATORY IMPACT ANALYSIS

The commission has reviewed the rulemaking in light of the regulatory analysis requirements of the Texas Government Code, and has determined that the rulemaking is not subject to §2001.0225 because it does not meet the definition of a "major environmental rule" as defined in the Administrative Procedure Act. Although the rules are adopted to protect the environment and reduce risk to human health, this rulemaking is not a major environmental rule because it does not 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 rules do not adversely affect in a material way the aforementioned aspects of the state because, generally, the changes are made to the financial assurance rules for the purposes of consolidation and organization. In the few instances where substantive changes are being adopted, there are no such changes which modify the procedures and criteria used by the commission and the regulated entities in such a manner that the rules, as adopted, are a "major environmental rule." The rules, as adopted, provide better-written, better-organized, and easier to use financial assurance rules, which in turn provides an overall benefit to the affected economy, sectors of the economy, productivity, competition, jobs, the environment, and the public

health and safety of the state and affected sectors of the state. The economy, a sector of the economy, productivity, competition, or jobs, are not adversely affected in a material way by the few substantive changes. In fact, the changes should benefit the economy, a sector of the economy, and productivity by clarifying existing requirements and by making the rules easier to understand. As the previously existing rules were protective of human health and the environment, this rule adoption does not decrease the protection of the environment or human health. More simply stated, the adoption revises the commission's rules in a manner which could provide a benefit to the economy while enhancing the protection of the environment and public health and safety.

Furthermore, these rules do not meet any of the four applicability requirements listed in Texas Government Code §2001.0225(a). The rules do not exceed a standard set by federal law because one of the purposes of this rulemaking is to adopt state rules which are accordant with the corresponding federal regulations. Any requirements in the rules are in accord with the corresponding federal regulations, and they do not exceed an express requirement of state law because they implement state law provisions to require financial assurance. This adoption does not exceed the requirements of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state or federal program because there is no federal financial assurance program. There are, however, federal financial assurance requirements for many of the delegated programs, and these rules are consistent with the corresponding federal financial assurance requirements. The adoption is not made solely under the general powers of the commission, but is also made under the requirements of specific state law that allows the commission to provide these

programs. Finally, these rules are not adopted on an emergency basis to protect the environment or to reduce risks to human health.

TAKINGS IMPACT ASSESSMENT

The commission has prepared a takings impact assessment for these rules under Texas Government Code, §2007.043. The following is a summary of that assessment. The purpose of this rulemaking is to delete obsolete language, to make the rules consistent with commission and federal rules, and to implement the commission's guidelines on regulatory reform as well as to provide clarifications to existing rule language. Promulgation and enforcement of the rules does not create a burden on private real property. There are no significant, new requirements being added. In the few instances where substantive changes are being adopted, there are no such changes which modify the financial assurance rules, procedures, or criteria in such a manner that a burden on private real property is modified or created. A landowner's rights in private real property will not be affected by the adoption of these rules.

COASTAL MANAGEMENT PROGRAM CONSISTENCY REVIEW

The commission has reviewed the rulemaking for consistency with the Texas Coastal Management Program (CMP) goals and policies in accordance with the regulations of the Coastal Coordination Council and found that the rules are subject to the CMP and must be consistent with applicable CMP goals and policies which are found in 31 TAC §501.12 and §501.14. The CMP goal applicable to the rules is the goal to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of Coastal Natural Resource Areas (CNRAs). CMP policies applicable to the rules include

the administrative policies and the policies for specific activities related to construction and operation of solid waste treatment, storage, and disposal facilities. In particular, the CMP policy most applicable to these rules is to ensure that new solid waste facilities and areal expansions of existing solid waste facilities are sited, designed, constructed, and operated to prevent releases of pollutants that may adversely affect CNRAs and comply with standards established under the Solid Waste Disposal Act, 42 United States Code, §§6901 et seq.

