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Sequence Number: 02-14-10  
Rule ID(s): 4622  
File Date: 02/17/2010  
Effective Date: 05/18/2010

# Rulemaking Hearing Rule(s) Filing Form

*Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing. TCA Section 4-5-205*

|                                 |  |
|---------------------------------|--|
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**Revision Type (check all that apply):**

- Amendment  
 New  
 Repeal

**Rule(s) Revised (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables.)**

| Chapter Number | Chapter Title  |
|----------------|--|
| 1200-04-06     | Underground Injection Control                                      |
| Rule Number    | Rule Title   |
| 1200-04-06-.02 | Definitions  |
| 1200-04-06-.03 | Injection Prohibited   |
| 1200-04-06-.04 | Prevention Of Pollution Of Ground Water                            |
| 1200-04-06-.06 | Classification Of Injection Wells                                  |
| 1200-04-06-.07 | Permit Required  |
| 1200-04-06-.08 | Authorization By Permit For Injection Wells Not Authorized By Rule |
| 1200-04-06-.09 | General Standards And Methods                                      |
| 1200-04-06-.10 | Class I Wells  |
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| 1200-04-06-.13 | Class IV Wells   |
| 1200-04-06-.14 | Class V Wells  |
| 1200-04-06-.16 | Fees For Class II Injection Wells                                  |
| 1200-04-06-.18 | Fees For Class V Injection Wells                                   |

(Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to <http://state.tn.us/sos/rules/1360/1360.htm>)

Chapter 1200-04-06  
Underground Injection Control

Amendments

The Table of Contents to Chapter 1200-04-06 Underground Injection Control shall be amended by changing the title of Rule 1200-04-06-.02 from "Definitions" to "General" and the title of Rule 1200-04-06-.04 from "Prevention Of Pollution Of Ground Water" to "Prevention Of Pollution Of Ground Water and Identification of Underground Sources of Drinking Water and Exempted Aquifers".

Rule 1200-04-06-.02 Definitions is amended by deleting it in its entirety and substituting the following so that, as amended, the Rule shall read as follows:

1200-04-06-.02 General

(1) Use of Number and Gender

As used in these Rules:

- (a) Words in the masculine gender also include the feminine and neuter genders; and
- (b) Words in the singular include the plural; and
- (c) Words in the plural include the singular.

(2) Rule Structure

These Rules are organized, numbered, and referenced according to the following outline form:

- (1) paragraph
  - (a) subparagraph
    - 1. part
      - (i) subpart
        - (l) item
          - I. subitem
            - A. section
              - (A) subsection

(3) Definitions

For the purposes of the Underground Injection Control program established in this chapter, the definition of any word or phrase used in these regulations shall be the same as given in T.C.A. 69-3-103 except the following words or phrases shall have the following meanings:

"Aquifer" means a formation, group of formations, or part of a formation that contains a sufficient quantity of permeable material to yield significant quantities of water for wells and springs.

"Area of Review" (AOR) means the area surrounding an injection well described according to the criteria set forth in Rule 1200-04-06-.09(3) or in the case of an area permit, the project area plus a circumscribing

area the width of which is either a mile or a number calculated according to the criteria set forth in the formula for injection well AOR.

“Casing” means a tubular retaining structure which is installed in an excavated hole to maintain the well opening.

“Cementing” means the act of employing cementitious material in the annulus behind the well casing.

“Cesspool” means a drywell that receives untreated sanitary waste containing human excreta, and which sometimes has an open bottom and/or perforated sides.

“Commissioner” means the Commissioner of environment and conservation or the commissioner’s duly authorized representative and, in the event of the commissioner’s absence or a vacancy in the office of commissioner, the deputy commissioner.

“Compatibility” means substances capable of being mixed or existing together.

“Composite sample” means a mixture of grab samples collected at the same sampling point at different times.

“Confining unit or zone” means a geological formation, group of formations, or part of a formation that limits fluid movement from an injection zone.

“Confining bed” means a layer of distinctly less permeable material stratigraphically adjacent to one or more aquifers.

“Contamination” means the addition of any substance or matter to water.

“Draft permit” means a document prepared under Rule 1200-04-06-.08(7) indicating the Commissioner’s tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a “permit.” A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in Rule 1200-04-06-.08(9) are types of “draft permits.” A denial of a request for modification, revocation and reissuance, or termination, as discussed in Rule 1200-04-06-.08(9) is not a “draft permit.”

“Drilling mud” means a heavy suspension used in drilling an “injection well,” introduced down the drill pipe and through the drill bit.

“Drywell” means 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.

“Enhanced recovery” means increased recovery from a pool achieved by artificial means or by the application of energy extrinsic to the pool.

“Emergency permit” means a UIC “permit” issued in accordance with Rule 1200-04-06-.07(8).

“Environmental Protection Agency” (“EPA”) means the United States Environmental Protection Agency.

