

The Texas Commission on Environmental Quality (TCEQ, agency, commission) proposes to amend §§331.82, 331.107, 331.108 and 331.122; and proposes new §331.110.

### **Background and Summary of the Factual Basis for the Proposed Rules**

The proposed changes to this chapter are necessary to implement passage of House Bill (HB) 1079, 83rd Legislature, 2013. HB 1079 amended Texas Water Code (TWC), §27.0513, to establish a requirement for new, amended, or renewed Class III Underground Injection Control (UIC) permits, to include a table of high and low values for each groundwater quality parameter that is used to determine aquifer restoration, herein referred to as the permit range table, to modify the conditions that determine when certain types of production area authorization (PAA) applications are subject to an opportunity for a contested case hearing and, to require that restoration table values of a new or amended PAA must fall within the range table that is established in the corresponding permit.

In a corresponding rulemaking published in this issue of the *Texas Register*, the commission also proposes to amend 30 TAC Chapter 55, Requests for Reconsideration and Contested Case hearing; Public comments, and 30 TAC Chapter 305, Consolidated Permits.

For the convenience of this proposed rulemaking, §331.108 is retained, with revision to

the section title, to include proposed rules to address amendments to TWC, §27.0513 under HB 1079.

### **Section by Section Discussion**

#### *§331.82, Construction Requirements*

The commission proposes to amend existing §331.82(e) to add paragraph (7), under which the pre-mining groundwater quality must be determined in accordance with the requirements of §305.49(a)(10). Proposed paragraph (7) implements TWC, §27.0513(a), as amended by HB 1079, which requires new, amended or renewed Class III injection well permits for mining of uranium to include a table of pre-mining low and high values that represent a range of groundwater quality within the permit boundary and area of review. Under existing §331.82(e), the injection zone characteristics (fluid pressure, temperature, fracture pressure, other physical and chemical characteristics of the injection zone, physical and chemical characteristics of the formation fluids, and compatibility of injected fluids with formation fluids) must be determined as part of the well construction process. This determination applies to all types of UIC wells. Proposed paragraph (7), which pertains to the chemical characteristics of the groundwater in the injection zone, will apply to Class III wells only.

#### *§331.107, Restoration*

The commission proposes to amend existing §331.107(a)(1) to add the requirement that

the values for the parameters listed in the restoration table in a PAA must be within the respective ranges in the permit range table. The proposed amendment to §331.107(a)(1) implements TWC, §27.0513(c) as amended by HB 1079. Under TWC, §27.0513(c) a restoration table value in a new or amended PAA cannot exceed the respective high value in the permit range table. In the case where a restoration table value would exceed the respective high value in the permit range table, the permit range table must be revised through a major amendment to increase the permit range table value (or values) such that the respective values in the PAA restoration table do not exceed the respective values in the permit range table. Applications for major amendments of a Class III injection well permit are subject to opportunity for a contested case hearing.

The commission proposes to amend existing §331.107(g) to address the requirement in TWC, §27.0513(c), as amended by HB 1079, that a value in an amended PAA restoration table cannot exceed the maximum respective value in the associated permit range table. The commission further proposes to amend this subsection to specify that if any proposed PAA restoration table value is not within the respective range in the permit range table, the permittee must submit an application for major amendment of the permit to revise the permit range table such that the proposed PAA restoration table value is within the respective range in the permit range table.

The commission proposes to amend existing §331.107(g)(1), (2), and (4) to specify that

the commission may amend a permit range table, as well as a PAA restoration table. Currently, paragraphs (1), (2), and (4) apply to amendment of a PAA restoration table value. Under TWC §27.0513(c), as amended by HB 1079, revision of a PAA restoration table value requires amendment to the associated permit range table if the proposed amended restoration table value is not within the respective range in the associated permit range table. Therefore, the factors considered by the commission and the required findings of the commission in reviewing an application for amendment of a PAA restoration range table under §331.107(g)(1), (2), and (4) should also apply to an application for a permit amendment to revise a permit range table.

*§331.108, Independent Third-Party Experts*

The commission proposes to amend existing §331.108 to remove the existing language in subsections (a) - (h), regarding the requirements for independent third-party experts and for the use of recommendations of such an expert. Additionally, the commission proposes to amend the title of this section to "Opportunity for a Contested Case Hearing on a Production Area Authorization Application." HB 1079 amended TWC, §27.0513 to remove the option for using the recommendations of an independent third-party expert regarding monitor well requirements. Under the previous language in TWC, §27.0513(d)(2) an application for a PAA that initial establishment of monitor wells associated with a PAA was subject to opportunity for a contested case hearing unless the executive director used the recommendations of such an expert regarding establishment

of monitor wells. Section 331.108 originally was adopted to address the use of an independent third-party expert, and the qualifications of such an expert. Deletion of the previous language at TWC, §27.0513(d)(2), by HB 1079, removed the necessity for the existing language in §331.108 regarding independent third-party experts.

