The Texas Commission on Environmental Quality (TCEQ, agency, or commission) adopts amendments to §331.11 and §331.132.

Amended §331.11 and §331.132 are adopted without changes to the proposed text as published in the August 2, 2024, issue of the *Texas Register* (49 TexReg 5746) and, therefore, will not be republished.

Background and Summary of the Factual Basis for the Adopted Rules

This rulemaking adoption implements Senate Bill (SB) 786 and SB 1186, 88th Texas Legislature, 2023, addressing agency jurisdiction over regulation of closed-loop geothermal injection wells and agency jurisdiction over brine mining injection wells in Texas. SB 786 confers the Railroad Commission of Texas (RRC) with jurisdiction over the regulation of closed-loop geothermal injection wells. SB 1186 confers the RRC with jurisdiction over the regulation of brine mining and the injection wells used for brine mining.

This rulemaking adoption implements SB 786 by amending the commission's underground injection control rules to remove requirements for the regulation of closed-loop geothermal injection wells. Prior to the enactment of SB 786, the commission's underground injection control rules included geothermal closed-loop injection wells as a type of Class V injection well under the jurisdiction of the commission. SB 786 provides that all commission functions and activities that relate to the regulation of closed-loop geothermal injection wells are transferred to the RRC. The RRC proposed rules to implement SB 786 for the regulation of closed-loop geothermal injection wells in the October 11, 2024, publication of the *Texas Register* (49 TexReg 8261).

The rulemaking adoption implements SB 1186 by amending the commission's underground injection control rules to acknowledge that the RRC has jurisdiction over the regulation of Class V injection wells used for brine mining. SB 1186 defines "brine mining" as the "production of brine, including naturally occurring brine and brine extracted by the solution of a subsurface salt formation, for the purpose of extracting from a subsurface formation elements, salts, or other useful substances…." SB 1186 defines a "Class V brine injection well" as a "well that injects spent, naturally occurring brine produced by a brine mining operation into the same formation from which it was withdrawn after extraction of elements, salts or other useful substances, including halogens or halogens salts."

Section by Section Discussion

The commission adopts amendment of 30 Texas Administrative Code (TAC) §331.11 by removing subsection (a)(4)(B), which states "closed loop injection wells which are closed system geothermal wells used to circulate fluids including water, water with additives, or other fluids or gases through the earth as a heat source or heat sink;" and re-lettering the remainder of the paragraph. The adopted amendment to remove §331.11(a)(4)(B) implements Texas Water Code (TWC), §27.037 as established in SB 786 by removing the inclusion of closed-loop geothermal injection wells as a type of Class V injection well for which the commission has jurisdiction.

The commission adopts amendment of 30 TAC §331.11(b) to implement SB 786 and SB 1186 and provisions of TWC, Chapter 27. The commission adopts amendment of §331.11(b) to identify certain types of injection wells for which the RRC has jurisdiction to regulate. Under TWC §27.011, the commission has jurisdiction over the regulation of injection wells unless the activity is subject to the jurisdiction of the RRC. The commission has jurisdiction over the Class III injection wells classified in 30 TAC §331.11(a)(2) and the Class V injection wells classified in

TAC §331.11(a)(4). The RRC has jurisdiction to regulate Class II injection wells under TWC, §27.031 and §27.0511. The RRC has jurisdiction over Class III and Class V injection wells used for brine mining as established in TWC, §27.036 and SB 1186. The RRC has jurisdiction over injection wells used for in situ recovery of tar sands as established in TWC, §27.035. The RRC has jurisdiction over injection wells used for the exploration, development or production of geothermal energy, including closed-loop geothermal injection wells as established in Texas Natural Resources Code Chapter 141, TWC, §27.037, and SB 786. The RRC has jurisdiction over the injection and geologic storage of carbon dioxide as established in TWC, §27.041.

The commission adopts amendment of 30 TAC §331.132(d)(3) by correcting a typographical error, changing "…close loop…" to "…closed loop.…" References to closed-loop injection wells in §331.132 will apply to other types of closed-loop injection systems but not closed-loop geothermal injection wells regulated by the RRC.

Final Regulatory Impact Analysis

The commission reviewed the rulemaking action in light of the regulatory analysis requirements of Texas Government Code (TGC), §2001.0225, and determined that the action is not subject to TGC, §2001.0225 because it does not meet the definition of a "Major environmental rule" as defined in that statute. A "major environmental rule" is 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 adopted amendments implement state legislation that confers RRC with jurisdiction over certain types of injection wells and activities. The adopted rules remove commission requirements for the regulation of closed-loop

geothermal injection wells and recognize the RRC as the regulatory agency for the regulation of closed-loop geothermal injection wells and Class V brine mining injection wells. The adopted rules are not specifically intended to protect the environment or reduce risks to human health from environmental exposure, nor does it 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.