“EPA” means the United States Environmental Protection Agency.

“Exempted aquifer” means an “aquifer” or its portion that meets the criteria in the definition of “underground source of drinking water” but which has been exempted according to the procedures in Rule 1200-04-06-.04.

“Existing injection well” means an “injection well” that began injection of fluids into the subsurface prior to the effective date of this rule.

“Facility or activity” means any waste facility or activity (including land or appurtenance thereto) that is subject to regulation under the Tennessee Solid Waste Disposal Act, the Tennessee Hazardous Water Management Act, the Tennessee Water Quality Control Act or the Tennessee Safe Drinking Water Act.

“Fluids” means materials or substances that flow or move whether semi-solid, liquid, sludge, gas or any other form or state.

“Formation” means a body or stratum of rock characterized by a degree of lithologic homogeneity and is mappable on the earth’s surface or traceable in the subsurface.

“Formation fluid” means “fluid” present in a “formation” under natural conditions as opposed to fluids introduced into a formation by injection or emplacement by man. This term is synonymous with “native water.”

“Grab sample” means a sample collected at a particular time and place that represents the composition of the source at that time and place.

“Ground water” means water below the land surface and free to move under the influence of gravity.

“Grout” means a fluid mixture of cement and water or other cementitious material of a consistency that can be forced through a pipe under hydraulic pressure.

“Hazardous waste” means a hazardous waste as defined by rule 1200-01-11-.02(1)(c).

“Hydrofracture” means the application of pressure sufficient to cause rupture of a subsurface formation.

“Improved Sinkhole” means a naturally occurring karst depression modified by man in such a manner that the chemical, physical, biological, radiological, or bacteriological properties of the water or fluids moving into the subsurface through it have been or will be altered.

“Infiltration cell” means an unlined man-made structure designed for the distribution of fluids into or above a “USDW.”

“Injection well” means structure or device which is used for the emplacement of fluids into a subsurface stratum including, but not limited to:

- (a) a well used for the emplacement of fluids;
- (b) a subsurface fluid distribution system;
- (c) an improved sinkhole; or
- (d) infiltration cell and any other structures or devices designed, constructed or used to emplace fluids into the subsurface, except as provided in rule 1200-04-06-.03(3); or
- (e) modified recharge point.

“Injection zone” means the formation, group of formations, or part of a formation that receives fluids through an injection well.

“Injectivity index” means the rate of injection in gallons per minute per unit of applied injection pressure in pounds per square inch.

“Innovative technology” means an experimental or unproven procedure, which has not been demonstrated to be feasible under the conditions in which it is being tested.

“Lease” means real property upon which the right to extract oil and gas or other minerals has been granted under contract for a share of the value of the production or an annual rental for a specified period.

“Mechanical integrity” means mechanically complete, performs the function for which it was intended and is unimpaired.

"Modified recharge point" means a naturally occurring karst feature that has been modified by man with a structure or in any other manner that the chemical, physical, biological, radiological or bacteriological properties of the water or fluids moving into the subsurface through it or the ground water has been or will be altered.

"New injection well" means any well that begins injection of fluids into the subsurface after August 9, 1985.

"Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the UIC program.

"Packer" means a device placed in a well to produce a fluid-tight seal in a section of the well bore or the annulus between the well casing and the inner injection tubing.

"Permit" means an authorization, license, or equivalent control document issued by EPA or the Department to implement the requirements of this rule. "Permit" includes an area permit and an emergency permit. "Permit" as used in these UIC rules means an individual permit issued under the Water Quality Control Act and does not include an authorization by rule which is a type of general permit under the Water Quality Control Act.

"Person" means an individual, association, partnership, corporation, municipality, State, Federal, or Tribal agency, or an agency or employee thereof.

"Plugging" means the act or process of stopping the flow of water, oil, or gas into or out of a formation through a bore hole or well penetrating that formation.

"Point of Injection" means the last accessible point where a sample may be collected prior to waste fluids being released into the subsurface environment through a Class V injection well.

"Pollution" means such alteration of the physical, chemical, biological, bacteriological, or radiological properties of waters of this State including but not limited to changes in temperature, taste, color, turbidity, or odor of the waters:

- (a) as will result or will likely result in harm, potential harm or detriment of the public health, safety, or welfare;
- (b) as will result or will likely result in harm, potential harm or detriment to the health of animals, birds, fish, or aquatic life;
- (c) as will render or will likely render the waters substantially less useful to domestic, municipal, industrial, agricultural, recreational, or other reasonable uses; or
- (d) as will leave or will likely leave the waters in such condition as to violate any standards of water quality established by Water Quality Control Board.

"Project" means a group of wells in a single operation.

"Produced water" means those waters produced in conjunction with the production of crude oil or natural gas and commonly collected at field storage or disposal facilities including: lease tanks, commingled tank batteries, burn pits, and community or lease wastewater disposal systems.

