The Texas Commission on Environmental Quality (TCEQ, agency, commission) proposes to amend §305.49 and §305.154.

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.

The proposed amendments to §305.49 and §305.154 address the requirement for inclusion of a permit range table in all new, amended, or renewed Class III UIC area permits for *in situ* mining of uranium.

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 Chapter 331, Underground Injection Control.

Section by Section Discussion

§305.49, Additional Contents of Application for an Injection Well Permit

The proposed amendment to §305.49(a)(10) would address the requirements of amended TWC, §27.0513(a), as amended by HB 1079. Under this proposed rule, an application for a new, amended, or renewed Class III UIC area permit for *in situ* mining of uranium must include a table of pre-mining low and high values for each groundwater quality parameter used to measure groundwater restoration, herein referred to as a permit range table. These values must be established from analysis of groundwater samples from baseline wells and from all available wells completed in the production zone within the area of review associated within an existing or proposed permit boundary. The proposed rule will require that pre-mining low and high values in the permit range table be established for each of the parameters listed in existing §331.104(b). The parameters identified in §331.104(b) are those that are used to establish pre-mining groundwater quality and are used to establish the restoration table of a PAA. Values must be established from analysis of groundwater samples, collected prior to mining, from all baseline wells required under §331.104(c), and from all other wells, within the associated area of review, that are completed in the production zone.

Existing §305.49(a)(10) is re-numbered to paragraph (11).

The executive director considered, as part of this rulemaking, recommending the amendment of §305.49 to specify that the values in the permit range table be based on a minimum number of sample analyses. At this time, however, we are not proposing such a requirement.

Conceptually, for a Class III permit area, each parameter in the permit range table will have some true range of values. This true range is unknown, and must be estimated. The purpose of sampling wells in the area, as required under proposed §305.49(a)(10), is to obtain a sufficient number of sample values to obtain an acceptable estimate of this true range. The estimation technique in this case is to select the low and high values for each parameter from the sample values obtained through analysis of groundwater samples collected from wells completed in the production zone. As is true with other estimation techniques, the larger the number of values used in the estimation, the better the estimate.

It is in the interest of the permittee that the estimated range of values for each parameter includes a large proportion of the true range. Values in the restoration table in each PAA cannot exceed the maximum values for the respective parameters in the permit range table. If the maximum value for a parameter in the permit range table was

estimated too low, achieving the restoration table values established in the PAA may be difficult, if not impossible. Therefore, in considering how many samples to use to estimate the range for each parameter in the permit range table, the applicant or permittee should decide to what extent these ranges should include the true range of each parameter. To assist in that decision, the executive director offers the following analysis.

Statistically, the true range may be considered to represent the population of values for a parameter, and the estimated range to be an interval estimate of a particular proportion of that population. One technique used to estimate a population proportion is a tolerance interval. A tolerance interval is a statistical interval designed to include a proportion of a population with an associated level of confidence. For example, a tolerance interval could be constructed to include 95% of a population with a confidence level of 99%. That is, a person could be 99% "sure" that the interval included 95% of the population. The desired proportion of the population is called the "coverage".

The level of confidence associated with a particular coverage is dependent on the number of values used to construct the tolerance interval. If the level of confidence is defined as $(1-\alpha)100\%$ and P equals the desired coverage, then the number of values needed (n) for a desired coverage and level of confidence is:

$$n = \ln(\alpha)/\ln(P)$$

This equation applies to a nonparametric tolerance interval, and is described on page 93 of *Statistical Methods for Groundwater Monitoring* (1994, John Wiley and Sons, Inc.) by Robert D. Gibbons.

Using this method, 22 samples would be needed to construct a nonparametric tolerance interval with coverage of 90% and a level of confidence of 90%:

Desired level of confidence: $\alpha = 0.1$; $(1 - 0.1)100\% = 90\%$

Desired coverage (P): 90%

$$n = \ln(\alpha)/\ln(P)$$

$$n = \ln(0.1)/\ln(0.9)$$

$$n = (-2.306)/(-0.1054)$$

$$n = 21.854$$

The range for a permit range table parameter would be the high and low values from these 22 samples. To construct an interval with 95% coverage with a level of confidence of 99%, the interval would have to be based on 298 values.

Based on this analysis, the executive director recommends that determination of the high and low values for each parameter in the permit range table be based on a minimum of 22 values for each parameter from groundwater analyses. The commission seeks comments on this analysis and whether a specified number of samples should be specified in the permit application requirements in this rule.

The Proposed amendment to §305.154(b)(5) would address the new requirement that a Class III UIC area permit include a permit range table. In addition to other requirements under existing §305.154(b)(1) - (4), such permits will also require the permit range table. Proposed §305.154(b)(5) 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 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 activities and applications for PAAs submitted to the agency 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 331 to complete the implementation of HB 1079. This

fiscal note will address the fiscal impacts of the proposed rules in Chapter 305, and the fiscal impacts of the provisions in Chapters 55 and 331 will be addressed in separate, but related fiscal notes.