HB 1079 amended TWC, §27.0513 to establish the conditions for determining when a PAA application is an uncontested matter, not subject to the opportunity for a contested case hearing. To address this change to the TWC, the commission proposes to further amend existing §331.108 to specify the required conditions for a PAA application to be an uncontested matter as further described.

The commission proposes to amend existing §331.108(a) to remove the current language regarding use of an independent third-party expert, and to add the conditions at TWC §27.0513(d)(1) - (3), as amended by HB 1079. Under the proposed revisions to §331.108(a)(1) - (4), an application for a new PAA is an uncontested matter if the permit under which the authorization will be issued includes a permit range table established in accordance with the requirements of §305.49(a)(10); the PAA application includes a restoration table with restoration parameter values that do not exceed the high values for the respective parameters in the permit range table; the application is for a PAA within the boundary of the permit under which the proposed PAA will be issued; and the PAA application meets the requirements at §331.104(a) - (d) regarding baseline wells.

Proposed §331.108(a)(1) implements TWC, §27.0513(d)(1), as amended by HB 1079.

Proposed §331.108(a)(2) implements TWC, §27.0513(d)(2), as amended by HB 1079.

Proposed §331.108(a)(3) implements TWC, §27.0513(d)(3), as amended by HB 1079.

Proposed §331.108(a)(4) implements TWC, §27.0513(g), as amended by HB 1079.

The commission proposes to amend existing §331.108(b) to remove the requirements that apply for a person to be designated as an independent third-party expert. HB 1079 amended TWC, §27.0513 to eliminate the use of such experts. Section 331.108(b) is further revised to establish the conditions for when an application to amend a PAA restoration table is an uncontested matter, not subject to an opportunity for a contested case hearing. If the application proposes to amend a restoration table value and the values in the amended restoration table do not exceed the respective values in the associated permit range table, the application is not subject to an opportunity for a contested case hearing. Proposed §331.108(b) implements TWC, §27.0513(d)(2), as amended by HB 1079.

The commission proposes to amend existing §331.108(c) to remove the requirement that the executive director will not designate an independent third-party expert unless requested to do so by the applicant. Revision to TWC, §27.0513(d) under HB 1079 removed the option of using such an expert. The commission further proposes to amend §331.108(c) to establish the conditions when an application for amendment of a

PAA restoration table is subject to opportunity for a contested case hearing. If the application proposes amendment to increase a restoration table value and the PAA is issued under a Class III UIC permit that does not include a permit range table, the application is subject to the opportunity for a contested case hearing. Proposed §331.108(c) implements TWC, §27.0513(d), as amended by HB 1079, establishing the only PAA application situation that can be subject to an opportunity for contested case hearing. The condition at proposed §331.108(c) can only apply to any of the currently-issued PAAs if the permittee does not amend the Class III injection well permit to include a range table. Because all new Class III injection well permits must have a range table, because all new PAAs must have restoration table values that fall within the values of the permit range table, and all existing Class III injection well permits have at least one PAA issued under the permit, proposed §331.108(c) describes the only situation where a PAA application can be subject to an opportunity for a contested case hearing under TWC, §27.0513(d), as amended by HB 1079. An application for a PAA that is not subject to an opportunity for contested case hearing is still subject to applicable public notice requirements and opportunity for the public to submit comments on the application.

*§331.110, General Requirements for Production Area Authorization*

The commission proposes new §331.110 to address the requirements in TWC, §27.0513(g), as amended by HB 1079. Under this proposed rule, a PAA may not

authorize: the use of groundwater from a well for purposes of providing supplemental water production; expansion of a permit boundary or a production area outside of a permit boundary; or a reduction in the number of monitor wells or an increase in the distance between wells as required under §331.103. The conditions addressed in TWC, §27.0513(g) do not alter the commission's existing practice regarding PAAs. PAAs do not confer any authority to the permittee regarding the uses of groundwater for supplemental groundwater; PAAs do not expand the area authorized under an area permit; and PAAs must comply with the number and spacing requirements for monitor wells established in commission rules.

*§331.122, Class III Wells*

The commission proposes to amend existing §331.122 to add §331.122(2)(O) to the list of information the commission shall consider before issuing a Class III injection well or area permit. This revision is necessary to address the requirement that a Class III area permit include the permit range table. Proposed §331.122(2)(O) implements TWC, §27.0513(a), as amended by HB 1079.

**Fiscal Note: Costs to State and Local Government**

Nina Chamness, Analyst in the Chief Financial Officer Division, has determined that, for the first five-year period the proposed rules are in effect, no significant fiscal implications are anticipated for the agency as a result of administration or enforcement

of the proposed rules. Other units of state or local government are not expected to experience fiscal impacts under the proposed rules since they do not typically participate in uranium mining activities.