"Public water system" means a system for the provision of piped water for human consumption if such system has at least fifteen (15) connections or regularly serves at least twenty-five (25) individuals at least sixty (60) days out of the year.

"Radioactive material" means any material, solid, liquid, or gas, which emits radiation spontaneously.

"Radioactive waste" means any waste which contains radioactive material in concentrations which exceed those listed in Rule 1200-02-05-.161, Schedule RHS 8-30, Table II, Column 2.

"Recharge point" means a naturally occurring sinkhole or other karst feature that accepts stormwater runoff from unimproved properties.

"Regional rock deformation" means folded, faulted, sheared, compressed or extended rocks which result from various earth forces.

"Sanitary waste" means liquid or solid wastes originating solely from humans and human activities, such as wastes from toilets, showers, wash basins, cleaning, clothes washing, or food preparation, together with any waters mixed with or used to convey such wastes, and provided that the waste or water is not mixed with industrial waste.

"Schedule of compliance" means a schedule of remedial measures included in a "permit," including an enforceable sequence of interim requirements (for example: actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations."

"Septic system" means a "well" that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system.

"Sewage" means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present; (T.C.A. § 69-3-103(27)).

"Sinkhole" means a naturally occurring closed depression in a karst area characterized by inward drainage (inlets) accepting runoff from the surrounding area and having no visible surface outlet.

"Site" means the land or water area where any facility or activity is physically located or conducted including adjacent land used in connection with the facility or activity.

"Stratum" (plural strata) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.

"Subsurface fluid distribution system" (SFDS) means an assemblage of perforated pipes, drain tiles, or mechanisms intended to distribute fluids below the surface of the ground.

"Total Dissolved Solids" means a material that passes through a standard glass fiber filter disk and remains after evaporation and drying to constant weight at 180°C.

"Transferee" means the owner or operator receiving ownership and/or operational control of the well.

"Transferor" means the owner or operator transferring ownership and/or operational control of the well.

"Tremie pipe" means a device, usually small diameter pipe, that carries grouting materials to the bottom of a drill hole and allows the emplacement of the grout from the bottom up without the introduction of appreciable air pockets.

"UIC" means the Underground Injection Control program.

"Underground injection" means a "well injection."

"Underground source of drinking water" (USDW) means an aquifer or its part that:

- (a) currently supplies any public water system; or
- (b) contains a sufficient quantity of ground water to supply a public water system; and
  - 1. currently supplies drinking water for human consumption; or
  - 2. contains fewer than 10,000 mg/L total dissolved solids; and

- (c) which is not a portion of an aquifer which has been designated by the Department as an Exempted Aquifer.

“Well” means a bored, drilled, driven or dug shaft or hole whose depth is greater than the largest surface dimension or an improved sinkhole; or a subsurface fluid distribution system.

“Well injection” means the subsurface emplacement of fluids through a “well.”

Authority: T.C.A. § 69-3-105.

Paragraph (2) of Rule 1200-04-06-.03 Injection Prohibited is amended by adding the phrase “or hazardous” after the word “radioactive” such that, as amended, the paragraph shall read:

- (2) Wells may not be used for the disposal of radioactive or hazardous waste.

Subparagraph (a) of paragraph (3) of Rule 1200-04-06-.03 Injection Prohibited is amended by adding the phrase “with the capacity of” after the word “waste” such that, as amended, the subparagraph shall read:

- (a) Operation of domestic subsurface distribution systems disposing of exclusively sanitary waste with the capacity of serving less than 20 persons;

Rule 1200-04-06-.03 Injection Prohibited is further amended with the addition of paragraph (6) such that, as amended, the paragraph shall read:

- (6) After the effective date of this rule all classes of new injection wells located within Zone 1 of a community water system’s wellhead protection area as defined in Rule 1200-05-01-.34 under T.C.A. §§ 68-221-701 et seq., the Tennessee Safe Drinking Water Act are prohibited.

Authority: T.C.A. § 69-3-105.

Rule 1200-04-06-.04 Prevention of Pollution of Ground Water is amended by adding the phrase “and Identification of Underground Sources of Drinking Water and Exempted Aquifers” at the end of the title such that, as amended, the Rule title shall read:

Rule 1200-04-06-.04 Prevention of Pollution of Ground Water and Identification of Underground Sources of Drinking Water and Exempted Aquifers.