As defined in the TGC, §2001.0225 only applies to a major environmental rule, the result of which is to: exceed a standard set by federal law, unless the rule is specifically required by state law; exceed an express requirement of state law, unless the rule is specifically required by federal law; 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 adopt a rule solely under the general authority of the commission. The adopted amendments do not exceed a standard set by federal law. The adopted amendments do not exceed an express requirement of state law or a requirement of a delegation agreement. These rules were not developed solely under the general powers of the agency but are authorized by specific sections of the Texas Water Code that are cited in the statutory authority section of this preamble. Therefore, this rulemaking is not subject to the regulatory analysis provisions of TGC, §2001.0225(b).

The commission invited public comment regarding the Draft Regulatory Impact Analysis Determination during the public comment period. No comments were received regarding the regulatory impact analysis determination.

Takings Impact Assessment

The commission evaluated the rulemaking and performed an analysis of whether the adopted rules constitute a taking under TGC, Chapter 2007. The specific purpose of the adopted amendments to Chapter 331 is to remove requirements for closed-loop geothermal injection wells in commission rule and recognize RRC jurisdiction over certain injection well activities. The adopted rulemaking substantially advances these stated purposes by implementing rules that reflect agency jurisdiction over injection wells as reflected in Texas statutes.

The commission's analysis indicates that the adopted rules will be neither a statutory nor a constitutional taking of private real property. Specifically, the amended rules do not affect a landowner's rights in real property because the adopted rulemaking does not burden (constitutionally); nor restrict or limit the owner's right to property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulations. The adopted amendments in Chapter 331 do not impose requirements on the owners of real property. The adopted amendments in Chapter 331 do not affect private real property in a manner that restricts or limits an owner's right to the property that will otherwise exist in the absence of the rulemaking. The adopted rulemaking will assist the public by implementing rules that are consistent with the Legislature’s designation of agency responsibility for the regulation of injection wells in Texas.

Consistency with the Coastal Management Program

The commission reviewed the adopted rules and found they are neither identified in Coastal Coordination Act Implementation Rules, 31 TAC §29.11(b)(2) or (4), nor will they affect any action/authorization identified in Coastal Coordination Act Implementation Rules, 31 TAC §29.11(a)(6). Therefore, the adopted rules are not subject to the Texas Coastal Management

Program.

The commission invited public comment regarding the consistency with the coastal management program during the public comment period. No comments were received regarding the CMP.

Public Comment

The commission offered a public hearing on August 29, 2024. The comment period closed on September 3, 2024. The commission received comments from Michael Mecke.

Response to Comment

Comment

Michael Mecke commented that the rules could have major effects on groundwater and should be addressed by the Texas Water Development Board (TWDB). Michael Mecke commented that water issues should be addressed by water agencies, such as the TWDB, and not mixed in with oil and gas regulations and issues.

Response

The adopted rules reflect the Texas Legislature's designation of agency responsibility for the regulation of injection wells. Under the Injection Well Act, only the commission and the RRC are conferred jurisdiction over the regulation of injection wells. The TWDB does not have jurisdiction over the regulation of injection wells. The adopted rules implement SB 786 and SB 1186 by recognizing RRC jurisdiction over closed-loop geothermal injection wells

and injection wells used for brine mining. No changes were made in response to the comment.

SUBCHAPTER A: GENERAL PROVISIONS
§331.11

Statutory Authority

The amendments are adopted under Texas Water Code (TWC), Chapter 5, §5.013, which establishes the general jurisdiction of the commission; §5.102, which provides the commission with the authority to carry out its duties and general powers under its jurisdictional authority as provided by TWC; §5.103, which requires the commission to adopt any rule necessary to carry out its powers and duties under the TWC and other laws of the state; and §27.019, which authorizes the commission to adopt rules for the performance of its powers, duties, and functions under the Injection Well Act.

The adopted rules implement Senate Bill (SB) 786 and SB 1186, 88th Texas Legislature, 2023; TWC, §§27.011; 27.031; 27.035; 27.036; 27.037; 27.041; and 27.0511.

§331.11. Classification of Injection Wells.

(a) Injection wells within the jurisdiction of the commission are classified as follows.

(1) Class I:

(A) wells used by generators of hazardous wastes or owners or operators of hazardous waste management facilities to inject hazardous waste, other than Class IV wells;

(B) other industrial and municipal waste disposal wells which inject fluids beneath the lower-most formation which within 1/4 mile of the wellbore contains an underground source of drinking water (USDW); and

(C) radioactive waste disposal wells which inject fluids below the lower-most formation containing a USDW within 1/4 mile of the wellbore.

