

The Texas Natural Resource Conservation Commission (TNRCC or commission) proposes amendments to §331.2, Definitions; §331.7, Permit Required; §331.9, Injection Authorized by Rule; §331.10, Inventory of Wells Authorized by Rule; §331.11, Classification of Injection Wells; §331.12, Conversion of Wells; §331.82, Construction Requirements; §331.131, Applicability; §331.132, Construction Standards; and §331.133, Closure Standards. The commission also proposes new §331.8, Prohibition of Motor Vehicle Waste Disposal Wells; §331.135, Construction Standards for Large Capacity Septic Systems; §331.136, Closure Standards for Motor Vehicle Waste Disposal Wells, Large Capacity Septic Systems, Large Capacity Cesspools, and Drywells; §331.137, Permits for Motor Vehicle Waste Disposal Wells; and §331.138, Monitoring Requirements for Motor Vehicle Waste Disposal Wells.

#### BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

Underground injection wells are regulated under the authority of Part C of the federal Safe Drinking Water Act (SDWA or the Act) (42 United States Code (USC), 300h et seq.). Part C mandates the regulation of underground injection of fluids through wells. Section 1421 of the Act requires the United States Environmental Protection Agency (EPA) to propose and promulgate regulations specifying minimum requirements for state programs to prevent underground injection that endangers drinking water sources. The EPA entered into a consent decree with the Sierra Club on August 31, 1994, subsequently modified on January 28, 1997, requiring the EPA to complete the promulgation of regulations for high risk Class V wells to prevent underground injection that endangers drinking water. Class V wells are generally shallow wells used to inject nonhazardous fluids into or above formations that contain underground sources of drinking water (USDW). The EPA has promulgated a final rule,

Underground Injection Control Regulations for Class V Injection Wells, in the December 7, 1999 issue of the *Federal Register* (64 FR 68546). The new federal rule provisions are in Title 40, Code of Federal Regulations (CFR), Part 144, Underground Injection Control Program, and Part 146, Underground Injection Control Program: Criteria and Standards.

The federal rules primarily address two types of Class V injection wells that have high potential for endangering USDWs: large capacity cesspools and motor vehicle waste disposal wells. The EPA's rulemaking links the Class V underground injection control (UIC) program and the State Drinking Water Source Assessment and Protection Program for motor waste disposal wells. The federal rules also adopt new definitions of "subsurface fluid distribution system" and "improved sinkhole" which define these as Class V injection wells and therefore subject to these rules. Under the federal rules, construction of new large capacity cesspools and motor vehicle waste disposal wells are banned by the federal rules as of April 5, 2000. Under the EPA's rulemaking, all existing motor vehicle waste disposal wells in a groundwater protection area must close or obtain a permit within one year of the designation of the groundwater protection area, but no later than by January 1, 2005 (40 CFR §144.87(b)). Groundwater protection areas are delineated under the Drinking Water Source Assessment and Protection Program for source water protection areas for community or non-transient non-community water systems that use groundwater as a source of drinking water. The EPA's rulemaking also provides that states may delineate other sensitive groundwater areas for groundwater areas that are critical for public health protection because of hydrogeologic and other features that would cause USDWs to be vulnerable to contamination from injection wells. The owner or operator may request an extension of one year on the closure requirement in groundwater protection areas from

the UIC program director. Additionally, EPA's rulemaking requires the closing of all other motor vehicle waste disposal wells in other sensitive groundwater areas, if delineated by the state, or statewide by January 1, 2007, if other sensitive groundwater areas are not delineated unless the owner or operator of the well obtains a permit or converts the well (40 CFR §144.87).

Options for motor vehicle waste disposal well owners offered in the new federal rules are to: 1) apply for a permit (40 CFR §144.84); 2) to get an extension of the closure compliance date in groundwater protection areas for up to one year, if the most efficient compliance option is to route the waste to a sanitary sewer or to install a new treatment technology (40 CFR §144.87(b)); or 3) convert the motor vehicle waste disposal well to another type of Class V well if all motor vehicle fluids are segregated by physical barriers and are not allowed to enter the well, and injection of motor vehicle waste is unlikely based on a facility's compliance history and records showing proper waste disposal (40 CFR §144.89(b)). A motor vehicle waste disposal well is defined in the federal rules as a well which currently receives or has ever received motor vehicle waste. The federal rules further state that if a motor vehicle waste disposal well owner or operator applies for a permit, the disposed waste must meet the primary maximum contaminant levels (MCLs) for drinking water, and other health-based standards at the point of injection. Additionally, the owner or operator must follow best management practices and monitor the injectate (40 CFR Part 144, Table 2). The federal rules also clarify plugging and abandonment requirements for Class IV and V wells, and propose new and amended definitions.

To demonstrate environmental need, the EPA cited evidence in its rulemaking that fluids released in motor vehicle waste disposal wells commonly exceed primary MCLs for drinking water, and that these

wells have been linked with contamination of USDW. Data provided by the EPA indicates that fluids being injected may exceed health-based limits for contaminant levels in water by ten to 100 times. The data also demonstrates that contaminants known to be associated with motor vehicle waste disposal wells occur nationwide in public water systems. (64 FR 68548 December 7, 1999).

The EPA justifies the ban on large capacity cesspools because large capacity cesspools have a high potential to contaminate USDWs. The effluent released from cesspools frequently exceeds drinking water MCLs for nitrates, total suspended solids, and coliform bacteria; and may contain other constituents of concern such as phosphates, chlorides, grease, viruses, and industrial chemicals such as trichloroethane and methylene chloride. Pathogens in untreated sanitary waste released into large capacity cesspools could contaminate water supply sources and pose a serious health risk with a single exposure (64 FR 68551, December 7, 1999). Also, the use of large capacity cesspools is recognized as an inferior method of disposing of waste that can be remedied by the installation of a septic system (64 FR 68553, December 7, 1999). Prior to this federal rulemaking, the commission had banned and continues to ban cesspools in §285.3 of this title (relating to On-Site Sewage Facilities).

Section 1422 of the SDWA provides that states may apply to the EPA for primary enforcement responsibility to administer the federal UIC program. Texas has applied for and been approved by the EPA to administer the federal UIC program in this state since January 6, 1982. The commission is therefore obligated to maintain rules at least as stringent as the federal rules to retain federal authorization to implement the UIC program in Texas.

In Texas, the UIC program is implemented under Texas Water Code (TWC), Chapter 27, Injection Wells, and the commission's rules, 30 TAC, Chapter 331, Underground Injection Control. The new and amended federal rule requirements are proposed to be incorporated into Chapter 331, Subchapter A, General Provisions, and Subchapter H, Standards for Class V Wells.

The main purpose of the commission's rulemaking is to implement these new federal rules. The commission proposes to require all existing motor vehicle waste disposal wells in groundwater protection areas to close or obtain a permit within one year of the date the groundwater protection areas are identified by the commission, and no later than January 1, 2005. This is in compliance with new 40 CFR §144.87(b). Additionally, with the effective date of these rules, the commission prohibits the construction of new motor vehicle waste disposal wells or large capacity cesspools. Because there are no currently inventoried (registered) motor vehicle waste disposal wells in the state and only a small number are believed to exist, the commission decided not to designate other sensitive groundwater areas (as allowed by the federal rules) and instead, is proposing to require all existing motor vehicle waste disposal wells outside of groundwater protection areas to close or obtain a permit. Therefore, owners and operators of all motor vehicle waste disposal wells in areas other than groundwater protection areas must close the wells or obtain a permit by January 1, 2007. The commission determined that this will provide consistent and equitable regulation throughout the state and will not require the commitment of additional resources to determine other sensitive groundwater protection areas, or to develop a program and regulations for motor vehicle waste disposal wells. This decision to apply the rules statewide does not mean the commission determined that the entire state is a sensitive groundwater protection area. The phasing in of these deadlines is intended to give any owners of motor vehicle waste disposal wells

the most time possible to close these wells. The commission solicits comments from motor vehicle waste disposal well owners and operators and other interested persons on the proposal to apply the rules statewide rather than designating other sensitive groundwater areas.

The commission determined that the cost of complying with the options of obtaining a permit for a motor vehicle waste disposal well and meeting primary MCLs for drinking water at the point of injection, or installing a new on-site treatment process would most likely not be cost effective for a majority of the well owners or operators. Similarly, the option of converting a motor vehicle waste disposal well to another use by physically blocking off the motor vehicle wastes present, not allowing injection of motor vehicle wastes, and monitoring the injectate was also considered most likely not too cost-effective. Recycling or off-site disposal of motor vehicle waste is anticipated to be more cost effective than these options. If public comment does not show a need for the permitting option, that option will be deleted from the final rule. However, the commission included the option of obtaining a permit or converting the well in the proposed rules and is seeking public comment on these options.