Rule 1200-04-06-.04 Prevention of Pollution of Ground Water and Identification of Underground Sources of Drinking Water and Exempted Aquifers is amended by deleting it in its entirety and replacing it with the following such that, as amended, the Rule shall read:

- (1) No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.
- (2) For Class I, II and III wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, except as authorized under this Rule, the Commissioner shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, the Commissioner may impose additional requirements by modifying the permit in accordance with Rule 1200-04-06-.08(8) or may terminate the permit in accordance with Rule 1200-04-06-.08(9). Additionally, the Commissioner may assess civil penalties for all permit or rule violations in accordance with T.C.A. § 69-3-115.
- (3) For class V wells, if at any time the Commissioner learns that a Class V well may cause a violation of primary drinking water regulations he or she shall:

- (a) Require the injector to obtain an individual permit; and/or
  - (b) Order the injector to take such actions (including, where required, closure of the injection well) as may be necessary to prevent the violation.
  - (c) Take enforcement action.
- (4) Whenever the Commissioner learns that a Class V well may be otherwise adversely affecting the health of persons, he or she may prescribe such actions as may be necessary to prevent the adverse effect, including any action authorized under paragraph (3) of this Rule and assess civil penalties in accordance with T.C.A § 69-3-115.
- (5) Notwithstanding any other provision of this rule, the Commissioner may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health of persons. The Commissioner must first determine that local authorities have not taken appropriate action to protect the health of such persons, before taking emergency action.
- (6) Identification of Underground Sources of Drinking Water
- (a) The Commissioner may identify (by narrative description, illustrations, maps, or other means) and shall protect, except where exempted under subparagraph (b) of this paragraph, as an underground source of drinking water, all aquifers or parts of aquifers which meet the definition of an "underground source of drinking water" in Rule 1200-04-06-.02. Even if an aquifer has not been specifically identified by the commissioner, it is an underground source of drinking water if it meets the definition in Rule 1200-04-06-.02.
  - (b)
    1. The Commissioner may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the Commissioner proposes to designate as exempted aquifers using the criteria in paragraph (7) of this Rule.
    2. No designation of an exempted aquifer submitted as part of a UIC Program shall be final until approved by the EPA Administrator.
    3. Subsequent to program approval or promulgation by the EPA, the Commissioner may, after notice and opportunity for a public hearing, identify additional exempted aquifers.
      - (i) Exemption of aquifers identified under subparagraph (7)(b) of this Rule shall be treated as a program revision under 40 CFR 145.32.

(Note: 40 CFR 145.32 provides that:

      - (a) Either EPA or the approved state may initiate program revision. Program revision may be necessary when the controlling federal or state statutory or regulatory authority is modified or supplemented. The state shall keep EPA fully informed of any proposed modifications to its basic statutory or regulatory authority, its forms, procedures, or priorities.
      - (b) Revision of a state program shall be accomplished as follows:
        - (1) The state shall submit a modified program description, Attorney General's statement, Memorandum of Agreement, or such other documents as EPA determines to be necessary under the circumstances.
        - (2) Whenever EPA determines that the proposed program revision is substantial, EPA shall issue public notice and provide an opportunity to comment for a period of at least 30 days. The

public notice shall be mailed to interested persons and shall be published in the Federal Register and in enough of the largest newspapers in the state to provide statewide coverage. The public notice shall summarize the proposed revisions and provide for the opportunity to request a public hearing. Such a hearing will be held if there is significant public interest based on requests received.

- (3) The Administrator shall approve or disapprove program revisions based on the requirements of this part and of the Safe Drinking Water Act.
- (4) A program revision shall become effective upon the approval of the Administrator. Notice of approval of any substantial revision shall be published in the Federal Register. Notice of approval of non-substantial program revisions may be given by a letter from the Administrator to the State Governor or his designee.)
- (ii) Exemption of aquifers identified under subparagraph (7)(c) of this Rule shall become final if the Commissioner submits the exemption in writing to the EPA Administrator and the EPA Administrator has not disapproved the designation within 45 days. Any disapproval by the EPA Administrator shall state the reasons and shall constitute final Agency action for purposes of judicial review.
- (c)
  - 1. For Class III wells, the Commissioner shall require an applicant for a permit which necessitates an aquifer exemption under part (7)(b)1 of this Rule to furnish the data necessary to demonstrate that the aquifer is expected to be mineral or hydrocarbon producing. Information contained in the mining plan for the proposed project, such as a map and general description of the mining zone, general information on the mineralogy and geochemistry of the mining zone, analysis of the amenability of the mining zone to the proposed mining method, and a time-table of planned development of the mining zone shall be considered by the Commissioner in addition to the information required.
  - 2. For Class II wells, a demonstration of commercial producibility shall be made as follows:
    - (i) For a Class II well to be used for enhanced oil recovery processes in a field or project containing aquifers from which hydrocarbons were previously produced, commercial producibility shall be presumed by the Commissioner upon a demonstration by the applicant of historical production having occurred in the project area or field; and
    - (ii) For Class II wells not located in a field or project containing aquifers from which hydrocarbons were previously produced, information such as logs, core data, formation description, formation depth, formation thickness and formation parameters such as permeability and porosity shall be considered by the Commissioner, to the extent such information is available.