(2) Class III. Wells which are used for the extraction of minerals, including:

(A) mining of sulfur by the Frasch process; and

(B) solution mining of minerals which includes sodium sulfate, sulfur, potash, phosphate, copper, uranium and any other minerals which can be mined by this process.

(3) Class IV. Wells used by generators of hazardous wastes or of radioactive wastes, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous wastes or radioactive wastes into or above a formation which within 1/4 mile of the wellbore contains a USDW.

(4) Class V. Class V wells are injection wells not included in Classes I, II, III, or IV. Generally, wells covered by this paragraph inject nonhazardous fluids into or above formations that contain USDWs. Except for Class V wells within the jurisdiction of the Railroad Commission of Texas, all Class V injection wells are within the jurisdiction of the commission and include, but are not limited to:

(A) air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling in a heat pump;

(B) large capacity cesspools or other devices that receive greater than 5,000 gallons of waste per day, which have an open bottom and sometimes have perforated sides;

(C) cooling water return flow wells used to inject water previously used for cooling;

(D) drainage wells used to drain surface fluid, primarily storm runoff, into a subsurface formation;

(E) drywells used for the injection of wastes into a subsurface formation;

(F) recharge wells used to replenish the water in an aquifer;

(G) salt water intrusion barrier wells used to inject water into a freshwater aquifer to prevent the intrusion of salt water into the fresh water;

(H) sand backfill wells used to inject a mixture of water and sand, mill tailings, or other solids into mined out portions of subsurface mines;

(I) septic systems designed to inject greater than 5,000 gallons per day of waste or effluent;

(J) subsidence control wells (not used for the purpose of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(K) wells used for the injection of water for storage and subsequent retrieval for beneficial use as part of an aquifer storage and recovery project;

(L) motor vehicle waste disposal wells which are used or have been used for the disposal of fluids from vehicular repair or maintenance activities, such as an automotive repair shop, auto body shop, car dealership, boat, motorcycle or airplane dealership, or repair facility;

(M) improved sinkholes;

(N) aquifer remediation wells, temporary injection points, and subsurface fluid distribution systems used to inject nonhazardous fluids into the subsurface to aid in the remediation of soil and groundwater; and

(O) subsurface fluid distribution systems.

(b) The Railroad Commission of Texas has jurisdiction over: Class II injection wells; Class III and Class V injection wells used for brine mining; injection wells used for the in situ recovery of tar sands; injection wells used for the exploration, development or production of geothermal energy, including closed-loop geothermal injection wells; and the injection and geologic storage of carbon dioxide.

(c) Baseline wells and monitor wells associated with Class III injection wells within the jurisdiction of the commission are also subject to the rules specified in this chapter.

SUBCHAPTER H: STANDARDS FOR CLASS V WELLS

§331.132

Statutory Authority

The amendments are adopted under Texas Water Code (TWC), Chapter 5, §5.013, which establishes the general jurisdiction of the commission; §5.102, which provides the commission with the authority to carry out its duties and general powers under its jurisdictional authority as provided by TWC; §5.103, which requires the commission to adopt any rule necessary to carry out its powers and duties under the TWC and other laws of the state; and §27.019, which authorizes the commission to adopt rules for the performance of its powers, duties, and functions under the Injection Well Act.

The adopted rules implement Senate Bill (SB) 786 and SB 1186, 88th Texas Legislature, 2023; and TWC, §§27.011, 27.031, 27.035, 27.036, 27.037, 27.041, and 27.0511.

§331.132. Construction Standards.

(a) Applicability. All Class V wells shall be completed in accordance with the specifications contained in this section, unless otherwise authorized by the executive director. Injection wells listed in Texas Occupations Code, §1901.001(8) shall be installed by a water well driller licensed by the Texas Department of Licensing and Regulation.

(b) Reporting.

(1) Prior to construction. Except for closed loop injection and air conditioning return flow wells, information required under §331.10(a) of this title (relating to Inventory or Wells Authorized by Rule) shall be submitted to the executive director for review and approval

prior to construction. For large capacity septic systems, septic systems that accept industrial waste, and subsurface fluid distribution systems including subsurface area drip dispersal systems as defined in §222.5 of this title (relating to Definitions), the information required under §331.10(a) of this title shall be submitted as part of the wastewater discharge permit application filed under Chapter 305 of this title (relating to Consolidated Permits).

(2) After completion of construction. Except for large capacity septic systems, subsurface fluid distribution systems, temporary injection points, closed loop injection wells, improved sinkholes, and air conditioning return flow wells, the Texas Department of Licensing and Regulation state well report form shall be submitted to the executive director within 30 days from the date the well construction is completed.