In addition to changes to implement the federal rules, the commission proposes to incorporate some minor clarifications and updates. The commission proposes to include specific definitions of large capacity cesspools, septic systems, subsurface fluid distribution systems, and improved sinkholes to clarify their status as Class V injection wells. Temporary injection points are proposed to be added to reflect advances in technology such as the current use of push point technology for the delivery of fluids into or above a USDW. The proposed amendments also clarify that the Class V wells listed in TWC, §32.001(8) shall be installed by a licensed water well driller. In addition, amendments are proposed to

the construction and closure sections of the rules because they include the types of Class V injection wells that are the primary focus of the new federal rules and the commission wants to update the construction and closure methods to reflect recent advances in technology.

## SECTION BY SECTION DISCUSSION

### Subchapter A: General Provisions

Section 331.2, Definitions, is proposed to be amended to add new definitions for “cesspool,” “drywell,” “groundwater protection area,” “improved sinkhole,” “point of injection,” “sanitary waste,” “septic system,” and “subsurface fluid distribution system” and to amend the definition of “well” for compatibility with new 40 CFR §144.3. In addition, the commission proposes to add new definitions for “large capacity cesspool,” “large capacity septic system,” “motor vehicle waste disposal well,” “temporary injection point,” and “well injection.”

The definition for “large capacity septic system” found in §331.2(50) is “A septic system that is designed for a flow of greater than 5,000 gallons per day.” In the federal rules, a “large capacity cesspool” is one which receives sanitary waste and serves more than 20 persons a day. The commission is proposing that a cesspool capacity of 5,000 gallons per day is equivalent to a cesspool that serves 20 persons per day. The definition of “large capacity septic system” is not in the federal rules; however, the commission is proposing this definition to provide consistency with Chapter 285 of this title (relating to On-Site Sewage Facilities).

The new definition for “motor vehicle waste disposal well” is derived from new 40 CFR §144.81(16) and is proposed to be added to clarify that wells which receive or have ever received motor vehicle waste are Class V injection wells. The new definition of “temporary injection point” is being proposed to keep the state rules up to date with push point injection technology used in remediation of groundwater. The new definition of “well injection” is proposed to be added to simply state that well injection means the subsurface emplacement of fluids through a well. These definitions are being added and/or amended for compatibility with the federal rules located at 40 CFR §144.3.

The terms “improved sinkhole” and “subsurface fluid distribution system” are also defined under 40 CFR §144.3 as types of injection wells regulated under the UIC program. These proposed definitions codify the commission’s interpretation that the intentional disposal of fluids in natural depressions, open fractures, and crevices (such as those commonly associated with cooling of lava flows or weathering of limestone) fits within the statutory definition of underground injection. Because improved sinkholes and subsurface fluid distribution systems are now considered Class V wells, owners or operators of these wells must comply with the inventory requirements of this chapter. The definition “groundwater protection area” defines the area subject to motor vehicle waste disposal well regulation. In compliance with the new federal rules, the definition of “well” is proposed to be amended to clarify that “well” includes improved sinkholes and subsurface fluid distribution systems. Where necessary, the definitions in the section have been renumbered to accommodate the addition of the new definitions.

The proposed new definitions for “cesspool,” “drywell,” “point of injection,” “sanitary waste” and “septic system” are derived from the new federal definitions in 40 CFR §144.3.

Section 331.7, Permit Required, is proposed to be amended. New §331.7(c) is added to clarify that a wastewater discharge permit is required for large capacity septic systems, or septic systems which accept industrial waste, in addition to the requirements of this chapter. Large capacity septic systems are currently regulated by the commission under TWC, Chapter 26, and 30 TAC Chapter 305 (relating to Consolidated Permits).

New §331.8, Prohibition of Motor Vehicle Waste Disposal Wells and Large Capacity Cesspools, is proposed to implement the federal requirement under 40 CFR §144.87, since the commission is proposing to use the option of not identifying “other sensitive groundwater protection areas.” Proposed new §331.8(a) implements a ban on the construction of all new motor vehicle waste disposal wells and large capacity cesspools. The construction of these two types of wells has been prohibited by the federal rules since June 2, 1987. Proposed new §331.8(b) specifies that the owner or operator of an existing motor vehicle waste disposal well located in a groundwater protection area must close the well within one year of the designation of the groundwater protection area, but no later than January 1, 2005, or must apply for a UIC Class V permit prior to the closure date. This subsection also describes well permitting and closure procedures and requirements. It should be noted that if comments received on the proposed rules do not indicate a need for a permitting program, this permitting option will be deleted from the final rules. If the most efficient compliance option is connection to a sanitary sewer or installation of new treatment technology, proposed §331.8(b)(1) establishes the procedure and requirements for applying for an extension from the closure date for one year, as provided in 40 CFR §144.87(b)(2). Proposed §331.8(b)(2) specifies that to continue operating during an extension, the owner or operator must ensure that the injectate meets primary MCLs for drinking water and other

health-based standards at the point of injection. Proposed §331.8(c) establishes that the owner or operator of all existing motor vehicle waste disposal wells in areas of the state other than groundwater protection areas must close the well by January 1, 2007, or apply for a Class V UIC permit prior to January 1, 2007. Proposed new §331.8(d) specifies that the owner or operator of an existing motor vehicle waste disposal well must close the well in accordance with closure standards specified in new §331.136 of this title (relating to Closure Standards for Motor Vehicle Waste Disposal Wells, Large Capacity Septic Systems, Large Capacity Cesspools, and Drywells).

Section 331.9, Injection Authorized by Rule, is proposed to be amended. Subsection 331.9(a) is proposed to be amended to update the cross-reference to §331.133 of this title (relating to Closure Standards), and §331.136 of this title. Section 331.9(b) is also proposed to be amended to require that Class V wells used to dispose of greater than 5,000 gallons per day of sewage or sewage effluent must be authorized by a wastewater discharge permit. The amount of effluent is proposed to be increased from 1,000 gallons per day to greater than 5,000 gallons per day for consistency with other commission rules and to be equivalent to federal rules where the capacity is specified as greater than 20 persons per day in 40 CFR §144.81(9).

Section 331.10, Inventory of Wells Authorized by Rule, is proposed to be amended. Section 331.10(b) repeats the requirement that drillers of closed loop and air conditioning return flow injection wells submit an inventory form provided by the executive director as required under §331.132(b)(3) of this title (relating to Construction Standards). Minor grammatical changes are also proposed for this subsection. New §331.10(d) is proposed to require that inventory information for all Class V wells,

with the exception of closed loop and air conditioning return flow wells, be submitted prior to construction, conversion, or use of the well. Inventory information for closed loop and air conditioning return flow wells may be submitted after construction of these types of wells.

Proposed new §331.10(e) specifies that owners and operators of existing subsurface fluid distribution systems and improved sinkholes must submit the inventory information within one year of the effective date of these rules. All new subsurface fluid distribution systems and improved sinkholes must comply with subsection (d) of this section.

Section 331.11, Classification of Injection Wells, is proposed to be amended. New §331.11(a)(1)(C) is proposed to specify that radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water (USDW) within 1/4-mile of the well bore are classified as Class I injection wells. This requirement is added to implement the new federal rules at 40 CFR §144.6(a)(3). These disposal wells are primarily associated with in situ uranium mining operations in South Texas and are used for disposal of uranium byproduct as defined in Texas Health and Safety Code, §401.003(3)(B). These wells have historically been permitted as Class I injection wells, and are identical to other Class I injection wells in terms of their design, the nature of injected fluids, and their potential to endanger USDWs; therefore, they warrant the same level of control as other Class I injection wells. This classification change does not mean that the Class II injection wells permitted by the Railroad Commission of Texas (RCT) to inject oil and gas naturally-occurring radioactive material (NORM waste) are reclassified as Class I wells. These wells remain

under RCT jurisdiction as Class II wells. However, any wells used to inject non-oil and gas NORM waste for disposal are Class I wells under TNRCC jurisdiction.

Section 331.11(a)(4) is proposed to be amended to improve readability by moving the second sentence in the paragraph to the beginning of the paragraph. Clarification as to which Class V injection wells are under the jurisdiction of the RCT is provided. Section 331.11(a)(4)(C) is proposed to be amended to clarify that large capacity cesspools which are Class V wells are those cesspools which receive greater than 5,000 gallons of waste per day. Sections 331.11(a)(4)(J)(i) and (ii) are proposed to be amended to clarify that vertically completed septic systems that receive greater than 5,000 gallons per day are classified as Class V wells. Sections 331.11(a)(4)(K) and (L) are proposed to be amended for punctuation. New §331.11(a)(4)(M) and (N) are proposed to list motor vehicle waste disposal wells and improved sinkholes as types of Class V injection wells in accordance with the federal rules at 40 CFR §144.1 and §144.81. New §331.11(a)(4)(O) is proposed to list aquifer remediation wells, temporary injection points, and subsurface fluid distribution systems as additional types of Class V wells.