The proposed rules for Chapter 331 are part of a rulemaking that would implement the provisions of HB 1079, 83rd Legislature. HB 1079 amended the TWC regarding permits for Class III injection wells used for *in situ* uranium mining and applications for PAAs submitted on or after September 1, 2013. HB 1079 changed the conditions under which a PAA would not be subject to an opportunity for a contested case hearing. The agency is also proposing rules to amend Chapters 55 and 305 to complete the implementation of HB 1079. This fiscal note will address the fiscal impacts of the proposed rules in Chapter 331, and the fiscal impacts of the provisions in Chapters 55 and 305 will be addressed in separate, but related fiscal notes.

The proposed rules for Chapter 331 would apply only to applications for Class III injection well permits, permit amendments, or permit renewals authorizing *in situ* uranium mining, and new PAAs, or amended PAAs issued on or after September 1, 2013. New permit applications would be required to have a permit range table, and associated new applications for PAAs could not be authorized if a restoration table value exceeded the respective high value in the permit range table.

Any current permittee's application for a new PAA under the associated permit would not be subject to an opportunity for a contested case hearing. Currently, there are four small businesses that hold all seven permits that have been issued in the state, and each permit has at least one PAA for the corresponding permit.

The proposed rules do not impose new requirements on existing permittees to establish permit range tables for currently issued permits. However, if permittees choose to amend their permit to establish a permit range table, then any subsequent petition for relief from a restoration table value that exceeded the respective high value in the permit range table would require a major amendment of the permit to revise the range table and be subject to an opportunity for a contested case hearing. A current permittee, whose permit does not include a range table, would be required to submit an application for a major amendment for a PAA (and be subject to an opportunity for a contested case hearing) under the proposed rules if they seek to exceed the high value in a restoration table for that PAA.

As required by HB 1079, the proposed rules also specify that there is not an opportunity for a contested case hearings in the following circumstances: where applications for new PAAs have a production area within the boundary of the permit that includes a permit range table meeting the applicable range table requirements; where a restoration table is included with an application where the parameter values do not exceed the maximum

values in the permit range table; and where the application meets requirements regarding baseline wells. New PAA application requests would also not be subject to an opportunity for a contested case hearing if the new area is within the boundary allowed by the permit and where an existing PAA has already been authorized.

The proposed rules also establish general requirements for PAAs which specify that: a PAA could not authorize the use of groundwater from a well to provide supplemental production water; a PAA could not expand a permit boundary or authorize a production area outside of the permit boundary; and a PAA could not authorize a reduction in the number of monitoring wells or increase the distance between monitoring wells. The proposed rules also comply with the requirements of HB 1079 by removing provisions for the executive director to use a third party expert for recommendations concerning PAAs.

The proposed rules would not have an impact on agency revenue, but they could reduce agency expenditures associated with contested case hearings. However, any cost reductions for the agency are expected to be minimal since there have been only two contested case hearings for new PAAs in the last ten years.

The proposed rules are not expected to have a fiscal impact on units of local government or other state agencies since they do not typically conduct *in situ* uranium mining

activities.

### **Public Benefits and Costs**

Ms. Chamness also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rules will be compliance with state law, a more efficient authorization process for new *in situ* uranium mining production areas, and continued protection of groundwater in the state.

The proposed rules would not have a significant fiscal impact on individuals that do not engage in uranium mining activities. The proposed rules are expected to result in fewer contested case hearings for certain PAA authorizations, but since there have only been two contested case hearings for new PAAs in the past ten years, no significant fiscal impacts are expected to individuals or business as a result of the proposed rules.

Currently, there are seven existing permits for *in situ* uranium mining, and all of them have been issued to four small businesses. The fiscal impact of the proposed rules is expected to be minimal and will be discussed under the Small Business and Micro-Business Assessment section of this fiscal note.

### **Small Business and Micro-Business Assessment**

No adverse fiscal implications are anticipated for small or micro-businesses as a result of the proposed rules. Currently there are four small businesses with permits for Class III injection wells for *in situ* uranium mining. The requirement for a permit range table is not expected to increase costs for small businesses, since under current rules, they are required to have baseline wells and report data that could be used to establish PAA baseline tables and restoration tables. The provisions of the proposed rules that limit the opportunity for contested case hearings for new PAAs are not expected to generate significant cost savings since there have only been two contested case hearings on new PAA applications in the past ten years. The proposed rules could have a benefit to businesses in terms of making the authorization process more efficient for new PAAs, but any fiscal impacts would vary among permittees and depend on the characteristics of each business and the environment in which they operate.

### **Small Business Regulatory Flexibility Analysis**

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules are required comply with state law and do not adversely affect a small or micro-business in a material way for the first five years that the proposed rules are in effect.