## (7) Exempted Aquifers

An aquifer or a portion thereof which meets the criteria for an "underground source of drinking water" may be determined to be an "exempted aquifer" if it meets the following criteria:

- (a) It does not currently serve as a source of drinking water; and
- (b) It cannot now and will not in the future serve as a source of drinking water because:
  - 1. It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible;

2. It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;
3. It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or
4. It is located over a Class III well mining area subject to subsidence or catastrophic collapse;

or

- (c) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

Authority: T.C.A. § 69-3-105.

Paragraph (1) of Rule 1200-04-06-.06 Classification of Injection Wells is amended by adding subparagraph (c) such that, as amended, the subparagraph shall read:

- (c) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one mile of the well bore.

Paragraph (4) of Rule 1200-04-06-.06 Classification of Injection Wells is amended by adding subparagraph (c) such that, as amended, the subparagraph shall read:

- (c) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under subparagraph (1)(a) or subparagraphs (4)(a) and (b) of this rule.

Subparagraph (g) of paragraph (5) of Rule 1200-04-06-.06 Classification of Injection Wells is amended by adding the sentence "This does not allow the injection of hazardous waste into a Class V well" after the first sentence such that, as amended, the subparagraph shall read:

- (g) Injection systems associated with remedial activity. This subparagraph does not allow the injection of hazardous waste into a Class V well. Systems used to inject contaminated ground water that has been treated and is being reinjected into the same formation from which it was drawn are not prohibited by this rule if such injection is approved by state or federal agencies operating under the Tennessee Hazardous Waste Management Act, Part 1 or Part 2, T.C.A. Sections 68-212-101 et seq. or 68-212-201 et seq. or Tennessee Petroleum Underground Storage Tank Act, T.C.A. Sections 68-215-101 et seq. or Tennessee Water Quality Control Act, T.C.A. Sections 69-3-101 et seq. or Resource Conservation and Recovery Act (RCRA); 42 USC 6901-6992k or Comprehensive Environmental Response and Liability Act of 1980; 42 USC 9601-9675;

Paragraph (5) of Rule 1200-04-06-.06 Classification of Injection Wells is amended with the addition of subparagraphs (p), (q) and (r) such that, as amended, the subparagraphs shall read:

- (p) Dry wells used for the injection of wastes into a subsurface formation;
- (q) Modification of a recharge point or the area where the recharge originates; and
- (r) Improved sinkholes.

Authority: T.C.A. § 69-3-105.

Rule 1200-04-06-.07 Permit Required is amended with the addition of paragraph (8) such that the paragraph shall read:

- (8) Emergency permits.

- (a) Coverage. Notwithstanding any other provision of this Rule the Commissioner may temporarily permit a specific underground injection if:
1. An imminent and substantial endangerment to the health of persons will result unless a temporary emergency permit is granted, provided the injection will not result in the movement of fluids into underground sources of drinking water; or
  2.
    - (i) A substantial and irretrievable loss of oil or gas resources will occur unless a temporary emergency permit is granted to a Class II well; and
    - (ii) Timely application for a permit could not be practically made; and
    - (iii) The injection will not result in the movement of fluids into underground sources of drinking water; or
  3. A substantial delay in production of oil or gas resources will occur unless a temporary emergency permit is granted to a new Class II well and the temporary authorization will not result in the movement of fluids into an underground source of drinking water.
- (b) Requirements for issuance.
1. Any temporary permit under part (a)1 of this paragraph shall be for no longer term than required to prevent the hazard.
  2. Any temporary permit under part (a)2 of this paragraph shall be for no longer than 90 days, except that if a permit application has been submitted prior to the expiration of the 90-day period, the Commissioner may extend the temporary permit until final action on the application.
  3. Any temporary permit under part (a)3 of this paragraph shall be issued only after a complete permit application has been submitted and shall be effective until final action on the application.
  4. Notice of any temporary permit under this paragraph shall be published in accordance with paragraph (7) of Rule 1200-04-06-.08 within ten days of the issuance of the permit.
  5. The temporary permit under this paragraph may be either verbal, or written. If verbal authorization, it must be followed within 5 calendar days by a written temporary emergency permit.
  6. The Commissioner shall condition the permit in any manner he or she determines is necessary to ensure that the injection will not result in the movement of fluids into an underground source of drinking water.

Authority: T.C.A. § 69-3-105.

Subparagraph (c) of paragraph (1) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the acronym "SIC" and replacing it with "North American Industry Classification System (NAICS)" such that, as amended, the subparagraph shall read:

- (c) Up to four North American Industry Classification System (NAICS) codes which best reflect the principal products or services provided by the facility.