Section 331.12, Conversion of Wells, is proposed to be amended. Proposed new §331.12(a)(4) clarifies that prior to converting a Class V motor vehicle waste disposal well, the owner or operator must inventory the well with the executive director, as required in §331.10 of this title. Proposed new §331.12(c) provides the conversion requirements for motor vehicle waste disposal wells. Proposed new §331.12(c)(1) states that the use of a semi-permanent plug is not sufficient to segregate waste; §331.12(c)(2) states the conditions under which the executive director may approve a Class V well

conversion. Proposed new §331.12(c)(2)(C) limits the conversion of Class V wells to those circumstances where the future injection of motor vehicle fluids is unlikely based on a facility's compliance history and records.

#### Subchapter E: Standards for Class III Wells

Section 331.82(b) and (g), Construction Requirements, are proposed to be amended to change "commission" to "executive director" to distinguish that the actions are actually performed by the executive director and not the commissioners. These amendments are not related to the new federal rules.

#### Subchapter H: Standards for Class V Wells

Section 331.131, Applicability, is proposed to be amended to delete the word "new." This amendment clarifies that rules in Subchapter H are applicable to "existing" as well as "new" Class V injection wells, and is consistent with the new federal rules.

Section 331.132, Construction Standards, is proposed to be amended. Section 331.132(a) is proposed to be amended to make explicit the requirement that the types of injection wells listed in TWC, §32.001(8) shall be installed by a licensed water well driller. Section 331.132(b)(1) is proposed to be amended to specify the requirement that inventory information for Class V wells in accordance with §331.10(a) of this title, shall be submitted for review and approval prior to construction of the well. Additionally, paragraph (b)(1) is proposed to be amended to require that inventory information for large capacity septic systems be submitted as part of the wastewater discharge permit application. Section

331.132(b)(2) adds large capacity septic systems, subsurface fluid distribution systems and temporary injection points to the requirement to submit the Texas Department of Licensing and Regulation state well report form to the executive director within 30 days of construction of the well. Section 331.132(d)(1) is proposed to be amended to specify that surface completion requirements for injection wells do not apply to temporary injection points and large capacity septic systems. New 331.132(d)(4) is proposed to be added to implement the requirement that temporary injection points shall be completed in such a manner as to prevent the movement of surface fluids into a USDW. New §331.132(h) is proposed to specify that sampling shall be done on a Class V injection well from the point of injection, the last accessible sampling point prior to the waste fluids being released into the subsurface environment. This requirement is to ensure that any sampling is representative of the waste fluid being released and is consistent with the sampling requirement for permitted motor vehicle waste disposal wells in 40 CFR §144.88(b), Table 2.

Section 331.133, Closure Standards, is proposed to be amended. The title of this section is proposed to be amended to “Closure Standards for Vertically Completed Injection Wells,” and to provide that the closure standards specified in this section apply to vertically completed injection wells. This is to distinguish these closure standards from those of horizontally completed septic systems and subsurface fluid distribution systems, for which the closure requirements found in new §331.136 of this title are more generally applicable. Section 331.133(a) is proposed to be amended for consistent use of terminology; specifically, the term “close” is substituted for “plug or plugged.” This subsection is also proposed to be amended to specify that the injection well must be closed in a manner that complies with §331.46(d) of this title (relating to Closure Standards), 40 CFR §144.12 (Prohibition of movement of

fluid into underground sources of drinking water, effective June 2, 1987), and disposal or other management of any contaminated soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well must be in accordance with Chapter 350 of this title (relating to Texas Risk Reduction Program). New §331.133(e) is proposed to specify the proper closure technique for temporary injection points. This subsection accommodates the use of push point technology for remediation of groundwater.

New §331.135, Construction Standards for Large Capacity Septic Systems, is proposed to provide appropriate regulatory standards for the construction of large capacity septic systems. During construction, the movement of fluids which might contaminate a USDW, violate primary drinking water standards, or other health-based standards is prohibited. There were no construction standards previously specified in commission rules for these types of Class V injection wells. These wells do require permits from the Wastewater Permits Section of the commission under Chapter 305 of this title (relating to Consolidated Permits) and Chapter 281 of this title (relating to Applications Processing).

New §331.136, Closure Standards for Motor Vehicle Waste Disposal Wells, Large Capacity Septic Systems, Large Capacity Cesspools and Drywells, is proposed to provide appropriate regulatory standards for the closure of these types of Class V injection wells. These proposed standards, in part, implement the federal requirements for closure of Class V wells found in new 40 CFR §144.89. These standards ensure that wells are closed in a manner that prevents the movement of contaminated fluids into a USDW, which may cause a violation of the primary drinking water or other health-based standards, or adversely affect public health. Proposed new §331.136(a) specifies that owners or

operators of large capacity cesspools, motor vehicle waste disposal wells, large capacity cesspools, and dry wells must comply with the standards set forth in this section. Proposed new §331.136(b) specifies that owners or operators of large capacity cesspools and motor vehicle waste disposal wells must provide pre-closure notification to the executive director 30 days prior to closure. In addition, proposed new §331.136(c) specifies closure procedures and requirements.

Proposed new §331.137, Permit for Motor Vehicle Waste Disposal Wells, establishes the minimum requirements for a motor vehicle waste disposal well permit. Proposed new §331.137(1) establishes that owners or operators of motor vehicle waste disposal wells shall demonstrate that fluids released in their wells meet the primary drinking water MCLs and other health-based standards at the point of injection. Proposed new §331.137(2) establishes that owners or operators shall follow prescribed best management practices as specified in their permits. Proposed new §331.137(3) establishes that owners or operators are required to monitor the quality of their injectate and sludge both initially and on a continuing basis as specified in their permit to demonstrate compliance with MCLs at the point of injection. If no comments are received to show a demand for this permitting program, it will be deleted from the final rules.

New §331.138, Monitoring Requirements for Motor Vehicle Waste Disposal Wells, establishes that owners or operators are required to characterize the quality of their injectate and any sludge. Proposed new §331.138(1) specifies that if liquid from sludge has chemical concentrations below the MCLs, then owners or operators are required to analyze the injectate quarterly for the first three years of operation after receiving a permit, and then annually to ensure that the injectate is consistently below the MCLs.

Proposed new §331.138(2) establishes that owners or operators are required to analyze their sludge annually. Proposed new §331.138(3) establishes that if the injectate is below the primary MCLs for drinking water but liquid from the sludge is above the MCLs, then owners or operators are required to meet the monitoring requirements specified in §331.138(1) and (2), and also must pump and properly dispose of the sludge. Proposed new §331.138(4) specifies that if the injectate exceeds the primary MCLs for drinking water and the liquid from the sludge also exceeds the MCLs, then the owner or operator must comply with treatment techniques specified in subparagraphs (A) - (E) of this paragraph. Proposed new §331.138(4)(A) - (E) specify that the owner or operator must install treatment techniques to meet permit requirements, pump and properly dispose of the sludge, perform quarterly sampling of injectate for the first three years of operation after receiving a permit and then perform annual sampling if consistently below the primary MCLs for drinking water, perform annual sampling of the sludge, and follow all other requirements established by the executive director.

#### FISCAL NOTE: COST TO STATE AND LOCAL GOVERNMENT

John Davis, Technical Specialist with Strategic Planning and Appropriations, has determined that for each year of the first five-year period the proposed amendments are in effect there will be fiscal implications which may be significant, depending on the number of affected Class V injection wells that a unit of state or local government owns or operates, as a result of administration or enforcement of the proposed amendments. The average annualized cost to close Class V motor vehicle waste disposal wells affected by the proposed amendments would range from \$4,300 to \$11,000 and the cost to close large capacity cesspools would be approximately \$3,700.

The proposed amendments will adopt new federal UIC regulations for Class V injection wells, which were adopted by the EPA in December 1999. Class V injection wells are generally shallow wells used to release non-hazardous fluids either directly into USDW or into the shallow subsurface that overlies the USDW. Types of Class V injection wells include, but are not limited to: motor vehicle waste disposal wells, large capacity cesspools, storm water drainage wells, aquifer remediation wells, aquifer storage and retrieval wells, aquifer recharge, and large capacity septic systems. The federal rules primarily address two types of Class V injection wells that have a high potential for endangering USDW: large capacity cesspools and motor vehicle disposal wells. In addition to implementing the UIC federal rules, the proposed amendments incorporate editorial updates for clarification of existing rules.

Large capacity cesspools are usually drywells, which are a bored, drilled, or driven, shaft or a dug hole whose depth is greater than its largest surface dimension, which is completed above the water table so that its bottom and sides are typically dry when receiving fluids. Large capacity cesspools are drywells that receive untreated sanitary waste, which sometimes have an open bottom and/or perforated sides. The UIC requirements do not apply to single-family residential cesspools or to non-residential cesspools that receive solely sanitary waste and have the capacity to serve fewer than 20 persons or 5,000 gallons a day or less.

Motor vehicle waste disposal wells are wells or subsurface fluid distribution systems that receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop; automotive repair shop; new and used car dealerships; aviation, marine, and rail repair facilities;

specialty repair shops (such as transmission and muffler repair shops); or any facility that does any vehicular repair work.