This rulemaking is related to financial assurance, which in turn impacts the issuance of permits, including those permits relating to solid waste facilities. Thus, this rulemaking is subject to the CMP. The commission has prepared a consistency determination for the rules pursuant to 31 TAC §505.22 and has found that this rulemaking is consistent with the applicable CMP goals and policies. The commission determined that the rule adoption is consistent with the applicable CMP goals and policies because the modification implemented by these rules is insignificant in relationship to the CMP and has no impact upon CNRAs.

The rulemaking does contain minor, substantive changes. In the few instances where a substantive change is made, it is for the purpose of achieving consistency with state and federal law and to achieve consistency with commission rules. However, the commission has determined that these rules do not have a direct or significant, adverse effect on CNRAs. This adoption does not change the technical permitting requirements of waste facilities nor change the amount of financial assurance that must be demonstrated. Instead, these financial assurance rules address the means by which demonstrations of financial assurance can be made.

Because this rule adoption does not modify the amount of financial assurance to be demonstrated for permits for owners and operators of hazardous waste storage, processing, or disposal facilities, promulgation and enforcement of these rules has no new effect on the CNRAs. The rules continue having their original effect, which is to require demonstrations of financial assurance in order to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of CNRAs, and also the rules continue to ensure that new solid waste facilities and areal expansions of existing solid waste facilities are sited, designed, constructed, and operated to prevent releases of pollutants that may adversely affect CNRAs and comply with standards established under the Solid Waste Disposal Act, 42 United States Code, §§6901 et seq.

The CMP goal applicable to the rules is the goal to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of CNRAs. Because the rules do not change the amount of financial assurance required by the previously existing rules, the rules are consistent with the applicable CMP goal. CMP policies applicable to the rules include the administrative policies and the policies for specific activities related to construction and operation of solid waste treatment, storage, and disposal facilities.

Promulgation and enforcement of these rules is consistent with the applicable CMP goals and policies because the adoption does not change the amount of financial assurance required in the previously existing rules. The rule modifications do not relax the existing requirements which encourage safe and appropriate storage, management, and treatment of hazardous waste, and thereby the rule modifications result in no substantive effect on the management of coastal areas of the state. In addition, these rules

do not violate any applicable provisions of the CMP's stated goals and policies. Therefore, in compliance with 31 TAC §505.22(e), the commission affirms that these rules are consistent with CMP goals and policies, and the rules have no new impact upon the coastal area.

HEARING AND COMMENTERS

A public hearing was not requested or held concerning these rules. The public comment period closed November 22, 1999 at 5:00 p.m. central standard time. Written comments were not received regarding this chapter. However, comments were received regarding other rule chapters associated with this rulemaking. Those comments as well as the changes that are being made throughout the associated promulgation are described and discussed in the adoption preambles for Chapters 37, 305, 324, and 331 being simultaneously published in this *Texas Register*.

STATUTORY AUTHORITY

The amendment is adopted under TWC, §5.103 and §5.105, which provide the commission with the authority to adopt any rules necessary to carry out its powers and duties under the laws of this state. The amendment is also adopted under TWC, §27.019, which provides the commission with the authority to adopt rules and procedures necessary for the management of underground injection well facilities; under TWC, §27.073, which provides the commission with the authority to require financial assurance for underground injection well facilities; and HSC, §361.085, which provides the commission with the authority to require financial assurance demonstrations for solid waste, hazardous waste, and permitted facilities.

Together, these statutes authorize the commission to adopt any rules necessary to carry out its powers and duties under TWC and other laws of Texas and to establish and approve all general policy of the commission.

SUBCHAPTER D : STANDARDS FOR CLASS I WELLS OTHER THAN SALT CAVERN SOLID WASTE DISPOSAL WELLS

§331.68

§331.68. Post-Closure Care.

(a) The owner or operator of a Class I hazardous well shall prepare, maintain, and comply with a plan for post-closure care that meets the requirements of subsection (b) of this section, and is acceptable to the executive director. The obligation to implement the post-closure plan survives the termination of a permit or the cessation of injection activities. The requirement to maintain an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.

(1) The owner or operator shall submit the plan as a part of the permit application and, upon approval by the executive director, such plan shall be a condition of any permit issued.

(2) The owner or operator shall submit any proposed significant revision to the plan as appropriate over the life of the well, but no later than the date of the closure report required under §331.46 of this title (relating to Closure Standards).