Subparagraph (c) of paragraph (5) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the word "properly" and replacing it with the word "property" such that, as amended, the subparagraph shall read:

- (c) The issuance of a permit does not authorize any injury to persons or property or invasion of other property rights, or any infringement of other State, Federal or local laws or regulations. In

particular, the issuance of a permit does not relieve a Class I, Class IV or Class V permittee from any applicable requirement he may be subject to under the Tennessee Hazardous Waste Management Act (T.C.A. 6-46-101 et seq.).

Paragraph (6) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the word "only" and inserting the phrase "as a minor modification" at the end of the paragraph such that, as amended, the paragraph shall read:

- (6) Transfer of permits – A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued or a minor modification made.

Subparagraph (b) of paragraph (9) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by adding the phrase "or terminate" at the end of the first sentence and the phrase "or notice of intent to terminate" after the word "revoke" in the second sentence such that, as amended, the subparagraph shall read:

- (b) Notice of intent to revoke and reissue, or terminate. If the Department tentatively decides to revoke and reissue a permit, a notice of intent to revoke and reissue, or notice of intent to terminate shall be issued.

Paragraph (10) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended with the addition of subparagraph (g) such that, as amended, the subparagraph shall read:

- (g) Allow for a change in ownership or operational control of a facility where the Commissioner determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the commissioner.

Paragraph (13) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the phrase "the effects of interaction with the host rock" in the second sentence such that, as amended, the paragraph shall read:

- (13) Permit Requirements—All UIC permits shall contain permit conditions established by the Commissioner as necessary to fulfill the purposes of the Tennessee Water Quality Control Act, T.C.A. §§69-3-101 et seq., a description of the injection zone being permitted, and any necessary corrective action as stated under Rule 1200-04-06-.09(5). The permit conditions shall be set at levels to prevent adverse effects to persons utilizing the ground water resource after consideration of at least the following factors: any guidelines set for certain pollutants by U.S.E.P.A., the flow characteristics of ground water, risk to humans and the risk of migration. The following conditions (a) through (n) apply to all UIC permits. All conditions applicable to all permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit.

Authority: T.C.A. § 69-3-105.

Paragraph (3) of Rule 1200-04-06-.09 General Standards and Methods is amended by deleting the phrase "(Horizontal extent of endangering influence)" from the paragraph's title such that, as amended, the paragraph's title shall read:

- (3) Area of Review

Subparagraph (a) of paragraph (3) of Rule 1200-04-06-.09 General Standards and Methods is amended by deleting it in its entirety and replacing with the following such that, as amended, the subparagraph shall read:

- (a) Descriptions of the area of review are subject to approval by the Department according to either subpart 4(i) or (ii) of this subparagraph. The Commissioner may solicit input from the owners and operators of injection wells within the State as to which method is most appropriate for each geographic area or field. In no event shall the boundary of an area of review be less than a radius of one (1) mile from any injection well covered by the appropriate authorization. The following factors are to be included in the description:

1. Chemistry of the injection and formation fluids;
2. Hydrogeology, including the direction of ground water movement;
3. Ground water use and dependence; past, present, and future, as documented by public record; and
4. The area of potential impact as determined by either subpart (i) the calculated zone of endangering influence or subpart (ii) a fixed radius.

(i) Zone of endangering influence.

(I) The zone of endangering influence shall be:

- I. In the case of application(s) for well permit(s) under Rule 1200-04-06-.08, that area the radius of which is the lateral distance in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water; or
- II. In the case of an application for an area permit, the project area plus a circumscribing area the width of which is the lateral distance from the perimeter of the project area, in which pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water.

(II) Computation of the zone of endangering influence may be based upon the parameters listed below and should be calculated for an injection time period equal to the expected life of the injection well or pattern. The following modified Theis equation illustrates one form which the mathematical model may take.

$$r = \left( \frac{2.25KHt}{S10^x} \right)^{1/2}$$

where:

$$X = \frac{4\pi KH(h_w - h_{bo})S_p G_b}{2.3Q}$$

r = Radius of endangering influence from injection well (length)

K = Hydraulic conductivity of the injection zone (length/time)

H = Thickness of the injection zone (length)

t = Time of injection (time)

S = Storage coefficient (dimensionless)

Q = Injection rate (volume/time)

$h_{bo}$  = Observed original hydrostatic head of injection zone (length) measured from the base of the lowermost underground source of drinking water

$h_w$  = Hydrostatic head of underground source of drinking water (length) measured from the base of the lowermost underground source of drinking water

$S_p G_b$  = Specific Gravity of fluid in the injection zone (dimensionless)

$\Pi$  (pi) = 3.142 (dimensionless)

The above equation is based on the following assumptions:

- I. The injection zone is homogeneous and isotropic;
- II. The injection zone has infinite areal extent;
- III. The injection well penetrates the entire thickness of the injection zone;
- IV. The well diameter is infinitesimal compared to "r"; when injection time is longer than a few minutes; and
- V. The emplacement of fluid into the injection zone creates instantaneous increase in pressure.