The construction of new large capacity cesspools and motor vehicle waste disposal wells are banned by the federal rules as of April 5, 2000. The construction of large capacity cesspools in Texas has been banned since at least 1997. The proposed amendments will require operators of existing motor vehicle waste disposal wells that are located in groundwater protection areas to obtain a permit or close the facility by no later than January 1, 2005. Motor vehicle waste disposal wells not located in groundwater protection areas will have to obtain a permit or close the facility by no later than January 1, 2007. The agency is in the process of determining the location of groundwater protection areas in Texas.

The total number of wells affected by this rulemaking is undetermined at this time because none have been inventoried. Any unit of state or local government that operates a facility that conducts vehicle maintenance may possibly be affected by the proposed amendments. Although the total number is unknown, the commission estimates there will be units of state or local government that have operational wells affected by the proposed amendments.

The EPA conducted an economic analysis of the federal rules and published the findings in the November 19, 1999, report titled "Economic Analysis for Final Rule: Revision to the Underground Injection Control Regulations for Class V Injection Wells." Data from this report was used in this fiscal note to provide the costs and issues associated with obtaining a permit or closing affected

facilities. Based on the EPA report, the annual cost to units of state and local government would be approximately \$3,700 to close a large capacity cesspool.

For a motor vehicle waste disposal well to qualify for a permit, the injectate cannot exceed primary drinking water MCLs and other health-based standards. Costs associated with obtaining a permit include initial sampling of injectate, implementation of best management practices (if required), permit application and development fees, and annual injectate and sludge sampling to ensure MCLs and other health-based standards are not exceeded.

The EPA estimated that all motor vehicle waste disposal facilities would have to implement best management practices to meet MCLs and other health-based standards. The EPA's estimates concerning meeting MCL thresholds did not incorporate data from facilities in Texas; therefore, it is undetermined how many facilities in Texas would have to implement best management practices to meet the required MCLs and other health-based standards. Facilities in Texas would only have to implement best management practices if the operator wanted to pursue a permit and if the facility could not meet MCLs and other health-based standards. Examples of best management practices that would be implemented include installation of collection devices, improvement of handling processes, recycling wastes in on-site solvent units, overall improvement of facility cleanliness, installation of mechanical devices for material removal, and installation and operation of built-in distillation units. One-time capital costs to implement best management practices would range from: 1) approximately \$1,800 for small auto/home supply operations; 2) approximately \$7,500 for the majority of sites including auto repair shops, trucking operations, auto transmission and exhaust repair shops, and auto dealerships; and

3) approximately \$27,000 for airport operations. The annual operation and maintenance (O&M) costs for each sector would be approximately \$1,300, \$1,700, and \$4,700, respectively.

The total costs to obtain a permit depends on the waste stream developed by the facility and whether best management practices would have to be implemented to meet MCLs and other health-based standards. For facilities that do not have to implement best management practices, the total one-time costs (including initial sampling, permit development, and application fees) would be approximately \$2,600 with annual monitoring costs of approximately \$1,900. If a facility has to implement best management practices, the total capital, sampling, and permit costs would be approximately \$4,400 to \$29,600 with annual monitoring and O&M costs (for best management practice equipment) of approximately \$3,200 to \$6,500. This last annual range could increase if capital expenditures for best management practice equipment were financed over several years.

If a facility cannot meet required MCLs or other health-based standards, the well would have to be closed. Steps involved in closing the facility include off-site recycling or disposal of well contents, closing the well, sampling the soil, and remediation of the soil and groundwater if required. The EPA estimated that the annual cost, including annualized capital and O&M costs, to units of state and local government to close motor vehicle waste disposal wells would be approximately \$4,300 to \$11,000 depending on the waste stream.

In addition to closing the well, if the facility continues operations, it will have to continue to handle the generated waste. The agency estimates that the majority of urban facilities are also tied into sewer

systems, which could be used to dispose of waste, depending on the waste stream. Fewer rural sites would have access to sewers and would have to rely on other options. Other alternatives to dispose of waste would include sending the waste offsite to a publicly-owned treatment works facility, an industrial/commercial wastewater treatment facility, or to a recycler. There will be monthly or annual costs associated with these options; however, the agency does not have an estimate at this time. The overall fiscal impact to units of state and local government will depend on the number of affected injection wells that are closed or permitted due to implementation of the proposed amendments.

#### PUBLIC BENEFIT AND COSTS

Mr. Davis has also determined for each of the first five years the proposed amendments are in effect, the public benefit anticipated as a result of implementing the proposed amendments will be greater environmental protection through stricter regulation of Class V injection wells (specifically large capacity cesspools and motor vehicle waste disposal wells) that have a high risk of contaminating a USDW. These wells will be closed or permitted and a prohibition against new wells will be established. These measures are intended to permanently remove the risk of contamination from these high risk wells.

The proposed amendments will adopt new federal UIC regulations for Class V injection wells, which were adopted by the EPA in December 1999. Types of Class V injection wells include: motor vehicle waste disposal wells, large capacity cesspools, storm water drainage wells, aquifer remediation wells, and large capacity septic systems. The federal rules primarily address two types of Class V injection wells that have a high potential for endangering USDWs: large capacity cesspools and motor vehicle

disposal wells. In addition to implementing the UIC federal rules, the proposed amendments will incorporate editorial updates for clarification of existing rules and will incorporate updates in injection well technology.

Large capacity cesspools are drywells that receive untreated sanitary waste, and which sometimes have an open bottom and/or perforated sides. The UIC requirements do not apply to single-family residential cesspools or to non-residential cesspools that receive solely sanitary waste and have the capacity to serve fewer than 20 persons (receive less than 5,000 gallons a day). Motor vehicle waste disposal wells are wells or subsurface fluid distribution systems that receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealerships, specialty repair shops (such as transmission and muffler repair shops), or any facility that does any vehicular repair work.

The construction of new large capacity cesspools and motor vehicle waste disposal wells are banned by the federal rules as of April 5, 2000. The construction of large capacity cesspools in Texas has been banned since at least 1997. The proposed amendments will require operators of existing motor vehicle waste disposal wells that are located in groundwater protection areas to obtain a permit or close the facility by no later than January 1, 2005. Motor vehicle waste disposal wells not located in groundwater protection areas will have to obtain a permit or close the facility by no later than January 1, 2007. The agency is in the process of determining the location of groundwater protection areas in Texas.

The total number of wells affected by this rulemaking is undetermined at this time because none have been inventoried. Any individual or business that owns and operates a facility that conducts vehicle maintenance may possibly be affected by the proposed amendments. Although the total number is unknown, the commission estimates there will be a few individuals and businesses that have operational wells affected by the proposed amendments.

The EPA conducted an economic analysis of the federal rule and published the findings in the November 19, 1999, report titled "Economic Analysis for Final Rule: Revision to the Underground Injection Control Regulations for Class V Injection Wells." Based on the EPA report, the annual cost to individuals and businesses would be approximately \$3,700 to close a large capacity cesspool, and \$4,300 to \$11,400 to close a motor vehicle waste disposal well, depending on the waste stream entering the well.

If a facility qualified for a permit, the total costs to receive the permit would depend on whether best management practices have to be implemented to meet required environmental standards. If a facility meets environmental standards, the total one-time costs (including initial sampling, permit development, and application fees) would be approximately \$2,600 with annual monitoring costs of approximately \$1,900. If a facility has to implement best management practices, the total capital, sampling, and permit costs would be approximately \$4,400 to \$29,600 with annual monitoring and O&M costs (for best management practice equipment) of approximately \$3,200 to \$6,500. This last annual range could increase if capital expenditures for best management practice equipment was financed over several years.

In addition to closing the well, if the facility continues operations, it will have to continue to handle the generated waste. The agency estimates that the majority of urban facilities are also tied into sewer systems, which could be used to dispose of waste, depending on the waste stream. Fewer rural sites would have access to sewers and would have to rely on other options. Other alternatives to dispose of waste would include sending the waste offsite to a publicly-owned treatment works facility, an industrial/commercial wastewater treatment facility, or to a recycler. There will be monthly or annual costs associated with these options; however, the agency does not have an estimate at this time. The overall fiscal impact to individuals and businesses will depend on the number of affected injection wells that are closed or permitted due to implementation of the proposed amendments.

#### SMALL AND MICRO-BUSINESS ASSESSMENT

There will be adverse economic effects, which are not anticipated to be significant, to small or micro-business as a result of the implementation of the proposed amendments. The construction of new large capacity cesspools and motor vehicle waste disposal wells are banned by the federal rules as of April 5, 2000. The construction of large capacity cesspools in Texas has been banned since at least 1997. The proposed amendments will require operators of existing motor vehicle waste disposal wells that are located in groundwater protection areas to obtain a permit or close the facility by no later than January 1, 2005, and January 1, 2007 for all remaining motor vehicle waste disposal wells located outside of groundwater protection areas. The agency is in the process of determining the location of groundwater protection areas in Texas.