(3) The plan shall provide financial responsibility as required in Subchapter I of this chapter (relating to Financial Responsibility). The owner or operator shall demonstrate and maintain financial assurance in the amount of the post closure cost estimate to cover post-closure care in a

manner that meets the requirements of Chapter 37, Subchapter Q of this title (relating to Financial Assurance for Underground Injection Wells). The amount of the funds available shall be no less than the amount identified in paragraph (4)(F) of this subsection. The obligation to maintain financial responsibility for post-closure care survives the termination of a permit or the cessation of injection.

(4) The plan shall include the following information:

(A) the pressure in the injection zone before injection began;

(B) the anticipated pressure in the injection zone at the time of closure;

(C) the predicted time until pressure in the injection zone decays to the point that the well's cone of influence no longer intersects the base of the lowermost USDW or freshwater aquifer;

(D) predicted position of the waste front at closure;

(E) the status of any corrective action required under §331.44 of this title (relating to Corrective Action Standards); and

(F) the estimated cost of proposed post-closure care.

(5) At the request of the owner or operator, or on his own initiative, the executive director may modify the post-closure plan after submission of the plugging and abandonment report following the procedures in §305.72 of this title (relating to UIC Permit Modification at the Request of the Permittee).

(b) The owner or operator shall:

(1) continue and complete any corrective action required under §331.44 of this title (relating to Corrective Action Standards);

(2) continue to conduct any groundwater monitoring required under the permit until pressure in the injection zone decays to the point that the well's cone of influence no longer intersects the base of the lowermost USDW or freshwater aquifer. The executive director may extend the period of post-closure monitoring if he determines that the well may endanger a USDW or freshwater aquifer;

(3) submit a survey plat to the local zoning authority designated by the executive director. The plat shall indicate the location of the well relative to permanently surveyed benchmarks. A copy of the plat shall be submitted to the Underground Injection Control (UIC) program at the Austin office of the commission;

(4) Provide appropriate notification and information to such state and local authorities as have cognizance over drilling activities to enable such state and local authorities to impose

appropriate conditions on subsequent drilling activities that may penetrate the well's confining or injection zone;

(5) Retain, for a period of five years following well plugging and abandonment records reflecting the nature, composition and volume of all injected fluids. The executive director shall require the owner or operator to deliver the records to the executive director at the conclusion of the retention period, and all records shall thereafter be retained at a location designated by the executive director for that purpose.

SUBCHAPTER G : CONSIDERATION PRIOR TO PERMIT ISSUANCE

§331.121, §331.122

STATUTORY AUTHORITY

The amendments are adopted under TWC, §5.103, and §5.105, which provide the commission with the authority to adopt any rules necessary to carry out its powers and duties under the laws of this state. The amendments are also adopted under TWC, §27.019, which provides the commission with the authority to adopt rules and procedures necessary for the management of underground injection well facilities; TWC, §27.073, which provides the commission with the authority to require financial assurance for underground injection well facilities; and HSC, §361.085, which provides the commission with the authority to require financial assurance demonstrations for solid waste, hazardous waste, and permitted facilities.

Together, these statutes authorize the commission to adopt any rules necessary to carry out its powers and duties under TWC and other laws of Texas and to establish and approve all general policy of the commission.

§331.121. Class I Wells.

(a) The commission shall consider the following before issuing a Class I Injection Well Permit:

(1) all information in the completed application for permit;

(2) all information in the Technical Report submitted with the application for permit in conformance with Chapter 305 of this title (relating to Consolidated Permits) including, but not limited to:

(A) a map showing the location of the injection well for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number, or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells, and other pertinent surface features, including residences and roads. The map should also show faults, if known or suspected. Only information of public record is required to be included on this map;

(B) a tabulation of all wells within the area of review which penetrate the injection zone or confining zone, and for salt cavern disposal wells, the salt cavern injection zone, salt cavern confining zone and caprock. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the executive director may require;

(C) the protocol followed to identify, locate, and ascertain the condition of abandoned wells within the area of review which penetrate the injection or the confining zones;