### **Local Employment Impact Statement**

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

### **Draft Regulatory Impact Analysis Determination**

The commission proposes the rulemaking action under the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the action is not subject to Texas Government Code, §2001.0225 because it does not meet the definition of "a major environmental rule" as defined in the statute. "A major environmental rule" means a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The proposed rulemaking action implements legislative requirements in HB 1079, establishing requirements for area permits and PAAs for *in situ* recovery of uranium. The proposed rulemaking is 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 the amendments do not alter in a material way the existing

requirements for injection wells used for *in situ* recovery of uranium. The proposed rulemaking action also amends procedural requirements for PAA regarding when such applications may be subject to the opportunity for a contested case hearing in Chapter 55 and amends requirements for injection well permit applications by requiring a permit range table in Chapter 305.

Furthermore, the proposed rulemaking action does not meet any of the four applicability requirements listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225 only applies to a major environmental rule, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law. The proposed 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.

The commission's UIC program is authorized by the United States Environmental Protection Agency and the proposed changes for injection well permits and PAAs, do not

exceed a standard of federal law or requirement of a delegation agreement. There are no federal standards for PAAs. The proposed rules are compatible with federal law.

The proposed rules do not exceed a requirement of state law. TWC, Chapter 27, the Injection Well Act, establishes requirements for the commission's UIC program. HB 1079 amended the Injection Well Act to require permit range tables depicting the range of pre-mining groundwater quality to be included in the injection well permits used for *in situ* recovery of uranium. HB 1079 also amended the Injection Well Act to require that a PAA's restoration table reflect groundwater restoration values that are within the range of values provided in the corresponding permit's range table. The purpose of the rulemaking is to implement requirements consistent with TWC, Chapter 27, as amended by HB 1079.

The proposed rules are compatible with the requirements of a delegation agreement or contract between the state and an agency of the federal government. The commission's UIC program is authorized by the United States Environmental Protection Agency, and the proposed rules are compatible with the state's delegation of the UIC program.

The proposed rules are adopted under specific laws. TWC, Chapter 27, establishes requirements for the commission's UIC program and TWC, §27.019, requires the commission to adopt rules reasonably required to implement the Injection Well Act, and

TWC, §27.0513 authorizes the commission to adopt rules to establish requirements for PAAs.

Written comments on the draft regulatory impact analysis determination may be submitted to the contact person at the address listed under the Submittal of Comments section of this preamble.

### **Takings Impact Assessment**

The commission evaluated these proposed rules and performed a preliminary assessment of whether the Private Real Property Rights Preservation Act, Texas Government Code, Chapter 2007 is applicable. The commission's preliminary assessment is that implementation of these proposed rules would not constitute a taking of real property.

The purpose of these proposed rules is to implement legislative requirements in HB 1079, establishing requirements for area permits and PAAs for *in situ* recovery of uranium. The proposed rule changes in Chapter 331 would substantially advance this purpose by amending the requirements applicable to *in situ* uranium mining consistent with the requirements of HB 1079.

Promulgation and enforcement of these proposed rules would be neither a statutory nor

a constitutional taking of private real property. The proposed rules do not affect a landowner's rights in private real property because this rulemaking action does not constitutionally burden, 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 proposed rules for injection well permits and PAAs do not affect real property. The proposed rules apply only to those who use or apply for permit or authorization of injection wells for *in situ* recovery of uranium. Significant requirements for wells used for *in situ* recovery of uranium apply in the absence of these proposed rules, including the statutory requirements of HB 1079 which became effective on September 1, 2013. Therefore, the proposed rules do not affect real property in a manner that is different than would have been affected without these revisions.

### **Consistency with the Coastal Management Program**

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

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the Submittal of Comments section of this

preamble.

### **Announcement of Hearing**

The commission will hold a public hearing on this proposal in Austin on June 17, 2014, at 2:00 p.m., in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Sandy Wong, Office of Legal Services at (512) 239-1802. Requests should be made as far in advance as possible.

### **Submittal of Comments**

Written comments may be submitted to Bruce McAnally, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: <http://www5.tceq.texas.gov/rules/ecomments/>. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference

Rule Project Number 2013-058-331-WS. The comment period closes June 30, 2014.

Copies of the proposed rulemaking can be obtained from the commission's Web site at *[http://www.tceq.texas.gov/nav/rules/propose\\_adopt.html](http://www.tceq.texas.gov/nav/rules/propose_adopt.html)*. For further information, please contact David Murry, Underground Injection Control Section, (512) 239-6080.

## **SUBCHAPTER E: STANDARDS FOR CLASS III WELLS**

### **§331.82**

#### **Statutory Authority**

The amendment is proposed under Texas Water Code (TWC), §5.103, concerning Rules, and TWC, §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC and other laws of the state. The amendment is also proposed under TWC, §27.019, which requires the commission to adopt rules reasonably required for the performance of duties and functions under the Injection Well Act; and TWC, §27.0513, which requires the commission to establish rules for procedural, application and technical requirements for production area authorizations.