Large capacity cesspools are drywells that receive untreated sanitary waste, and which sometimes have an open bottom and/or perforated sides. The UIC requirements do not apply to single-family residential cesspools or to non-residential cesspools that receive solely sanitary waste and have the capacity to serve fewer than 20 persons (receive 5,000 gallons a day or less). Motor vehicle waste disposal wells are wells or subsurface fluid distribution systems that receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop; automotive repair shop; new and used car dealerships; aviation, marine, and rail repair facilities; specialty repair shops (such as transmission and muffler repair shops); or any facility that does any vehicular repair work.

The commission estimates that the majority of Class V Injection wells located in Texas will be owned and operated by small or micro-businesses. Data presented in the referenced EPA report indicates that approximately 98% of all owners and operators of Class V Injection wells affected by the proposed amendments are small or micro-businesses. The total number of wells affected by this rulemaking is undetermined at this time because none have been inventoried (registered) as required by existing rules. Because large capacity cesspools have been banned in Texas, the commission estimates that the number of cesspools affected by the proposed amendments will be fairly low. Any small or micro-business that owns and operates a facility that conducts vehicle maintenance may possibly be affected by the proposed amendments. Although the total number is unknown, the commission estimates there will be a few small or micro-businesses that have operational wells affected by the proposed amendments.

The EPA conducted an economic analysis of the federal rules and published the findings in the November 19, 1999, report titled "Economic Analysis for Final Rule: Revision to the Underground

Injection Control Regulations for Class V Injection Wells.” Based on the EPA report, the annual cost to individuals and businesses would be approximately \$3,700 to close a large capacity cesspool, and \$4,300 to \$11,400 to close a motor vehicle waste disposal well, depending on the waste stream in the well.

If a facility qualified for a permit, the total costs to receive the permit would depend on whether best management practices have to be implemented to meet required environmental standards. If a facility meets environmental standards, the total one-time costs (including initial sampling, permit development, and application fees) would be approximately \$2,600 with annual monitoring costs of approximately \$1,900. If a facility has to implement best management practices, the total capital, sampling, and permit costs would be approximately \$4,400 to \$29,600 with annual monitoring and O&M costs (for best management practice equipment) of approximately \$3,200 to \$6,500. This last annual range could increase if capital expenditures for best management practice equipment was financed over several years.

In addition to closing the well, if the facility continues operations, it will have to continue to handle the generated waste. The agency estimates that the majority of urban facilities are also tied into sewer systems, which could be used to dispose of waste, depending on the waste stream. Fewer rural sites would have access to sewers and would have to rely on other options. Other alternatives to dispose of waste would include sending the waste offsite to a publicly-owned treatment works facility, an industrial/commercial wastewater treatment facility, or to a recycler. There will be monthly or annual costs associated with these options; however, the agency does not have an estimate at this time. The

overall fiscal impact to small and micro-businesses will depend on the number of affected injection wells that are closed or permitted due to implementation of the proposed amendments.

#### DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the proposed rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to §2001.0225 because it does not meet the definition of a “major environmental rule” as defined in the act. “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. Although the intent of the rules is to protect the environment or reduce risks to human health from environmental exposure, the rules will not have a material adverse impact on the economy because the primary purpose of the proposed rules address groundwater contamination from large capacity cesspools and motor vehicle waste disposal wells.

Large capacity cesspools have already been banned in the state and the commission has no inventory of registered motor vehicle waste disposal wells. Furthermore, the rulemaking does not meet any of the four applicability requirements listed in §2001.0225(a). Section 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 does not exceed a standard set by federal law, an express requirement of state law, a requirement of a delegation agreement, nor adopt a rule solely under the general powers of the agency.

Chapter 27 of the TWC authorizes the commission to regulate injection wells and §27.019 authorizes the commission to adopt rules reasonably required for the regulation of injection wells. Section 330h(b)(1) of the federal SDWA requires that the EPA promulgate regulations for state underground injection programs containing minimum requirements for effective programs to prevent underground injection which endangers drinking water sources. The commission believes that the proposed rules do not exceed standards set by federal law. New federal requirements ban all new motor vehicle waste disposal wells and require existing motor vehicle waste disposal wells in groundwater protection areas or other sensitive groundwater areas to close or obtain a permit. The new federal requirement found in 40 CFR §144.87(c) provides: “States may also delineate other sensitive groundwater areas by January 1, 2004... If a state or EPA region fails to identify these additional sensitive groundwater areas by January 1, 2004, the new requirements of this rule will apply to all motor vehicle waste disposal wells in the state effective January 1, 2007....” Because the commission is choosing not to identify other sensitive groundwater protection areas, the requirements applicable to existing motor vehicle waste disposal wells must be implemented statewide by January 1, 2007. Under the proposed rules, all large capacity cesspools and new motor vehicle waste disposal wells are banned. Owners or operators of existing motor vehicle waste disposal wells must close the wells or apply for a permit.

The commission believes that the proposed rules do not exceed an express requirement of state law. Requirements for injection wells are found in Chapter 27 of the TWC. Section 27.003 of the TWC provides that: "It is the policy of this state and the purpose of this chapter to maintain the quality of fresh water in the state to the extent consistent with the public health and welfare, the operation of existing industries, and the economic development of the state, to prevent underground injection that may pollute fresh water, and to require the use of all reasonable methods to implement this policy." However, Chapter 27 of the TWC does not provide specific standards or requirements for large capacity cesspools or motor vehicle waste disposal wells. Therefore, the commission does not believe that an express requirement of state law has been exceeded in the proposed rules.

The commission has also determined that the proposed rules do not exceed a requirement of a delegation agreement or contract between the state and an agency of the federal government. The State of Texas has been delegated authority to administer the UIC program in the state by the EPA pursuant to the federal SDWA. The SDWA requires the EPA to promulgate minimum requirements for effective state UIC programs that prevent underground injection which endangers drinking water sources. The commission believes that the proposed rules do not exceed the new federal requirements for large capacity cesspools or motor vehicle waste disposal wells, nor exceed the requirements in the delegation agreement with the EPA for state authorization of the UIC program.

The commission also believes that these rules are proposed under specific authority of the Injection Well Act, Chapter 27 of the TWC. Section 27.003 requires the use of all reasonable methods to implement the policy of the state to maintain the quality of fresh water in the state to the extent

consistent with the public health and welfare, the operation of existing industries, and the economic development of the state, and to prevent underground injection that may pollute fresh water. Section 27.019 requires the commission to adopt rules reasonably required for the regulation of injection wells. These proposed rules implement requirements for certain types of Class V wells to prevent underground injection that may pollute fresh water.

The commission invites public comment on the draft regulatory impact analysis determination.

#### TAKINGS IMPACT ASSESSMENT

The commission evaluated these proposed rules and performed a preliminary assessment of whether Texas Government Code, Chapter 2007 is applicable. The commission's preliminary assessment indicates that Texas Government Code, Chapter 2007 does not apply to these proposed rules because this is an action that is reasonably taken to fulfill an obligation mandated by federal law, which is exempt under Texas Government Code, §2007.003(b)(4). The State of Texas has received authorization from the EPA to administer the UIC program in Texas. The SDWA, 42 USC §300h, requires that the administrator of the EPA promulgate regulations for state underground injection programs containing minimum requirements for delegated programs to prevent underground injection which endangers drinking water sources. The proposed rulemaking will provide consistency with new federal rules for two categories of Class V wells the EPA has determined to be a source of endangerment to drinking water.

Nevertheless, the commission further evaluated these proposed rules and performed a preliminary assessment of whether these proposed rules constitute a taking under Texas Government Code, Chapter 2007. The following is a summary of that evaluation and preliminary assessment. The primary purpose of these proposed rules is to implement federal requirements for large capacity cesspools and motor vehicle waste disposal wells. The proposed rules would substantially advance this purpose by banning new motor vehicle waste disposal wells and by requiring the owners and operators of existing motor vehicle waste disposal wells to close the wells or obtain a permit from the commission.

Cesspools have already been banned in Texas.

Promulgation and enforcement of these proposed rules would be neither a statutory nor a constitutional taking of private real property. Specifically, the subject proposed regulations do not affect a landowner's rights in private real property because this rulemaking does not burden (constitutionally), 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. In other words, these rules implement federal requirements for closure of motor vehicle waste disposal wells and large capacity cesspools, but because there are no inventoried motor vehicle waste disposal wells in the state and cesspools have already been banned, there will be no burden, restriction, or limitation on the owner's right to property. Additionally, a prohibition on such disposal wells and cesspools would not reduce property value by 25%.

#### CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The executive director reviewed the proposed rulemaking and found that the rule is neither identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11, relating to Actions and Rules Subject to the Texas Coastal Management Program (CMP), nor will it affect any action or authorization identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11. Therefore, the proposed rule is not subject to the CMP.

#### PUBLIC HEARING

A public hearing on this proposal will be held in Austin on February 20, 2001 in Building F, Room 2210 at 10:00 a.m. 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 discussions will not occur during the hearing; however, an agency staff member will be available to discuss the proposal 30 minutes prior to the hearing and will answer questions before and after the hearing.