(D) maps and cross-sections indicating the general vertical and lateral limits of underground sources of drinking water (USDWs) and freshwater aquifers, their positions relative to the

injection formation and the direction of water movement, where known, in each USDW or freshwater aquifer which may be affected by the proposed injection;

(E) maps, cross-sections, and description of the geologic structure of the local area;

(F) maps, cross-sections, and description of the regional geologic setting;

(G) proposed operating data:

(i) average and maximum daily injection rate and volume of the fluid or waste to be injected over the anticipated life of the injection well;

(ii) average and maximum injection pressure;

(iii) source of the waste streams;

(iv) an analysis of the chemical and physical characteristics of the waste streams;

(v) for salt cavern waste disposal, the bulk waste density, permeability, porosity, and compaction rate, as well as the individual physical characteristics of the wastes and transporting media;

(vi) for salt cavern waste disposal, the results of tests performed on the waste to demonstrate that the waste will remain solid under cavern conditions; and

(vii) any additional analyses which the executive director may reasonably require;

(H) proposed formation testing program to obtain an analysis of the chemical, physical, and radiological characteristics of formation fluids, and other information on the injection zone and confining zone;

(I) proposed stimulation program, if needed;

(J) proposed operation and injection procedures;

(K) engineering drawings of the surface and subsurface construction details of the system;

(L) contingency plans, based on a reasonable worst case scenario, to cope with all shut-ins; loss of cavern integrity, or well failures so as to prevent migration of fluid into any USDW;

(M) plans (including maps) for meeting the monitoring requirements of this chapter, such plans shall include all parameters, test methods, sample methods, and quality assurance procedures necessary and used to meet these requirements;

(N) for wells within the area of review which penetrate the injection zone or confining zone but are not adequately constructed, completed, or plugged, the corrective action proposed to be taken;

(O) construction procedures including a cementing and casing program, contingency cementing plan for managing lost circulation zones and other adverse subsurface conditions, well materials specifications and their life expectancy, logging procedures, deviation checks, and a drilling, testing, and coring program;

(P) delineation of all faults within the area of review, together with a demonstration, unless previously demonstrated to the commission or to the United States Environmental Protection Agency, that the fault is not sufficiently transmissive or vertically extensive to allow migration of hazardous constituents out of the injection zone;

(3) whether the applicant will assure, in accordance with Chapter 37, Subchapter Q of this title (relating to Financial Assurance for Underground Injection Control Wells), the resources necessary to close, plug, abandon, and if applicable, provide post-closure care for the well and/or waste disposal cavern as required.

(4) the closure plan, corrective action plan, and post-closure plan submitted in the technical report accompanying the permit application;

(5) any additional information required by the executive director for the evaluation of the proposed injection well.

(b) In determining whether the use or installation of an injection well for the disposal of hazardous waste is in the public interest under the Texas Water Code, §27.051(a)(1), the commission shall also consider:

(1) the compliance history of the applicant in accordance with the Texas Water Code, §27.051(e) and §281.21 of this title (relating to Draft Permit and Compliance Summary);

(2) whether there is a practical, economic and feasible alternative to an injection well reasonably available to manage the types and classes of hazardous waste;

(3) whether the applicant will maintain liability coverage for bodily injury and property damage to third parties that is caused by sudden and nonsudden accidents in accordance with Chapter 37 of this title (relating to Financial Assurance); and

(4) that any permit issued for a Class I injection well for disposal of wastes generated on site requires a certification by the owner or operator that:

(A) the generator of the waste has a program to reduce the volume or quantity and toxicity of such waste to the degree determined by the generator to economically practicable; and

(B) injection of the waste is that practicable method of disposal currently available to the generator which minimizes the present and future threat to human health and the environment.

(c) The commission shall consider the following minimum criteria for siting before issuing a Class I injection well permit:

(1) All Class I injection wells shall be sited such that they inject into a formation that is beneath the lowermost formation containing, within 1/4 mile of the wellbore, a USDW or freshwater aquifer.