The proposed amendment implements HB 1079, 83rd Legislature (2013), and TWC, §27.0513.

#### **§331.82. Construction Requirements.**

(a) Casing and cementing. All new Class III wells, baseline wells, and monitor wells associated with the mining operations shall be cased, cemented from the bottom of the casing to the surface, and capped to prevent the migration of fluids which may cause the pollution of underground sources of drinking water (USDWs) and maintained in

that condition throughout the life of the well. In addition, existing wells in areas where there is the potential for contamination and other harmful or foreign matter to enter groundwater through an open well, shall also be cemented to the surface and capped. The casing and cement used in the construction of each well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, the following factors shall be considered:

- (1) depth to the injection zone;
- (2) injection pressure, external pressure, internal pressure, axial loading, etc.;
- (3) hole size;
- (4) size and grade of all casing strings (wall thickness, diameter, nominal weight, length, joint specification, and construction material);
- (5) corrosiveness of injected fluids and formation fluids;
- (6) lithology of injection and confining zones; and
- (7) type and grade of cement.

(b) Alterations to construction plans. Any proposed changes or alterations to construction plans after permit issuance shall be submitted to the executive director and written approval obtained before incorporating such changes.

(c) Logs and tests. Appropriate logs and other tests shall be conducted during the drilling and construction of all new Class III wells and after an existing well has been repaired. A descriptive report interpreting the results of those logs and tests shall be prepared by a knowledgeable log analyst and submitted to the executive director. The logs and tests appropriate to each type of Class III well shall be determined based on the intended function, depth, construction, and other characteristics of the well, availability of similar data in the area of the drilling site, and the need for additional information that may arise from time to time as the construction of the well progresses.

(1) During the drilling and construction of Class III wells, appropriate deviation checks shall be conducted on holes, where pilot holes and reaming are used, at sufficiently frequent intervals to assure that vertical avenues for fluid migration in the form of diverging holes are not created during drilling.

(2) Mechanical integrity, as described in §331.43 of this title (relating to Mechanical Integrity Standards), shall be demonstrated both following construction of the well, and prior to production or injection. For Class III uranium solution mining

wells, a pressure test shall also be conducted each time a tool that could affect mechanical integrity is placed into the well.

(A) Except as provided by subparagraph (B) of this paragraph, the following tests shall be used to evaluate the mechanical integrity of the injection well:

(i) to test for significant leaks under §331.43(a)(1) of this title, monitoring of annulus pressure, or pressure test with liquid or gas, or radioactive tracer survey. For Class III uranium solution mining wells only, a single point resistivity survey in conjunction with a pressure test can be used to detect any leaks in the casing, tubing, or packer; and

(ii) to test for significant fluid movement under §331.43(a)(2) of this title, temperature log, noise log, radioactive tracer survey, cement bond log, oxygen activation log. For Class III uranium solution mining wells only, cement records that demonstrate the absence of significant fluid movement can be used where other tests are not suitable. For Class III wells where the cement records are used to demonstrate the absence of significant fluid movement, the monitoring program prescribed by §331.84 of this title (relating to Monitoring Requirements) shall be designed to verify the absence of significant fluid movement.

(B) The executive director may allow the use of a test to demonstrate mechanical integrity other than those listed in subparagraph (A) of this paragraph with the written approval of the administrator of the United States Environmental Protection Agency (EPA) or his authorized representative. To obtain approval, the executive director shall submit a written request to the EPA administrator, which shall set forth the proposed test and all technical data supporting its use. The EPA administrator shall approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the EPA administrator shall be published in the *Federal Register* and may be used unless its use is restricted at the time of approval by the EPA administrator.

(3) Additional logs and tests may be required by the executive director when appropriate.

(d) Construction and testing supervision. All phases of well construction and testing shall be supervised by a person who is knowledgeable and experienced in practical drilling engineering and who is familiar with the special conditions and requirements of injection well construction.

(e) Injection zone characteristics - water bearing formation. Where the injection zone is a water bearing formation, the following information concerning the injection zone shall be determined or calculated:

(1) fluid pressure;

(2) temperature;

(3) fracture pressure;

(4) other physical and chemical characteristics of the injection zone;

(5) physical and chemical characteristics of the formation fluids; [and]

(6) compatibility of injected fluids with formation fluids; and [.]

(7) pre-mining groundwater quality, established in a range table as required under §305.49(a)(10) of this title (relating to Additional Contents of Application for an Injection Well Permit), for a Class III injection well permit authorizing *in situ* mining of uranium.

(f) Injection zone characteristics - non-water bearing formations. Where the injection formation is not a water bearing formation, the fracture pressure shall be determined or calculated.