Persons with disabilities who have special communication or other accommodation needs who are planning to attend the hearing should contact the agency at (512) 239-4900. Requests should be made as far in advance as possible.

#### SUBMITTAL OF COMMENTS

Comments may be submitted to Joyce Spencer, Office of Environmental Policy, Analysis, and Assessment, MC 205, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. All

comments should reference Rule Log Number 2000-015-331-WT. Comments must be received by 5:00 p.m., March 5, 2001. For further information contact Melissa Estes, Policy and Regulation Division, (512) 239-3937.

#### STATUTORY AUTHORITY

The amendments and new section are proposed under TWC, §5.103, which provides the commission authority to adopt any rules necessary to carry out its powers and duties under this code and other laws of this state; §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and §27.019, which requires the commission to adopt rules reasonably required for the regulation of injection wells.

The proposed amendments and new section implement Chapter 27 of TWC relating to injection wells. Section 27.003 requires the use of all reasonable methods to implement the policy of the state to maintain the quality of fresh water in the state to the extent consistent with the public health and welfare, the operation of existing industries, and the economic development of the state, and to prevent underground injection that may pollute fresh water.

**SUBCHAPTER A: GENERAL PROVISIONS**

**§§331.2, 331.7 - 331.12**

**§331.2. Definitions.**

General definitions can be found in Chapter 3 of this title (relating to Definitions). The following words and terms, when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise.

(1) - (19) (No change.)

(20) **Cesspool** - A drywell that receives untreated sanitary waste containing human excreta, and which sometimes has an open bottom and/or perforated sides.

(21) [(20)] **Commercial facility** - A Class I permitted facility, where one or more commercial wells are operated.

(22) [(21)] **Commercial Underground Injection Control (UIC) Class I well facility** - Any waste management facility that accepts, for a charge, hazardous or nonhazardous industrial solid waste for disposal in a UIC Class I injection well, except a captured facility or a facility that accepts waste only from other facilities owned or effectively controlled by the same person.

(23) [(22)] **Commercial well** - A UIC Class I injection well which disposes of hazardous or nonhazardous industrial solid wastes, for a charge, except for a captured facility or a facility that accepts waste only from facilities owned or effectively controlled by the same person.

(24) [(23)] **Conductor casing or conductor pipe** - A short string of large-diameter casing used to keep the top of the wellbore open during drilling operations.

(25) [(24)] **Cone of influence** - The potentiometric surface area around the injection well within which increased injection zone pressures caused by injection of wastes would be sufficient to drive fluids into an underground source of drinking water (USDW) or freshwater aquifer.

(26) [(25)] **Confining zone** - A part of a formation, a formation, or group of formations between the injection zone and the lowermost USDW or freshwater aquifer that acts as a barrier to the movement of fluids out of the injection zone.

(27) [(26)] **Contaminant** - Any physical, biological, chemical or radiological substance or matter in water.

(28) [(27)] **Control parameter** - Any chemical constituent of groundwater monitored on a routine basis used to detect or confirm the presence of mining solutions in a designated monitor well.

(29) [(28)] **Disposal well** - A well that is used for the disposal of waste into a subsurface stratum.

(30) [(29)] **Disturbed salt zone** - Zone of salt enveloping a salt cavern, typified by increased values of permeability or other induced anomalous conditions relative to undisturbed salt which lies more distant from the salt cavern, and is the result of mining activities during salt cavern development and which may vary in extent through all phases of a cavern including the post-closure phase.

(31) [(30)] **Drilling mud** - A heavy suspension used in drilling an injection well, introduced down the drill pipe and through the drill bit.

(32) **Drywell** - A well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.

(33) [(31)] **Excursion** - The movement of mining solutions into a designated monitor well.

(34) [(32)] **Existing injection well** - A Class I well which was authorized by an approved state or EPA-administered program before August 25, 1988 or a well which has become a

Class I well as a result of a change in the definition of the injected waste which would render the waste hazardous under §335.1 of this title (relating to Definitions).

(35) [(33)] **Fluid** - Material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.

(36) [(34)] **Formation** - A body of rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.

(37) [(35)] **Formation fluid** - Fluid present in a formation under natural conditions.

(38) [(36)] **Fresh water** - Water having bacteriological, physical, and chemical properties which make it suitable and feasible for beneficial use for any lawful purpose.

(A) For the purposes of this subchapter, it will be presumed that water is suitable and feasible for beneficial use for any lawful purpose only if:

(i) it is used as drinking water for human consumption; or

(ii) the ground water contains fewer than 10,000 mg/l total dissolved

solids; and

(iii) it is not an exempted aquifer.

(B) This presumption may be rebutted upon a showing by the executive director or an affected person that water containing greater than or equal to 10,000 mg/l total dissolved solids can be put to a beneficial use.

(39) [(37)] **Groundwater** - Water below the land surface in a zone of saturation.

(40) **Groundwater protection area** - A geographic area (delineated by the state under the Safe Drinking Water Act, 42 United States Code §300j-13) near and/or surrounding community and non-transient, non-community water systems that use groundwater as a source of drinking water.

(41) [(38)] **Hazardous waste** - Hazardous waste as defined in §335.1 of this title.

(42) **Improved sinkhole** - A naturally occurring karst depression or other natural crevice found in carbonate rocks, volcanic terrain, and other geologic settings which has been modified by man for the purpose of directing and emplacing fluids into the subsurface.

(43) [(39)] **Injection interval** - That part of the injection zone in which the well is authorized to be screened, perforated, or in which the waste is otherwise authorized to be directly emplaced.

(44) [(40)] **Injection operations** - The surface storage or subsurface emplacement of fluids occurring in connection with an injection well or wells, other than that occurring solely for construction or initial testing.

(45) [(41)] **Injection well** - A well into which fluids are being injected.

(46) [(42)] **Injection zone** - A formation, a group of formations, or part of a formation that receives fluid through a well.

(47) [(43)] **In service** - The operational status when an authorized injection well is capable of injecting fluids, including times when the well is shut-in and on standby status.

(48) [(44)] **Intermediate casing** - A string of casing with diameter intermediate between that of the surface casing and that of the smaller long-string or production casing, and which is set and cemented in a well after installation of the surface casing and prior to installation of the long-string or production casing.

(49) **Large capacity cesspool** - A cesspool that is designed for a flow of greater than 5,000 gallons per day.

(50) **Large capacity septic system** - A septic system that is designed for a flow of greater than 5,000 gallons per day.

(51) [(45)] **Liner** - An additional casing string typically set and cemented inside the long string casing and occasionally used to extend from base of the long string casing to or through the injection zone.

(52) [(46)] **Long string casing or production casing** - A string of casing that is set inside the surface casing and that usually extends to or through the injection zone.

(53) [(47)] **Lost circulation zone** - A term applicable to rotary drilling of wells to indicate a subsurface zone which is penetrated by a wellbore, and which is characterized by rock of high porosity and permeability, into which drilling fluids flow from the wellbore to the degree that the circulation of drilling fluids from the bit back to ground surface is disrupted or "lost."

(54) [(48)] **Mine area** - The area defined by a line through the ring of designated monitor wells installed to monitor the production zone.

(55) [(49)] **Mine plan** - A map of proposed mine areas and an estimated schedule indicating the sequence and timetable for mining and any required aquifer restoration.

(56) [(50)] **Monitor well** - Any well used for the sampling or measurement of any chemical or physical property of subsurface strata or their contained fluids.

(A) Designated monitor wells are those listed in the production area authorization for which routine water quality sampling is required.

(B) Secondary monitor wells are those wells in addition to designated monitor wells, used to delineate the horizontal and vertical extent of mining solutions.

(C) Pond monitor wells are wells used in the subsurface surveillance system near ponds or other surface facilities.

(57) Motor vehicle waste disposal well - A well used for the disposal of fluids from vehicular repair or maintenance activities, including, but not limited to, repair and maintenance facilities for cars, trucks, motorcycles, boats, railroad locomotives, and airplanes.

(58) [(51)] New injection well - Any well, or group of wells not an existing injection well.

(59) [(52)] New waste stream - A waste stream not permitted.

(60) [(53)] Non-commercial facility - A Class I permitted facility which operates only non-commercial wells.

(61) [(54)] **Non-commercial UIC Class I well facility** - A UIC Class I permitted facility where only non-commercial wells are operated.

(62) [(55)] **Non-commercial well** - A UIC Class I injection well which disposes of wastes that are generated on-site, at a captured facility or from other facilities owned or effectively controlled by the same person.

(63) [(56)] **Off-site** - Property which cannot be characterized as on-site.

(64) [(57)] **On-site** - The same or geographically contiguous property which may be divided by public or private rights-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing, as opposed to going along, the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way which the owner controls and to which the public does not have access, is also considered on-site property.

(65) [(58)] **Out of service** - The operational status when a well is not authorized to inject fluids, or the well itself is incapable of injecting fluids for mechanical reasons, maintenance operations, or well workovers or when injection is prohibited due to the well's inability to comply with the in-service operating standards of this chapter.