(ii) Fixed radius.

- (I) In the case of application(s) for a well permit(s), a fixed radius around the well of not less than one mile may be used.
- (II) In the case of an application for an area permit, a fixed width of not less than one mile for the circumscribing area may be used.

In determining the fixed radius, the following factors shall be taken into consideration: chemistry of the injected and formation fluids; hydrogeology; population and ground-water use and dependence; and historical practices in the area.

Paragraph (5) of Rule 1200-04-06-.09 General Standards and Methods is amended by the addition of subparagraph (e) such that the subparagraph shall read:

(e) Class III wells only.

When setting corrective action requirements, the Commissioner shall consider the overall effect of the project on the hydraulic gradient in the potentially affected USDWs, and the corresponding changes in potentiometric surface(s) and flow direction(s) rather than the discrete effect of each well. If a decision is made that corrective action is not necessary based on the determinations above, the monitoring program required in Rule 1200-04-06-.12 shall be designed to verify the validity of such determinations.

Paragraph (6) of Rule 1200-04-06-.09 General Standards and Methods is amended by the addition of subparagraph (k) such that the subparagraph and its accompanying parts shall read:

- (k) After a cessation of operations of two years, the owner or operator shall plug and abandon the well in accordance with the plan unless he:
1. Provides notice to the commissioner; and
  2. Describes actions or procedures, satisfactory to the Commissioner that the owner or operator will take to ensure that the well will not endanger USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the commissioner.

Rule 1200-04-06-.09 General Standards and Methods is further amended with the addition of paragraphs (11), (12) and (13) such that the paragraphs shall read:

- (11) The Commissioner may require, by written notice on a selective well-by-well basis, an owner or operator of an injection well to establish and maintain records, make reports, conduct monitoring, and provide other information as is deemed necessary to determine whether the owner or operator has acted or is

acting in compliance with T.C.A. § 69-3-101 et seq., Tennessee Water Quality Control Act or its implementing regulations.

- (12) All injection wells must be placed on a plat with the Register of Deeds by the seller of the individual properties that the injection well is located on or the injection zone is beneath. The owner/operator of the injection well shall have contractual agreement for access to the injection well at all reasonable times.
- (13) Any person owning or operating an injection well shall keep the Department advised of his or her current address and must readily accept all mail sent by the Department. For the purposes of this Rule, registered or certified mail sent with proper postage to the registered owner or operator's last known address shall be considered adequate notification regardless of whether the mail is accepted or returned unclaimed.

Authority: T.C.A. § 69-3-105.

Subparagraph (a) of paragraph (1) of Rule 1200-04-06-.10 Class I Wells is amended by deleting the phrase "unless it can be demonstrated that the wastes become nonhazardous as a result of interaction with the host rock" such that, as amended, the subparagraph shall read:

- (a) Subsurface emplacement of fluids containing hazardous waste into ground water.

Subparagraph (c) of paragraph (2) of Rule 1200-04-06-.10 Class I Wells is amended by deleting it in its entirety.

Part 3 of subparagraph (a) of paragraph (4) of Rule 1200-04-06-.10 Class I Wells is amended by deleting the second sentence such that, as amended, the part shall read:

3. The compatibility of the non-hazardous injected fluid with both native fluid and the host rock of the intended injection zone must be demonstrated using laboratory or field data.

Authority: T.C.A. § 69-3-105.

The introductory text to Rule 1200-04-06-.11 Class II Wells is amended by deleting it in its entirety and substituting the following so that, as amended, the introductory text to the Rule shall read:

1200-04-06-.11 Class II Wells. A permit must be obtained from the Department prior to the operation of any Class II injection well except for existing Class II enhanced recovery wells and hydrocarbon storage wells. This requirement is in addition to and separate from any approval or regulatory procedure required by the Tennessee Oil and Gas Board, Department of Environment and Conservation.

Subparagraph (c) of paragraph (1) of Rule 1200-04-06-.11 Class II Wells is amended by deleting it and reserving it such that, as amended, the subparagraph shall read:

- (c) Reserved

Paragraph (11) of Rule 1200-04-06-.11 Class II Wells is amended by deleting it and replacing it with the following such that, as amended, the paragraph shall read:

- (11) Existing Class II enhanced recovery wells and hydrocarbon storage wells.

Class II wells in current operation upon the effective date of this rule shall file an application within 6 months of the effective date of this rule. No application fee will be required. Failure to file an application by the required date shall make the wells in violation of Rule Chapter 1200-04-06 and subject to the new application fee or closure.