(g) Monitor well location. Where injection is into a formation which contains water with less than 10,000 milligrams per liter of total dissolved solids [mg/L TDS], monitoring wells shall be completed into the injection zone and into any USDW above the injection zone which could be affected by the mining operation. These wells shall be located to detect any excursion of injection fluids, production fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by subsidence or catastrophic collapse, the monitoring wells shall be located so that they will not be physically affected. Designated monitoring wells shall be installed at least 100 feet inside any permit area boundary, unless excepted by written authorization from the executive director.

(h) Subsidence or catastrophic collapse. Where the injection wells penetrate a USDW in an area subject to subsidence or catastrophic collapse an adequate number of monitor wells shall be completed into the USDW to detect any movement of injected fluids, process by-products or formation fluids into the USDW. The monitor wells shall be located outside the physical influence of the subsidence or catastrophic collapse.

(i) Monitor well criteria. In determining the number, location, construction, and frequency of monitoring of the monitor wells the following criteria shall be considered:

(1) the population relying on the USDW affected or potentially affected by the injection operation;

(2) the proximity of the injection operation to points of withdrawal of drinking water;

(3) the local geology and hydrology;

(4) the operating pressures and whether a negative pressure gradient is being maintained;

(5) the chemistry and volume of the injected fluid, the formation water, and the process by-products; and

(6) the injection well density.

**SUBCHAPTER F: STANDARDS FOR CLASS III WELL PRODUCTION AREA  
DEVELOPMENT**

**§§331.107, 331.108, 331.110**

**Statutory Authority**

The amendments are proposed under Texas Water Code (TWC), §5.103, concerning Rules, and TWC, §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC and other laws of the state. The amendments are also proposed under TWC, §27.019, which requires the commission to adopt rules reasonably required for the performance of duties and functions under the Injection Well Act; and TWC, §27.0513, which requires the commission to establish rules for procedural, application and technical requirements for production area authorizations.

The proposed amendments implement HB 1079, 83rd Legislature (2013), and TWC, §27.0513.

**§331.107. Restoration.**

(a) Aquifer restoration. Groundwater in the production zone within the production area must be restored when mining is complete. Each Class III permit or production area authorization shall contain a description of the method for determining

that groundwater has been restored in the production zone within the production area. Restoration must be achieved for all values in the restoration table of all parameters in the suite established in accordance with the requirements of §331.104(b) of this title (relating to Establishment of Baseline and Control Parameters for Excursion Detection).

(1) Restoration table. Each permit or production area authorization shall contain a restoration table for all parameters in the suite established in accordance with the requirements of §331.104(b) of this title. The restoration value for each parameter listed in the restoration table cannot exceed the maximum value for the respective parameter in the permit range table required under §331.82(d)(7) of this title (relating to Construction Requirements). A restoration table value for a parameter shall be established by:

(A) The mean concentration or value for that parameter based on all measurements from groundwater samples collected from baseline wells prior to mining activities; or

(B) A statistical analysis of baseline well information proposed by the owner or operator and approved by the executive director that demonstrates that the restoration table value is representative of baseline quality.

(2) Achievement of restoration. Achievement of restoration shall be determined using one of the following methods:

(A) When all sample measurements from groundwater samples from all baseline wells for a restoration parameter are equal to or below (or, in the case of pH, within an established range) the restoration table value for that parameter, then restoration for that parameter will be assumed to have occurred. Complete restoration will be assumed to have occurred when measurements from all samples from all baseline wells for all restoration parameters are equal to or below (or, in the case of pH, within an established range) each respective restoration table value; or

(B) A statistical analysis of information from groundwater samples from baseline wells proposed by the owner or operator and approved by the executive director that demonstrates that the groundwater quality is representative of the restoration table values.

(b) Mining completion. When the mining of a permit or production area is completed, the permittee shall notify the appropriate commission regional office and the executive director and shall proceed to reestablish groundwater quality in the affected

permit or production area aquifers in accordance with the requirements of subsection (a) of this section. Restoration efforts shall begin as soon as practicable but no later than 30 days after mining is completed in a particular production area. The executive director, subject to commission approval, may grant a variance from the 30-day period for good cause shown.

(c) Timetable. Aquifer restoration, for each permit or production area, shall be accomplished in accordance with the timetable specified in the currently approved mine plan, unless otherwise authorized by the commission. Authorization for expansion of mining into new production areas may be contingent upon achieving restoration progress in previously mined production areas within the schedule set forth in the mine plan. The commission may amend the permit to allow an extension of the time to complete restoration after considering the following factors:

(1) efforts made to achieve restoration by the original date in the mine plan;

(2) technology available to restore groundwater for particular parameters;

(3) the ability of existing technology to restore groundwater to baseline quality in the area;

(4) the cost of achieving restoration by a particular method;

(5) the amount of water which would be used or has been used to achieve restoration;

(6) the need to make use of the affected aquifer; and

(7) complaints from persons affected by the permitted activity.