(3) Closed loop and air conditioning return flow wells. No reporting prior to construction is necessary for these two types of wells. The Texas Department of Licensing and Regulation state well report form shall be completed and submitted to the executive director within 30 days from the date the well construction is completed. Any additives, constituents, or fluids (other than potable water) that are used in the closed loop injection well system shall be reported in the Water Quality Section on the state well report form.

(4) Temporary injection points. Temporary injection points shall be completed in such a manner as to prevent movement of surface water or undesirable groundwater into underground sources of drinking water.

(5) Large capacity septic systems, subsurface fluid distribution systems, and improved sinkholes. The owner or operator of large capacity septic systems, subsurface fluid

distribution systems, and improved sinkholes must submit the well report form provided by the executive director within 30 days from the date well construction is completed.

(c) Sealing of casing.

(1) General. Except for closed loop injection wells, the annular space between the borehole and the casing shall be filled with cement slurry from ground level to a depth of not less than ten feet below the land surface or well head. In areas of shallow, unconfined groundwater aquifers, the cement need not be placed below the static water level. In areas of shallow, confined groundwater aquifers having artesian head, the cement need not be placed below the top of the water-bearing strata.

(2) Closed loop injection well. The annular space of a closed loop injection well shall be backfilled to the total depth with impervious bentonite or a similar material. Where no groundwater or only one zone of groundwater is encountered, sand, gravel, or drill cuttings may be used to backfill up to 30 feet from the surface. The top 30 feet shall be filled with impervious bentonite. Alternative impervious materials may be authorized by the executive director upon request.

(d) Surface completion.

(1) With the exception of temporary injection points, subsurface fluid distribution systems, improved sinkholes, and large capacity septic systems, all wells must have a concrete slab or sealing block placed above the cement slurry around the well at the ground surface.

(A) The slab or block shall extend at least two feet from the well in all directions and have a minimum thickness of four inches and shall be separated from the well casing by a plastic or mastic coating or sleeve to prevent bonding of the slab to the casing.

(B) The surface of the slab shall be sloped so that liquid will drain away from the well.

(2) For wells that use casing, the top of the casing shall extend a minimum of 12 inches above the original ground surface. The well casing shall be capped or completed in a manner that will prevent pollutants from entering the well.

(3) Closed loop injection wells which are completed below grade are exempt from the surface completion standards in this subsection. Pitless adapters may be used in closed loop wells provided that:

(A) the adapter is welded to the casing or fitted with another suitably effective seal; and

(B) the annular space between the borehole and the casing is filled with cement to a depth not less than 15 feet below the adapter connection.

(4) Temporary injection points shall be completed in such a manner as to prevent the movement of surface water or undesirable groundwater into underground sources of drinking water.

(e) Optional use of a steel or polyvinyl chloride (PVC) sleeve. If the use of a steel or PVC sleeve is necessary to prevent possible damage to the casing, the steel sleeve shall be a minimum of 3/16 inches in thickness or the PVC sleeve shall be a minimum of Schedule 80 sun-resistant and 24 inches in length, and shall extend 12 inches into the cement slurry.

(f) Well placement in a flood-prone area. All wells shall be located in areas not generally subject to flooding. If a well must be placed in a flood-prone area, it shall be completed with a watertight sanitary well seal to maintain a junction between the casing and injection tubing, and a steel sleeve extending a minimum of 36 inches above ground level and 24 inches below the ground surface shall be used. For the purpose of this subsection, a flood-prone area is defined as that area within the 100-year flood plain as determined on the Federal Emergency Management Agency (FEMA) Flood Hazard Maps for the National Flood Insurance Program. If FEMA has conducted a flood insurance study of the area, and has mapped the 50-year flood plain, then the smaller geographic areas within the 50-year boundary are considered to be flood-prone. Closed loop injection wells, improved sinkholes, and air conditioning return flow wells are exempt from the completion standards in this subsection.

(g) Other protection measures.

(1) Commingling prohibited. All wells, especially those that are gravel packed, shall be completed so that aquifers or zones containing waters that are known to differ significantly in chemical quality are not allowed to commingle through the borehole-casing annulus or the gravel pack and cause quality degradation of any aquifer containing fresh water.

(2) Undesirable groundwater. When undesirable groundwater, which is water that is injurious to human health and the environment or water that can cause pollution to land or other waters, is encountered in a Class V well, the well shall be constructed so that the undesirable groundwater is isolated from any underground source of drinking water and is confined to the zone(s) of origin.

(h) Sampling. For a Class V injection well, any required sampling shall be done at the point of injection, or as specified in a permit issued by the executive director.