(2) The siting of Class I injection wells shall be limited to areas that are geologically suitable. The executive director shall determine geologic suitability based upon:

(A) an analysis of the structural and stratigraphic geology, the hydrogeology, and the seismicity of the region;

(B) an analysis of the local geology and hydrogeology of the well site, including, at a minimum, detailed information regarding stratigraphy, structure, and rock properties, aquifer hydrodynamics, and mineral resources; and

(C) a determination that the geology of the area can be described confidently and that limits of waste fate and transport can be accurately predicted through the use of analytical and numerical models.

(3) Class I injection wells shall be sited such that:

(A) the injection zone has sufficient permeability, porosity, thickness, and areal extent to prevent migration of fluids into USDWs or freshwater aquifers;

(B) the confining zone:

(i) is laterally continuous and free of transecting, transmissive faults or fractures over an area sufficient to prevent the movement of fluids into a USDW or freshwater aquifer; and

(ii) contains at least one formation of sufficient thickness and with lithologic and stress characteristics capable of preventing initiation and/or propagation of fractures.

(4) The owner or operator shall demonstrate to the satisfaction of the executive director that:

(A) the confining zone is separated from the base of the lowermost USDW or freshwater aquifer by at least one sequence of permeable and less permeable strata that will provide an added layer of protection for the USDW or freshwater aquifer in the event of fluid movement in an unlocated borehole or transmissive fault; or

(B) within the area of review, the piezometric surface of the fluid in the injection zone is less than the piezometric surface of the lowermost USDW or freshwater aquifer, considering density effects, injection pressures, and any significant pumping in the overlying USDW or freshwater aquifer; or

(C) there is no USDW or freshwater aquifer present;

(D) the commission may approve a site which does not meet the requirements in subparagraphs (A), (B), or (C) of this paragraph if the owner or operator can demonstrate to the commission that because of the geology, nature of the waste, or other considerations, that abandoned boreholes or other conduits would not cause endangerment of USDWs, and fresh or surface water.

(d) The commission shall also consider the following additional criteria, which must be addressed in the technical report of the application, before issuing a salt cavern Class I injection well permit:

(1) geologic suitability of the location:

(A) a thorough geologic characterization of the salt dome, including the geometry of the salt stock and its calculated movement and calculated salt loss rate. Data submitted must be sufficient to image underneath all overhangs, to delineate the edge of the salt stock, to define any other caverns or co-uses of the salt stock, and to address any conditions that may result in potential adverse impact on the salt stock. Well logs, seismic reflection surveys, gravity surveys, and any other appropriate geophysical methods necessary to characterize the salt dome are to be utilized. Seismic reflection data submitted must include a surface recorded three-dimensional seismic grid survey sufficient to image underneath all suspected overhangs and to delineate the edge of the stock;

(B) any unusual features, such as depressions or lineations observable at the land surface or within or detectable within the subsurface, which may be indicative of underlying

anomalies in the caprock or salt stock, which might affect construction, operation, or closure of the cavern;

(C) the petrology of the caprock, salt stock, and deformed strata; and

(D) for strata surrounding the salt stock, information on their nature, structure, hydrodynamic properties, and relationships to USDWs, including a demonstration that the proposed salt cavern injection zone will not be in or above a formation which within 1/4 mile of the salt cavern injection zone contains a USDW;

(2) establishment of a pre-development baseline for subsidence and groundwater monitoring, over the area of review;

(3) characterization of the predicted impact of the proposed operations on the salt stock, specifically the extent of the disturbed zone;

(4) demonstration of adequate separation between the outer limits of the injection zone and any other activities in the domal area. The thickness of the disturbed zone, as well as any additional safety factors will be taken into consideration; and

(5) the commission will consider the presence of salt cavern storage activities, sulfur mining, salt mining, brine production, oil and gas activity, and any other activity which may adversely affect or be affected by waste disposal in a salt cavern.

(e) Information requirements for Class I hazardous waste injection well permits.

(1) The following information is required for each active Class I hazardous waste injection well at a facility seeking a underground injection control permit:

(A) dates well was operated; and

(B) specification of all wastes that have been injected in the well, if available.