(d) Reports. Beginning six months after the date of initiation of restoration of a permit or production area, as defined in the mine plan, the operator shall provide to the executive director semi-annual restoration progress reports until restoration is accomplished for the production area. This report shall contain the following information:

(1) all analytical data generated during the previous six months;

(2) graphs of analysis for each restoration parameter for each baseline well;

(3) the volume of fluids injected and produced;

(4) the volume of fluids disposed;

(5) water level measurements for all baseline and monitor wells, and for any other wells being monitored;

(6) a potentiometric map for the area of the production area authorization, based on the most recent water level measurements; and

(7) a summary of the progress achieved towards aquifer restoration.

(e) Restoration table values achieved. When the permittee determines that constituents in the aquifer have been restored to the values in the Restoration Table, the restoration shall be demonstrated by stability sampling in accordance with subsection (f) of this section.

(f) Stability sampling. The permittee shall obtain stability samples and complete an analysis for certain parameters listed in the restoration table from all production area baseline wells. Stability samples shall be conducted at a minimum of 30-day intervals for a minimum of three sample sets and reported to the executive director. The permittee shall notify the executive director at least two weeks in advance of sample dates to provide the opportunity for splitting samples and for selecting additional wells for sampling, if desired. To insure water quality has stabilized, a period of one calendar year must elapse between cessation of restoration operations and the final set of stability samples. Upon acknowledgment in writing by the executive director confirming achievement of final restoration, the permittee shall accomplish closure of the area in accordance with §331.86 of this title (relating to Closure).

(g) Amendment of restoration table **or range table** values. After an appropriate effort has been made to achieve restoration in accordance with the requirements of subsection (a) of this section, the permittee may cease restoration operations, reduce bleed and request that the restoration table be amended. An amended restoration table value for each parameter listed in the restoration table cannot exceed the maximum value for the respective parameter in the permit range table required under §331.82(d)(7) of this title. With the request for amendment of the restoration table values, the permittee shall submit the results of three consecutive sample sets taken at a

minimum of 30-day intervals from all production area baseline wells used in determining the restoration table to verify current water quality. Stabilization sampling may commence 60 days after cessation of restoration operations. The permittee shall notify the executive director of his or her intent to cease restoration operations and reduce the bleed 30 days prior to implementing these steps. The permittee shall submit an application for an amendment to the restoration table within 120 days of receipt of authorization from the executive director to cease restoration operations and reduce the bleed. If any restoration table value for any parameter listed in the restoration table will exceed the maximum value for the respective parameter in the permit range table, the permittee must submit an application for a major amendment of the permit range table.

(1) In determining whether the restoration table or range table should be amended, the commission will consider the following items addressed in the request:

(A) uses for which the groundwater in the production area was suitable at baseline water quality levels;

(B) actual existing use of groundwater in the production area prior to and during mining;

(C) potential future use of groundwater of baseline quality and of proposed restoration quality;

(D) the effort made by the permittee to restore the groundwater to baseline;

(E) technology available to restore groundwater for particular parameters;

(F) the ability of existing technology to restore groundwater to baseline quality in the area under consideration;

(G) the cost of further restoration efforts;

(H) the consumption of groundwater resources during further restoration; and

(I) the harmful effects of levels of particular parameter.

(2) The commission may amend the restoration table or range table if it finds that:

(A) reasonable restoration efforts have been undertaken, giving consideration to the factors listed in paragraph (1) of this subsection;

(B) the values for the parameters describing water quality have stabilized for a period of one year;

(C) the formation water present in the exempted portion of the aquifer would be suitable for any use to which it was reasonably suited prior to mining;  
and

(D) further restoration efforts would consume energy, water, or other natural resources of the state without providing a corresponding benefit to the state.

(3) If the restoration table is amended, restoration sampling shall commence and proceed as described in subsection (f) of this section, except the stability period shall be for a period of two years unless the owner or operator can demonstrate through modeling or other means that a period of less than two years is appropriate for a demonstration of stability.

(4) If the request for an amendment of the restoration table or range table values is not granted, the permittee shall restart restoration efforts.

**§331.108. Opportunity for a Contested Case Hearing on a Production Area Authorization Application [Independent Third-Party Experts].**

(a) An application for a new production area authorization is not subject to opportunity for a contested case hearing if: [If requested by an applicant for a production area authorization submitted after September 1, 2007, the executive director may use the recommendations from an independent third-party expert regarding the initial establishment of requirements pertaining to monitoring wells for any area covered by the application, provided:]

(1) the authorization is for a production area within the boundary of the permit under which the authorization will be issued and the permit includes a range table with values established in accordance with the requirements in §305.49(a)(10) of this title (relating to Additional Contents of Application for an Injection Well Permit);  
[the expert meets the qualifications in subsection (b) of this section;]

