

SUBCHAPTER H: STANDARDS FOR CLASS V WELLS
§§331.131 - 331.333, 331.335 - 331.337
Effective July 5, 2006

§331.131. Applicability.

The sections of this subchapter apply to all Class V injection wells under the jurisdiction of the commission. Aquifer storage wells must also comply with Subchapter K of this chapter (relating to Additional Requirements for Class V Aquifer Storage Wells) in addition to this subchapter.

Adopted June 20, 2001

Effective July 12, 2001

§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 close 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.

§331.133. Closure Standards for Injection Wells.

(a) It is the responsibility of the owner or operator to close a Class V well which is to be permanently discontinued or abandoned under standards set forth in this section unless the well must comply with §331.136 of this title (relating to Closure Standards for Motor Vehicle Waste Disposal Wells, Large Capacity Septic Systems, Large Capacity Cesspools, Subsurface Fluid Distribution Systems, and Drywells). The well must be closed in a manner that complies with §331.5 of this title (relating to Prevention of Pollution) and 40 Code of Federal Regulations (CFR) §144.12 ("prohibition of movement of fluid into underground sources of drinking water," effective June 2, 1987 at 48 FR 20676). Any contaminated soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well must be managed in accordance with Chapter 350 of this title (relating to Texas Risk Reduction Program), and all other applicable federal, state, and local regulations and requirements.

(b) Closure shall be accomplished by removing all of the removable casing and the entire well shall be pressure filled via a tremie pipe with cement from bottom to the land surface.

(c) As an alternative to the procedure in subsection (b) of this section, if a Class V well is not completed through zones containing undesirable groundwater, water that is injurious to human health and the environment or water that can cause pollution to land or other waters, the well may be filled with fine sand, clay, or heavy mud followed by a cement plug extending from land surface to a depth of not less than ten feet below the land surface.

(d) As an alternative to the procedure in subsection (b) of this section, if a Class V well is completed through zones containing undesirable groundwater, water that is injurious to human health and the environment or water that can cause pollution to land or other waters, either the zone(s) containing undesirable groundwater or the fresh groundwater zone(s) shall be isolated with cement plugs and the remainder of the wellbore filled with bentonite grout (9.1 pounds per gallon mud or more) followed by a cement plug extending from land surface to a depth of not less than ten feet below the land surface.

(e) It is the responsibility of the owner or operator to ensure that temporary injection points are pressure grouted from the bottom of the well to the land surface, and the injection point is sealed to prevent the migration of fluids into underground sources of drinking water.

(f) It is the responsibility of the owner or operator to close improved sinkholes in a manner that prohibits the movement of contaminated fluids into underground sources of drinking water, in compliance with §331.5 of this title, and 40 CFR §144.12 (as amended through June 2, 1987 at 48 FR 20676); and to demonstrate that any fluids released through the closed well will meet the primary maximum contaminant levels (MCLs) for drinking water contained in 40 CFR Part 141, and other appropriate health-based standards at the point of injection.

§331.135. Construction Standards for Large Capacity Septic Systems.

- (a) Large capacity septic systems shall be constructed in accordance with the terms of the wastewater discharge permit obtained under Chapter 305 of this title (relating to Consolidated Permits).
- (b) During construction, movement of fluids which might contaminate an underground source of drinking water, violate primary drinking water standards, or violate other health-based standards is prohibited.

Adopted June 20, 2001

Effective July 12, 2001

§331.136. Closure Standards for Motor Vehicle Waste Disposal Wells, Large Capacity Septic Systems, Large Capacity Cesspools, Subsurface Fluid Distribution Systems, and Drywells.

- (a) The owner or operator of a Class V motor vehicle waste disposal well, large capacity septic system, large capacity cesspool, subsurface fluid distribution system, or drywell that is to be permanently discontinued or abandoned must close the well under the standards set forth in this section.
- (b) The owner or operator of a large capacity cesspool or motor vehicle waste disposal well must submit a preclosure notice form provided by the executive director no later than 30 days prior to closure.
- (c) The owner or operator of a large capacity cesspool, large capacity septic system, subsurface fluid distribution system, drywell, or motor vehicle waste disposal well must:
 - (1) close the well in a manner that prohibits the movement of fluids into underground sources of drinking water, in compliance with §331.5 of this title (relating to Prevention of Pollution), and 40 Code of Federal Regulations §144.12 ("prohibition of movement of fluid into underground sources of drinking water," as amended through June 2, 1987 at 48 FR 20676);
 - (2) dispose or otherwise manage any contaminated soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well in accordance with Chapter 350 of this title (relating to Texas Risk Reduction Program) and all other applicable federal, state, and local regulations and requirements; and
 - (3) submit a closure report to the executive director within 60 days of closing the well.

Adopted June 20, 2001

Effective July 12, 2001

§331.137. Permit for Motor Vehicle Waste Disposal Wells.

An owner or operator of a motor vehicle waste disposal well who wishes to continue operation of a well may apply for an underground injection control permit. A Class V motor vehicle waste disposal permit shall contain the following minimum requirements.

(1) The owner or operator of a Class V motor vehicle waste disposal well must demonstrate that fluids released through the well will meet the primary maximum contaminant levels (MCLs) for drinking water contained in 40 Code of Federal Regulations (CFR) Part 141, and other appropriate health-based standards at the point of injection as specified in the Class V permit.

(2) The owner or operator of a Class V motor vehicle waste disposal well must follow specified best management plans (BMPs) for motor vehicle-related facilities as specified in the Class V permit.

(3) The owner or operator of a Class V motor vehicle waste disposal well must monitor the quality of the injectate and sludge (if present in dry wells or tanks holding injectate) both initially and on a continuing basis as specified in the Class V permit to demonstrate compliance with the primary MCLs for drinking water contained in 40 CFR Part 141.

Adopted June 20, 2001

Effective July 12, 2001