(2) The owner or operator of any facility containing one or more active hazardous waste injection wells must submit all available information pertaining to any release of hazardous waste or constituents from any active hazardous waste injection well at the facility.

(3) The owner or operator of any facility containing one or more active Class I hazardous waste injection wells must conduct such preliminary site investigations as are necessary to determine whether a release is occurring, has occurred, or is likely to have occurred.

(f) Interim Status under the Resource Conservation and Recovery Act (RCRA) for Class I hazardous waste injection wells. The minimum state standards which define acceptable injection of hazardous waste during the period of interim status are set out in this chapter. The issuance of an underground injection well permit does not automatically terminate RCRA interim status. A Class I well's interim status does, however, automatically terminate upon issuance to that well of a RCRA permit, or upon the well's receiving a RCRA permit-by-rule under §335.47 of this title (relating to Special Requirements for Persons Eligible for a Federal Permit by Rule). Thus, until a Class I well injecting hazardous waste receives a RCRA permit or RCRA permit-by-rule, the well's interim status requirements are the applicable requirements imposed under this chapter, including any requirements imposed in the UIC permit.

(g) Before issuing a permit for a hazardous waste injection well in a solution-mined salt dome cavern, the commission by order must find that there is an urgent public necessity for the hazardous waste injection well. The commission, in determining whether an urgent public necessity exists for the permitting of the hazardous waste injection well in a solution-mined salt dome cavern, must find that:

(1) the injection well will be designed, constructed, and operated in a manner that provides at least the same degree of safety as required of other currently operating hazardous waste disposal technologies;

(2) consistent with the need and desire to manage the state hazardous wastes generated in the state, there is a substantial or obvious public need for additional hazardous waste disposal

capacity and the hazardous waste injection well will contribute additional capacity toward servicing that need;

(3) that the injection well will be constructed and operated in a manner so as to safeguard public health and welfare and protect physical property and the environment;

(4) the applicant has demonstrated that groundwater and surface waters, including public water supplies, will be protected from the release of hazardous waste from the salt dome waste containment cavern; and

(5) any other criteria required by the commission to satisfy that the test of urgency has been met.

§331.122. Class III Wells.

The commission shall consider the following before issuing a Class III Injection Well or Area Permit:

(l) all information in the completed application for permit;

(2) all information in the Technical Report submitted with the application for permit, including the following:

(A) a map showing the injection well(s) and area for which the permit is sought and the applicable area of review. Within the area of review, the map must show the number, or name, and location of all existing producing wells, injection wells, dry holes, surface bodies of water, mines (surface and subsurface), quarries, public water systems, water wells, and other pertinent surface features, including residences and roads. The map should also show faults, if known or suspected. Only information of public record is required to be on this map. If production area authorizations are required prior to the commencement of mining, the proposed production areas must be shown on the map;

(B) a tabulation of reasonably available data on all wells within the area of review which penetrate the proposed injection zone. This data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and completion, and any additional information the executive director may require;

(C) maps and cross-sections indicating the vertical and lateral limits of those aquifers within the area of review that contain water with less than 10,000 mg/liter TDS, their position relative to the injection formation, and the direction of water movement;

(D) maps and cross-sections, detailing the geologic structure of the local area;

(E) generalized map and cross-sections illustrating the regional geologic setting;

(F) proposed operating data:

(i) average and maximum daily rate and volume of fluid to be injected;

(ii) average and maximum injection pressure;

(iii) source of the injection fluids; and

(iv) analysis, as needed, of the chemical, physical, and radiological characteristics of the injection fluids.

(G) proposed formation testing program to obtain an analysis of the physical, chemical, and radiological characteristics of the receiving formation;

(H) proposed stimulation program;

(I) proposed operation and injection procedure;

(J) engineering drawings of the surface and subsurface construction details of the system;

(K) plans (including maps) for meeting the minimum monitoring requirements of the rules;

(L) expected changes in pressure, native fluid displacement, direction of movement of injection fluid;

(M) contingency plans to cope with all shut-ins or well failures so as to prevent the migration of contaminating fluids into fresh water; and

(N) the corrective action proposed to be taken under §331.44 of this title (relating to Corrective Action Standards).