(2) the application includes a restoration table, with restoration parameter values, that do not exceed the high values for the respective parameters in the permit range table; and [the applicant for the production area authorization pays the cost of the work of the expert;]

(3) the application is for a production area within the boundary of the permit under which the proposed authorization will be issued, and the application meets the requirements at §§331.104(a) - (d) of this title (relating to Establishment of Baseline and Control Parameters for Excursion Detection) regarding baseline wells; or [the applicant for the production area authorization is not involved in the selection of the expert or the direction of the work by the expert;]

(4) the application requests authorization for a new, and subsequent, production area within the permit boundary of a permit after the first production area authorization has been issued for a production area within the permit boundary. [the recommendations of the independent third-party expert, in the opinion of the executive director, meet all applicable statutory and regulatory requirements for monitoring wells authorized under a production area authorization; and]

[(5) the recommendations of the independent third-party expert, in the opinion of the executive director, are necessary for the protection of underground sources of drinking water or fresh water.]

(b) An application to amend a restoration table, included in an issued production area authorization, is not subject to opportunity for a contested case hearing if the restoration parameter values in the proposed amended restoration table do not exceed the respective values in the permit range table included in the permit under which the production area authorization was issued. [In order to be considered for designation as an independent third-party expert, a person must be either a licensed professional engineer currently authorized to practice engineering in the State of Texas (unless exempted under the Texas Occupations Code, Chapter 1001, Subchapter B), or a licensed professional geoscientist currently authorized to practice geoscience in the State of Texas (unless exempted under Texas Occupations Code, §1002.252). In determining whether to designate a person as an independent third-party expert, the executive director also will consider the following:]

[(1) the person's work experience in geology and hydrogeology, in particular the person's experience in the area of the proposed in situ mining operation;]

[(2) the person's work experience related to in situ mining of uranium;]

[(3) the person's current and previous work experience with the applicant;]

[(4) the person's current and previous work experience with persons or entities that are in opposition to in situ uranium mining; and]

[(5) any other factors that may be relevant to determine the person's objectivity regarding their function as an independent third-party expert.]

(c) An application to amend a restoration table, to increase any restoration table value included in an issued production area authorization, is subject to opportunity for a contested case hearing if the permit under which the production area authorization was issued does not include a permit range table, established in accordance with the requirements of §305.49(a)(10) of this title. [The executive director will not designate an independent third party expert for the purposes of subsection (a) of this section unless requested to do so in writing by the applicant.]

[(d) If the executive director determines that the recommendations from the designated independent third-party expert meet the requirements for the initial establishment of monitor wells in accordance with §331.103 of this title (relating to

Production Area Monitor Wells), those recommendations will be incorporated into the production area authorization, and, in accordance with §55.201(i)(11)(B) of this title (relating to Requests for Reconsideration or Contested Case Hearing), in regards to the initial establishment of monitoring wells for the area covered by the requested authorization, no opportunity for a contested case hearing will exist.]

[(e) If the executive director determines that the recommendations from the designated independent third-party expert do not meet the requirements for the initial establishment of monitor wells in accordance §331.103 of this title, either in whole or in part, the application for a production area authorization will be subject to opportunity for contested case hearing, regardless of subsequent changes to the application.]

[(f) Any person may request to be considered an independent third-party expert under this section by submitting information to the executive director to demonstrate qualifications under this section.]

[(g) The use of an independent third-party expert qualified and approved under this section does not constitute the applicant's selection of the expert under subsection (a)(3) of this section.]

[(h) A person providing an independent third-party recommendation under this section shall not be an employee of the commission.]

**§331.110. General Requirements for Production Area Authorization.**

(a) A production area authorization may not authorize the use of groundwater from a well for purposes of providing supplemental production water.

(b) A production area authorization may not expand a permit boundary or authorize a production area outside of a permit boundary.

(c) A production area authorization may not authorize a reduction in the number of monitor wells or increase the distance between wells as required under §331.103 of this title (relating to Production Area Monitor Wells).

## **SUBCHAPTER G: CONSIDERATION PRIOR TO PERMIT ISSUANCE**

### **§331.122**

#### **Statutory Authority**

The amendment is proposed under Texas Water Code (TWC), §5.103, concerning Rules, and TWC, §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC and other laws of the state. The amendment is also proposed under TWC, §27.019, which requires the commission to adopt rules reasonably required for the performance of duties and functions under the Injection Well Act; and TWC, §27.0513, which requires the commission to establish rules for procedural, application and technical requirements for production area authorizations.

The proposed amendment implements HB 1079, 83rd Legislature (2013), and TWC, §27.0513.

#### **§331.122. Class III Wells.**

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

- (1) 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 milligrams per liter of total dissolved solids [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); and[.]

(O) the permit range table required under §305.49(a)(10) and §331.82(d)(7) of this title (relating to Additional Contents of Application for an Injection Well Permit; and Construction Requirements).

(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.