The proposed rules for Chapter 305 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. The proposed rules require that new, amended, or renewed Class III permit injection well area permit applications have a range table of pre-mining low and high values for each groundwater quality parameter and that those values be established from an analysis of independent and representative groundwater samples. The proposed rules would also amend injection well standards to require that area permits specify a permit range table with high and low values for each aquifer restoration parameter. Currently, there are four small businesses that hold all of the seven permits that have been issued statewide, and the proposed rules do not impose new requirements on existing permittees to establish permit range tables for currently issued permits.

The proposed rules are not expected to significantly affect agency administrative requirements, and therefore, would not have a significant fiscal impact on the agency. Units of local government or other state agencies are not expected to experience any

fiscal impact as a result of the proposed rules 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. Individuals or businesses that do engage in uranium mining activities may experience minimal fiscal impacts as a result of the proposed rules. The requirements for permit range tables and restoration tables in the proposed rules would continue to provide for protection of the public and of groundwater quality.

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 preamble.

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 and a restoration table is not expected to significantly 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 and restoration tables.

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 injection well area permits 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 permits and PAAs in Chapter 331.

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 permit applications do not exceed a standard of federal law or requirement of a delegation agreement. There are no federal standards regarding permit range tables. 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 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. 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 305 would substantially advance this purpose by amending the requirements for submitted applications for Class III injection well permits authorizing *in situ* uranium mining consistent with the requirements of HB 1079. Applications for such permits must include must contain a range table of pre-mining low and high values for each groundwater quality parameter used in the restoration tables of PAAs.

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 applications do not affect real property. The proposed rules apply only to those who apply for a permit for injection

wells authorizing *in situ* recovery of uranium. Additional requirements for permit applications 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*. For further information, please contact David Murry, Underground Injection Control Section, (512) 239-6080.

SUBCHAPTER C: APPLICATION FOR PERMIT OR POST-CLOSURE ORDER

§305.49

Statutory Authority

The amendment is proposed under Texas Water Code (TWC), §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the 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 §27.0513, which requires the commission to establish rules for procedural, application and technical requirements for production area authorizations.

The proposed amendment implements House Bill 1079, 83rd Legislature, 2013, and TWC, §27.0513.

§305.49. Additional Contents of Application for an Injection Well Permit.

(a) The following must be included in an application for an injection well permit:

(1) for Class I wells, as defined in Chapter 331 of this title (relating to Underground Injection Control), the information listed in §331.121 of this title (relating to Class I Wells);

(2) for Class III wells, as defined in Chapter 331 of this title, the information listed in §331.122 of this title (relating to Class III Wells);

(3) the manner in which compliance with the financial assurance requirements in Chapter 37 of this title (relating to Financial Assurance) will be attained;

(4) the manner in which compliance with the plugging and abandonment requirements of §331.46 of this title (relating to Closure Standards) will be attained;

(5) the manner in which compliance with the corrective action requirements of §331.44 of this title (relating to Corrective Action Standards) will be attained;

(6) the manner in which compliance with the post-closure requirements of §331.68 of this title (relating to Post-Closure Care) will be attained;

(7) for Class I wells, a letter from the Railroad Commission of Texas stating that the drilling of a disposal well and the injection of the waste into the subsurface stratum selected for disposal will not endanger or injure any oil or gas formation;

(8) for Class III wells, a description of all liquid and solid nonradioactive wastes resulting from mining activities;

(9) a complete delineation by a licensed professional geoscientist or a licensed professional engineer of any aquifer or portion of an aquifer for which exempt status is sought; [and]

(10) an application for a new, amended, or renewed Class III injection well area permit for an *in situ* uranium mine must contain a range table of pre-mining low and high values for each groundwater quality parameter listed in §331.104(b) of this title (relating to Establishment of Baseline and control Parameters for Excursion Detection). These values shall be established from analysis of independent and representative groundwater samples, collected prior to mining, from:

(A) all baseline wells required under §331.104(c) of this title that are within the area of review associated with the existing or proposed permit boundary, as specified at §331.42(a)(4) of this title (relating to Area of Review); and

(B) all available wells within the existing or proposed permit boundary, provided the well is completed within the production zone identified in the existing or proposed permit; and

(11) [(10)] any other information reasonably required by the executive director to evaluate the proposed injection well or project, including, but not limited to, the information set forth in Texas Water Code, §27.051(a).

(b) An application for production area authorization shall be submitted with and contain the following for each production area:

(1) mine plan;

(2) a restoration table;

(3) a baseline water quality table;

(4) control parameter upper limits;

(5) monitor well locations;

(6) cost estimate for aquifer restoration and well plugging and abandonment; and

(7) other information reasonably required by the executive director to evaluate the application.

(c) An application under this section shall comply with the requirements of §305.50(a)(4)(B) of this title (relating to Additional Requirements for an Application for a Hazardous or Industrial Solid Waste Permit and for a Post-Closure Order).

SUBCHAPTER H: ADDITIONAL CONDITIONS FOR INJECTION WELL PERMITS

§305.154

Statutory Authority

The amendment is proposed under Texas Water Code (TWC), §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the 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 §27.0513, which requires the commission to establish rules for procedural, application and technical requirements for production area authorizations.