(66) [(59)] **Permit area** - The area owned or under lease by the permittee which may include buffer areas, mine areas, and production areas.

(67) [(60)] **Plugging** - The act or process of stopping the flow of water, oil, or gas into or out of a formation through a borehole or well penetrating that formation.

(68) **Point of injection** - For a Class V well, the last accessible sampling point prior to fluids being released into the subsurface environment.

(69) [(61)] **Pollution** - The contamination of water or the alteration of the physical, chemical, or biological quality of water:

(A) that makes it harmful, detrimental or injurious:

(i) to humans, animal life, vegetation, or property; or

(ii) to public health, safety, or welfare; or,

(B) that impairs the usefulness or the public enjoyment of the water for any lawful and reasonable purpose.

(70) [(62)] **Pre-Injection facilities** - The on-site above-ground appurtenances, structures, equipment, and other fixtures that are or will be used for storage, processing, or in conjunction with an injection operation.

(71) [(63)] **Production area** - The area defined by a line generally through the outer perimeter of injection and recovery wells used for mining.

(72) [(64)] **Production area authorization** - A document, issued under the terms of an injection well permit, approving the initiation of mining activities in a specified production area within a permit area.

(73) [(65)] **Production zone** - The stratigraphic interval extending vertically from the shallowest to the deepest stratum into which mining solutions are authorized to be introduced.

(74) [(66)] **Radioactive waste** - Any waste which contains radioactive material in concentrations which exceed those listed in 10 Code of Federal Regulations (CFR) Part 20, Appendix B, Table II, Column 2 and as amended.

(75) [(67)] **Restoration demonstration** - A test or tests conducted by a permittee to simulate production and restoration conditions and verify or modify the fluid handling values submitted in the permit application.

(76) [(68)] **Restored aquifer** - An aquifer whose local groundwater quality has, by natural or artificial processes, returned to levels consistent with restoration table values or better as verified by an approved sampling program.

(77) [(69)] **Salt cavern** - A hollowed-out void space that has been purposefully constructed within a salt stock, typically by means of solution mining by circulation of water from a well or wells connected to the surface.

(78) [(70)] **Salt cavern confining zone** - A zone between the salt cavern injection zone and all USDWs and freshwater aquifers, that acts as a barrier to movement of waste out of a salt cavern injection zone, and consists of the entirety of the salt stock excluding any portion of the salt stock designated as a UIC Class I salt cavern injection zone or any portion of the salt stock occupied by a UIC Class II or Class III salt cavern or its disturbed salt zone.

(79) [(71)] **Salt cavern injection interval** - That part of a salt cavern injection zone consisting of the void space of the salt cavern into which waste is stored or disposed of, or which is capable of receiving waste for storage or disposal.

(80) [(72)] **Salt cavern injection zone** - The void space of a salt cavern that receives waste through a well, plus that portion of the salt stock enveloping the salt cavern, and extending from the boundaries of the cavern void outward a sufficient thickness to contain the disturbed salt zone, and an additional thickness of undisturbed salt sufficient to ensure that adequate separation exists between the outer limits of the injection zone and any other activities in the domal area.

(81) [(73)] **Salt cavern solid waste disposal well or salt cavern disposal well** - For the purposes of this chapter relating to Underground Injection Control, regulations of the commission,

and not to UIC Class II or UIC Class III wells in salt caverns regulated by the Texas Railroad Commission, a salt cavern disposal well is a type of UIC Class I injection well used:

(A) to solution mine a waste storage or disposal cavern in naturally occurring salt; and/or

(B) to inject hazardous, industrial, or municipal waste into a salt cavern for the purpose of storage or disposal of the waste.

(82) [(74)] **Salt dome** - A geologic structure that includes the caprock, salt stock, and deformed strata surrounding the salt stock.

(83) [(75)] **Salt stock** - A geologic formation consisting of a relatively homogeneous mixture of evaporite minerals dominated by halite (NaCl) that has migrated from originally tabular beds into a vertical orientation.

(84) **Sanitary waste** - Liquid or solid waste originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses, and utensils are cleaned.

(85) **Septic system** - A well that is used to emplace sanitary waste below the surface, and is typically composed of a septic tank and subsurface fluid distribution system or disposal system.

(86) [(76)] **Stratum** - A sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock or material.

(87) **Subsurface fluid distribution system** - An assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground.

(88) [(77)] **Surface casing** - The first string of casing (after the conductor casing, if any) that is set in a well.

(89) **Temporary injection point** - A method of Class V injection that uses push point technology (injection probes pushed into the ground) for the one-time injection of fluids into or above a USDW.

(90) [(78)] **Total dissolved solids (TDS)** - The total dissolved (filterable) solids as determined by use of the method specified in 40 CFR Part 136, as amended.

(91) [(79)] **Transmissive fault or fracture** - A fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations.

(92) [(80)] **Underground injection** - The subsurface emplacement of fluids through a well.

(93) [(81)] **Underground injection control (UIC)** - The program under the federal Safe Drinking Water Act, Part C, including the approved Texas state program.

(94) [(82)] **Underground source of drinking water (USDW)** - An "aquifer" or its portions:

(A) which supplies drinking water for human consumption; or

(B) in which the groundwater contains fewer than 10,000 mg/l total dissolved solids; and

(C) which is not an exempted aquifer.

(95) [(83)] **Upper limit** - A parameter value established by the commission in a permit/production area authorization which when exceeded indicates mining solutions may be present in designated monitor wells.

(96) [(84)] **Verifying analysis** - A second sampling and analysis of control parameters for the purpose of confirming a routine sample analysis which indicated an increase in any control parameter to a level exceeding the upper limit. Mining solutions are assumed to be present in a

designated monitor well if a verifying analysis confirms that any control parameter in a designated monitor well is present in concentration equal to or greater than the upper limit value.

(97) [85] Well - A bored, drilled, or driven shaft whose depth is greater than the largest surface dimension, a dug hole whose depth is greater than the largest surface dimension, an improved sinkhole, or a subsurface fluid distribution system[, or an artificial opening in the ground made by digging, jetting, or some other method, where the depth of the opening is greater than its largest surface dimension,] but does not include any surface pit, surface excavation, or natural depression.

(98) Well injection - The subsurface emplacement of fluids through a well.

(99) [(86)] Well monitoring - The measurement by on-site instruments or laboratory methods of any chemical, physical, radiological, or biological property of the subsurface strata or their contained fluids penetrated by the wellbore.

(100) [(87)] Well stimulation - Several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for wastewater to move more readily into the formation, including, but not limited to surging, jetting, blasting, acidizing, and hydraulic fracturing.

(101) [(88)] **Workover** - An operation in which a down-hole component of a well is repaired, the engineering design of the well is changed, or the mechanical integrity of the well is compromised. Workovers include operations such as sidetracking, the addition of perforations within the permitted injection interval, and the addition of liners or patches. For the purposes of this chapter, workovers do not include well stimulation operations.

**§331.7. Permit Required.**

(a) - (b) (No change.)

(c) Large capacity septic systems or septic systems which accept industrial waste shall obtain a wastewater discharge permit in accordance with Texas Water Code, Chapter 26 and Chapter 305 of this title (relating to Consolidated Permits).

**§331.8. Prohibition of Motor Vehicle Waste Disposal Wells and Large Capacity Cesspools.**

(a) The construction of new motor vehicle waste disposal wells and large capacity cesspools is prohibited.

(b) The owner or operator of a motor vehicle waste disposal well in a groundwater protection area must close the well within one year after designation of the groundwater protection area, and no later than January 1, 2005, or apply for a Class V underground injection control (UIC) permit prior to the closure date.

(1) The owner or operator of a motor vehicle waste disposal well located in a groundwater protection area may be granted an extension to the closure deadline by the executive director for up to one year if the most efficient compliance option for the well is connection to a sanitary sewer or installation of new treatment technology.

(2) To continue operating during the extension period, the owner or operator must ensure that the injectate meets primary maximum contaminant levels for drinking water and other health-based standards at the point of injection.

(c) The owner or operator of a motor vehicle waste disposal well in any area of the state other than a groundwater protection area, must close the well by January 1, 2007; apply for a Class V UIC permit from the executive director under §331.137 of this title (relating to Class V Well Permit), prior to the closure date; or convert the well in accordance with §331.12 of this title (relating to Conversion of Wells) so that it is not receiving motor vehicle waste.

(d) The owner or operator of an existing motor vehicle waste disposal well must close the well in accordance with closure standards specified in §331.136 of this title (relating to Closure Standards for Motor Vehicle Waste Disposal Wells, Large Capacity Septic Systems, Large Capacity Cesspools, and Drywells).

**§331.9. Injection Authorized by Rule.**

(a) Plugging and abandonment of a well authorized by rule at any time after January 1, 1982, shall be accomplished in accordance with the standards of §331.46 of this title (relating to Closure Standards). Class V wells shall be closed according to standards under §331.133 of this title (relating to Closure Standards for Vertically Completed Injection Wells). Large capacity septic systems, large capacity cesspools, and subsurface fluid distribution systems shall be closed according to standards under §331.136 of this title (relating to Closure Standards for Motor Vehicle Waste Disposal Wells, Large Capacity Septic Systems, Large Capacity Cesspools and Drywells).