(3) whether the applicant will assure, in accordance with Chapter 37, Subchapter Q of this title (relating to Financial Assurance for Underground Injection Control Wells), the resources necessary to close, plug, or abandon the well;

(4) the closure plan, in accordance with §331.46 of this title (relating to Closure Standards, submitted in the Technical Report accompanying the application; and

(5) Any additional information reasonably required by the executive director for the evaluation of the proposed injection well or project.

SUBCHAPTER I : FINANCIAL RESPONSIBILITY

§331.141, 331.145-331.147

STATUTORY AUTHORITY

The repeals are adopted under TWC, §5.103, and §5.105, which provide the commission with the authority to adopt any rules necessary to carry out its powers and duties under the laws of this state. The repeals are also adopted under TWC, §27.019, which provides the commission with the authority to adopt rules and procedures necessary for the management of underground injection well facilities; TWC, §27.073, which provides the commission with the authority to require financial assurance for underground injection well facilities; and HSC, §361.085, which provides the commission with the authority to require financial assurance demonstrations for solid waste, hazardous waste, and permitted facilities.

Together, these statutes authorize the commission to adopt any rules necessary to carry out its powers and duties under TWC and other laws of Texas and to establish and approve all general policy of the commission.

§331.141. Definitions.

§331.145. Incapacity of Owners or Operators, Guarantors, or Financial Institutions.

§331.146. State Assumption of Responsibility.

§331.147. Wording of the Instruments.

SUBCHAPTER I : FINANCIAL RESPONSIBILITY

§§331.142-331.144

STATUTORY AUTHORITY

The amendments are adopted TWC, §5.103, and §5.105, which provide the commission with the authority to adopt any rules necessary to carry out its powers and duties under the laws of this state. The amendments are also adopted under TWC, §27.019, which provides the commission with the authority to adopt rules and procedures necessary for the management of underground injection well facilities; TWC, §27.073, which provides the commission with the authority to require financial assurance for underground injection well facilities; and HSC, §361.085, which provides the commission with the authority to require financial assurance demonstrations for solid waste, hazardous waste, and permitted facilities.

Together, these statutes authorize the commission to adopt any rules necessary to carry out its powers and duties under TWC and other laws of Texas and to establish and approve all general policy of the commission.

§331.142. Financial Assurance.

(a) The permittee shall secure and maintain financial assurance for plugging and abandonment in the amount of the plugging and abandonment cost estimate for Class I, Class I salt cavern disposal wells and associated salt caverns, and Class III wells in a manner that meets the requirements of

Chapter 37, Subchapter Q of this title (relating to Financial Assurance for Underground Injection Control Wells). Financial assurance for plugging and abandonment shall be provided in the amount of the plugging and abandonment cost estimate as provided in §331.143 of this title (relating to Cost Estimate for Plugging and Abandonment). Financial assurance for post closure of Class I hazardous wells shall be provided in the amount of the post closure cost estimate.

(b) The permittee of a hazardous waste Class I waste injection well or Class I salt cavern disposal well and associated salt cavern shall establish and maintain sufficient liability coverage for bodily injury and property damage to third parties caused by sudden or nonsudden accidental occurrences arising from operations of the facility that meets the requirements of Chapter 37 of this title (relating to Financial Assurance) and §305.154(a)(11) of this title (relating to Standards).

(c) The requirement to maintain financial responsibility is enforceable regardless of whether the requirement is a condition of the permit.

§331.143. Cost Estimate for Plugging and Abandonment.

(a) The owner or operator must prepare a written estimate, in current dollars, of the cost of plugging the well in accordance with the plugging and abandonment plan as specified in this chapter. The plugging and abandonment cost estimate must equal the cost of plugging and abandonment at the

point in the facility's operating life when the extent and manner of its operation would make plugging and abandonment the most expensive, as indicated by its plugging and abandonment plan.

(b) During the operating life of the facility, the owner or operator must keep at the facility the latest plugging and abandonment cost estimate prepared in accordance with subsection (a) of this section.

§331.144. Approval of Plugging and Abandonment.

Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that plugging and abandonment has been accomplished in accordance with the plugging and abandonment plan, the executive director will notify the owner or operator in writing that he is no longer required by this section to maintain financial assurance for plugging and abandonment of the well, unless the executive director has reason to believe that plugging and abandonment has not been in accordance with the plugging and abandonment plan. Financial assurance may not be released without the written approval of the executive director.

SUBCHAPTER J : STANDARDS FOR CLASS I SALT CAVERN

SOLID WASTE DISPOSAL WELLS

§331.171

STATUTORY AUTHORITY

The amendment is adopted under TWC, §5.103, and §5.105, which provide the commission with the authority to adopt any rules necessary to carry out its powers and duties under the laws of this state. The amendment is also adopted under TWC, §27.019, which provides the commission with the authority to adopt rules and procedures necessary for the management of underground injection well facilities; and, TWC, §27.073, which provides the commission with the authority to require financial assurance for underground injection well facilities; and HSC, §361.085, which provides the commission with the authority to require financial assurance demonstrations for solid waste, hazardous waste, and permitted facilities.

Together, these statutes authorize the commission to adopt any rules necessary to carry out its powers and duties under TWC and other laws of Texas and to establish and approve all general policy of the commission.

§331.171. Post-Closure Care.

(a) The owner or operator of a Class I salt cavern solid waste disposal well shall prepare, maintain, and comply with a plan for post-closure care that meets the requirements of subsection (b) of this section, and that is acceptable to the executive director.

(1) The owner or operator shall submit the plan as a part of the permit application and, upon approval by the executive director, such plan shall be a condition of any permit issued.

(2) The owner or operator shall submit any proposed significant revision to the plan and obtain any necessary permit amendment, as appropriate over the life of the well, but no later than the date of the closure report required under §331.46 of this title (relating to Closure Standards).

(3) The plan shall provide financial assurance as required in this chapter. The owner or operator shall demonstrate and maintain financial assurance in the amount of the post closure cost estimate to cover post closure in a manner that meets the requirements of this chapter and Chapter 37, Subchapter Q of this title (relating to Financial Assurance for Underground Injection Control Wells). The amount of the funds available shall be no less than the amount identified in paragraph (4)(F) of this subsection.

(4) The plan shall include the following information:

(A) the pressure in the injection zone before injection began;

(B) the anticipated pressure in the injection zone at the time of closure;

(C) the predicted time based on actual preclosure monitoring data until pressure in the injection interval reaches equilibrium with the surrounding salt stock;

(D) predicted position of the waste front at closure (cavern sealing and well plugging);

(E) the status of any corrective action required under §331.44 of this title (relating to Corrective Action Standards);

(F) the estimated cost of proposed closure and post-closure care to be based on a reasonable worst case scenario.

(5) At the request of the owner or operator, or on his own initiative, the executive director may modify the post-closure plan after submission of the closure report following the procedures in §331.46 of this title (relating to Closure Standards).

(b) The owner or operator shall:

(1) continue and complete any corrective action required under §331.44 of this title (relating to Corrective Action Standards);

(2) continue to conduct any groundwater monitoring and subsidence monitoring required under the permit until pressure in the injection interval reaches equilibrium with the salt stock. The executive director may extend the period of post-closure monitoring if he determines that the well or cavern may endanger an underground source of drinking water or freshwater aquifer;

(3) submit a survey plat to the local zoning authority designated by the executive director. The plat shall indicate the location of the well relative to permanently surveyed benchmarks, the depth of the cavern ceiling and floor, and the maximum cavern radius. A copy of the plat shall be submitted to the underground injection control (UIC) staff of the commission;

(4) provide appropriate notification and information to such state and local authorities as have authority over drilling activities to enable such state and local authorities to impose appropriate conditions on subsequent drilling activities that may penetrate the well's confining or injection zone;

(5) retain for a period of five years following well closure records reflecting the nature, composition, and volume of all injected materials. The executive director shall require the owner or operator to deliver the records to the executive director at the conclusion of the retention period, and all records shall thereafter be retained at a location designated by the executive director for that purpose.