The proposed amendment implements House Bill 1079, 83rd Legislature, 2013, and TWC, §27.0513.

§305.154. Standards.

(a) In addition to other standard permit conditions listed elsewhere in this chapter, the following conditions and other applicable standards listed in Chapter 331 of

this title (relating to Underground Injection Control) shall be incorporated into each permit expressly or by reference to this chapter. The commission may impose stricter standards where appropriate.

(1) Construction requirements. Section 331.62 and §331.82 of this title (relating to Construction Standards; and Construction Requirements).

(2) Compliance schedule. See §305.127(3)(E) of this title (relating to Conditions to be Determined for Individual Permits [Schedule of Compliance]).

(3) Construction plans. Changes in construction plans shall be approved under §331.45 of this title (relating to Executive Director Approval of Construction and Completion), or, by minor modification according to §305.72 of this title (relating to Underground Injection Control (UIC) Permit Modifications at the Request of the Permittee).

(4) Commencing operations. Commencement of injection operations before approval by the executive director of construction and completion is a violation of the permit and may be considered grounds for revocation or suspension of the permit, and for enforcement action. Except for new wells authorized by an area permit under

subsection (b) of this section [(relating to Standards)], a new injection well may not commence injection until construction is complete, and:

(A) the permittee has submitted notice of completion of construction to the Director; and

(B) the executive director has inspected or otherwise reviewed the new injection well and finds it complies with the conditions of the permit; or

(C) the permittee has not received notice from the executive director of intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in subparagraph (A) of this paragraph, in which case prior inspection or review is waived and the permittee may commence injection. The executive director shall include in the notice a reasonable time period in which he shall inspect the well.

(D) for Class I wells, submission of the completion report required by §331.65(a)(1) of this title (relating to Reporting [Monitoring] Requirements) shall constitute the notice required in subparagraph (A) of this paragraph.

(5) Operating requirements. Section 331.63 of this title (relating to Operating Requirements) and §331.83 of this title (relating to Operating Requirements).

(6) Monitoring and reporting. All permits shall specify requirements concerning the proper use, maintenance and installation, when appropriate, of monitoring equipment or methods including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including when appropriate, continuous monitoring. Reporting shall be no less frequent than specified in the appropriate sections of Chapter 331 of this title [(relating to Underground Injection Control)]. Section 331.64 <u>of this title (relating to Monitoring and Testing Requirements</u> and §331.65 of this title [(relating to Monitoring Requirements; Reporting Requirements)]; §331.84 and §331.85 of this title (relating to Monitoring Requirements; <u>and</u> Reporting Requirements); or Chapter 331, Subchapter F of this title (relating to Standards for Class III Well Production Area Development).

(7) Closure. The permittee shall notify the executive director and obtain approval before plugging an injection well. After failing to operate for a period of two years, the owner or operator shall close the well in accordance with an approved plan unless:

(A) notice is provided to the executive director; and

(B) actions and procedures are described, satisfactory to the executive director, that the owner or operator will take to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable, unless waived by the executive director.

(8) Corrective action requirements. Section 331.44 of this title (relating to Corrective Action Standards) and §305.152 of this title (relating to Corrective Action).

(9) Financial assurance requirements. The permittee is required to demonstrate and maintain financial responsibility and resources to close, plug, and abandon in accordance with Chapter 37, Subchapter Q of this title (relating to Financial Assurance for Underground Injection Control Wells). The permittee shall show evidence of such financial responsibility to the executive director.

(10) Post-closure requirements. Section 331.68 of this title (relating to Post-Closure Care [Standards]).

(11) Liability coverage requirements. The permittee of hazardous waste injection wells shall maintain sufficient liability coverage for bodily injury and property

damage to third parties that is caused by sudden and non-sudden accidents in accordance with Chapter 37, Subchapter Q of this title.

(b) Area permits shall specify:

(1) The area within which underground injections are authorized. [, and]

(2) The requirements for construction, monitoring, reporting, operation, and abandonment for all wells authorized by the permit.

(3) The area permit may authorize the permittee to construct and operate, convert, or plug and abandon wells within the permit area provided:

(A) The permittee notifies the executive director at such time as the permit requires;

(B) The additional well satisfies the criteria in §331.7(b) of this title (relating to Permit Required) and meets the requirements specified in the permit under paragraphs (1) and (2) of this subsection; and

(C) The cumulative effects of drilling and operation of additional injection wells are considered by the executive director during evaluation of the area permit application and are acceptable to the executive director.

(4) If the executive director determines that any well constructed pursuant to paragraph (3) of this subsection does not satisfy any of the requirements of this subsection, the executive director may amend, terminate, or take enforcement action. If the executive director determines that cumulative effects are unacceptable, the permit may be amended under §305.62 of this title (relating to Amendments [Amendment]).

(5) Permit range table. The high and low values for each aquifer restoration parameter are identified in §331.104(b) of this title (relating to Establishment of Baseline and Control Parameters for Excursion Detection). All values shall be determined in accordance with the requirements of §305.49(a)(10) of this title (relating to Additional Contents of Application for an Injection Well Permit).