(b) Injection into Class V wells, unless otherwise provided, is authorized by virtue of this rule. Injection into [new] Class V wells used for the disposal of greater than [over] 5,000 [1,000] gallons per day of sewage or sewage effluent must be authorized by a wastewater discharge permit from the commission under Chapter 305 of this title (relating to Consolidated Permits) before operations begin.

(1) - (2) (No change.)

(c) - (d) (No change.)

**§331.10. Inventory of Wells Authorized by Rule.**

(a) Within one year after January 1, 1982, or prior to construction, the owner or operator [, operator, and driller] of an injection well facility shall submit to the executive director an inventory for each facility containing:

(1) - (5) (No change.)

(b) Drillers of closed loop and air conditioning return flow injection wells authorized by rule shall [may] inventory wells after construction by submitting [submission of] the [a] form [to be] provided by the executive director.

(c) (No change.)

(d) Owners or operators of all Class V wells, with the exception of closed loop and air conditioning return flow wells, shall submit the inventory information required under subsection (a) of this section for review, modification, and approval by the executive director. The owner or operator of a Class V well must obtain approval from the executive director prior to construction, conversion, or operation of the well.

(e) Owners and operators of subsurface fluid distribution systems and improved sinkholes in existence on the effective date of this rule must submit the inventory information for these Class V

wells to the executive director within one year of the effective date of these rules. Owners and operators of new subsurface fluid distribution systems and improved sinkholes must submit inventory information as required under subsection (d) of this section.

**§331.11. Classification of Injection Wells.**

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

(1) Class I:

(A) (No change.)

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

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

(2) - (3) (No change.)

(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. [Class V wells are injection wells within the jurisdiction of the commission, but are not included in Classes I, III, or IV. Class V wells include, but are not limited to:] Class V wells used for in situ combustion of fossil fuels, recovery of geothermal energy to produce electricity, and geothermal wells used in heating and aquaculture are within the jurisdiction of the Railroad Commission of Texas; all other Class V injection wells are within the jurisdiction of the commission and include, but are not limited to:

(A) - (B) (No change.)

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

(D) - (I) (No change.)

(J) septic system wells vertically completed and used:

(i) to inject greater than 5,000 gallons per day of waste or effluent from a multiple dwelling, business establishment, community, or regional business establishment [septic tank]; or

(ii) to inject greater than 5,000 gallons per day of waste or effluent from [for] a multiple dwelling, community, or regional cesspool;

(K) 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; [and]

(L) aquifer storage wells used for the injection of water for storage and subsequent retrieval for beneficial use; [.]

(M) 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;

(N) improved sinkholes; and

(O) 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.

(b) - (c) (No change.)

**§331.12. Conversion of Wells.**

(a) Persons utilizing wells authorized by permit, rule, or otherwise, who wish to convert the well from its authorized purpose to a new or additional purpose must first obtain the appropriate approval described in paragraphs (1) - ~~(4)~~ [(3)] of this section. [:]

(1) - (3) (No change.)

(4) Prior to converting a Class V motor vehicle waste disposal well, the owner or operator must inventory the well with the executive director under §331.10 of this title (relating to Inventory of Wells Authorized by Rule) and comply with the conversion requirements under subsection (c) of this section.

(b) (No change.)

(c) In limited cases, the executive director may authorize the conversion of a motor vehicle waste disposal well to another type of Class V well.

(1) The use of a semi-permanent plug as the means to segregate waste is not sufficient to convert a motor vehicle waste disposal well to another type of Class V well.

(2) The executive director may approve the conversion only if:

(A) the well is inventoried with the executive director under §331.10 of this title;

(B) all motor vehicle fluids are segregated by physical barriers and are not allowed to enter the well; and

(C) injection of motor vehicle waste is unlikely based on a facility's compliance history and records showing proper waste disposal.

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

**§331.82**

**STATUTORY AUTHORITY**

The amendment is proposed under Texas Water Code (TWC), §5.103, which provides the commission authority to adopt any rules necessary to carry out its powers and duties under this code and other laws of this state; §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and §27.019, which requires the commission to adopt rules reasonably required for the regulation of injection wells.

The proposed amendment implements Chapter 27 of TWC, relating to injection wells. Section 27.003 requires the use of all reasonable methods to implement the policy of the state to maintain the quality of fresh water in the state to the extent consistent with the public health and welfare, the operation of existing industries, and the economic development of the state, and to prevent underground injection that may pollute fresh water.

**§331.82. Construction Requirements.**

- (a) (No change.)

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

(c) - (f) (No change.)

(g) Monitor well location. Where injection is into a formation which contains water with less than 10,000 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 [commission].

(h) - (i) (No change.)

## **SUBCHAPTER H: STANDARDS FOR CLASS V WELLS**

### **§§331.131 - 331.133, 331.135, 331.136, 331.137, 331.138**

#### **STATUTORY AUTHORITY**

The amendments and new sections are proposed under Texas Water Code (TWC), §5.103, which provides the commission authority to adopt any rules necessary to carry out its powers and duties under this code and other laws of this state; §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; and §27.019, which requires the commission to adopt rules reasonably required for the regulation of injection wells.

The proposed amendments and new sections implement Chapter 27 of TWC, relating to injection wells. Section 27.003 requires the use of all reasonable methods to implement the policy of the state to maintain the quality of fresh water in the state to the extent consistent with the public health and welfare, the operation of existing industries, and the economic development of the state, and to prevent underground injection that may pollute fresh water.

#### **§331.131. Applicability.**

The sections of this subchapter apply to all [new] 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.

**§331.132. Construction Standards.**

(a) All Class V wells shall be completed in accordance with the specifications contained in this section, unless otherwise authorized by the executive director, [ , and] Injection wells listed in Texas Water Code, §32.001(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 of Wells Authorized by Rule) shall be submitted to the executive director for review and approval prior to construction. For large capacity septic systems 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, and air conditioning return flow wells, the Texas Department of Licensing and Regulation [Regulation's] state well report form shall be [completed and] submitted to the executive director within 30 days from the date the well construction is completed.

(3) (No change.)

(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 (USDW).

(c) (No change.)

(d) Surface completion.

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

(A) - (B) (No change.)

(2) - (3) (No change.)

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

(e) - (g) (No change.)

(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 Vertically Completed Injection Wells.**

(a) It is the responsibility of the owner [and/] or operator to close [plug or have plugged], under standards set forth in this section, a Class V well which is to be permanently discontinued or abandoned. The well must be closed in a manner that complies with 40 Code of Federal Regulations §144.12 (prohibition of movement of fluid into underground sources of drinking water, effective June 2, 1987). 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) - (d) (No change.)

(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.

**§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 other health-based standards is prohibited.

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

(a) The owner or operator of a Class V motor vehicle waste disposal well, large capacity septic system, large capacity cesspool, 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 shall submit a preclosure notice on a form provided by the executive director no later than 30 days prior to closure.

(c) The owner or operator of a large capacity cesspool 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 §331.46 of this title (relating to Closure Standards), and 40 Code of Federal Regulations §144.12 (prohibition of movement of fluid into underground sources of drinking water, effective June 2, 1987);

(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.

**§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 shall demonstrate that fluids released through the well will meet the primary maximum contaminant levels (MCLs) for drinking water, 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 shall 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 shall be required to 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 in order to demonstrate compliance with the primary MCLs for drinking water.

**§331.138. Monitoring Requirements for Motor Vehicle Waste Disposal Wells.**

Owners or operators of Class V motor vehicle waste disposal wells are required to characterize the quality of the injectate and any sludge, and monitor for the characterized wastes using the following criteria.

(1) If liquid from the sludge has chemical concentrations below the primary maximum contaminant levels (MCLs) for drinking water, the owner or operator will analyze the injectate quarterly for the first three years of operation after receipt of a permit, and then analyze the injectate annually if the injectate is consistently below the MCLs.

(2) The owner or operator is required to analyze the sludge annually.

(3) If the injectate is below the primary MCLs for drinking water but liquid from the sludge is above the MCLs, then the owner or operator will be required to follow the same monitoring requirements as required in paragraphs (1) and (2) of this section, and pump and properly dispose of the sludge.

(4) If the injectate is above the primary MCLs for drinking water and the liquid from the sludge is above the MCLs, then the owner or operator shall:

(A) install treatment techniques to comply with requirements in the Class V permit to meet primary MCLs for drinking water and other health-based standards at the point of injection;

(B) pump and properly dispose of the sludge;

(C) analyze the injectate quarterly for the first three years of operation after receipt of a permit, and then analyze injectate annually if the injectate consistently below the primary MCLs for drinking water;

(D) perform annual sampling of the sludge; and

(E) follow all other requirements established by the executive director to protect underground sources of drinking water.