Paragraph (11) of Rule 1200-04-06-.11 Class II Wells is further amended with the addition of subparagraphs (a), (b), (c) and (d) such that the paragraphs shall read:

- (a) An existing Class II enhanced recovery or hydrocarbon storage injection well is authorized by rule, if the owner or operator injects into the existing well within one year after the date which the State of Tennessee's UIC program is authorized under the Federal Safe Drinking Water Act and

becomes effective. An owner or operator of a well which is authorized by rule pursuant to this paragraph shall re-work, operate, maintain, plug, abandon or inject into the well in compliance with applicable regulations.

- (b) Duration of well authorization by rule. Well authorization under this paragraph expires upon the effective date of a permit issued after plugging and abandonment in accordance with an approved plugging and abandonment plan pursuant to these Rules and upon submission of a plugging and abandonment report.
- (c) Prohibitions on injection. An owner or operator of a well authorized by rule pursuant to this paragraph is prohibited from injecting into the well:
  - 1. Upon the effective date of an applicable permit denial;
  - 2. Upon failure to submit a permit application in a timely manner;
  - 3. Upon failure to submit inventory information in a timely manner;
  - 4. Upon failure to comply with a request for information in a timely manner;
  - 5. Upon failure to provide alternative financial assurance;
  - 6. Forty-eight hours after receipt of the determination by the Commissioner that the well lacks mechanical integrity, unless the Commissioner requires immediate cessation; or
  - 7. Upon receipt of notification from the Commissioner that the transferee has not demonstrated financial responsibility.
- (d) Requirements. The owner or operator of a well authorized under this paragraph shall comply with the applicable requirements of this Rule. Such owner or operator shall comply with the casing and cementing requirements no later than 1 year and other requirements no later than 1 year after authorization.

Authority: T.C.A. § 69-3-105.

Rule 1200-04-06-.13 Class IV Wells is amended with the addition of paragraph (3) such that the paragraph shall read:

- (3) Wells used to inject contaminated ground water that has been treated and is being re-injected into the same formation from which it was drawn are not prohibited by this Rule if such injection is approved by EPA or the Department, pursuant to provisions for cleanup of releases under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601-9657, or pursuant to requirements and provisions under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 – 6987.

Authority: T.C.A. § 69-3-105.

Subparagraph (a) of paragraph (1) of Rule 1200-04-06-.14 Class V Wells is amended by deleting it in its entirety and substituting the following so that the subparagraph shall read:

- (a) The use of any well to dispose of water carrying human waste, household or business waste, raw sewage or the effluent from any septic tank or other sewer system of any kind, unless such well is a subsurface fluid distribution system (SFDS) which is part of a Subsurface Sewage Disposal System (SSDS) permitted under the provisions of T.C.A. §§ 68-221-401 et seq. or a drip disposal system permitted pursuant to T.C.A. §§ 69-3-108 et seq.

Paragraph (1) of Rule 1200-04-06-.14 Class V Wells is amended by the addition of subparagraph (e) such that the subparagraph shall read:

- (e) Motor Vehicle Waste Disposal Wells (MVWDWs) are prohibited and must be properly closed and abandoned.

Subparagraph (b) of paragraph (2) of Rule 1200-04-06-.14 Class V Wells is amended by adding the phrase “a list of all wells owned or operated along with the following information for each well to include” after the word “supply” and before the word “the” such that, as amended, the subparagraph shall read:

- (b) The owner or operator shall within six (6) months after the promulgation of this rule supply a list of all wells owned or operated along with the following information for each well to include the following.

Paragraph (2) of Rule 1200-04-06-.14 Class V Wells is further amended by the addition of subparagraph (f) such that the subparagraph shall read:

- (f) Prohibition of injection. An owner or operator of a well which is authorized by rule pursuant to this paragraph is prohibited from injecting into the well:
  1. Upon the effective date of an applicable permit denial;
  2. Upon failure to submit a permit application in a timely manner;
  3. Upon failure to submit inventory information in a timely manner; or
  4. Upon failure to comply with a request for information in a timely manner.

Paragraph (8) of Rule 1200-04-06-.14 Class V Injection Wells is amended by the addition of subparagraph (e) such that the subparagraph shall read:

- (e) After the effective date of this rule, the operator, if not the property owner, for all Class V injection wells shall have access to the “point of injection” for the Class V wells. This is to be maintained by easement or deed restrictions on all injection points.

Paragraph (11) of Rule 1200-04-06-.14 Class V Wells is amended by the addition of subparagraph (e) such that the subparagraph shall read:

- (e) Closure does not mean that the owner or operator will need to cease operations at the facility, only that the owner or operator will need to close the well. A number of alternatives are available for the disposal of waste fluids. Examples of alternatives that may be available to motor vehicle stations include: recycling and reusing wastewater as much as possible; collecting and recycling petroleum-based fluids, coolants, and battery acids drained from vehicles; washing parts in a self-contained, recirculating solvent sink, with spent solvents being recovered and replaced by the supplier; using absorbents to clean up minor leaks and spills, and placing the used materials in approved waste containers and disposing of them properly; using a wet vacuum or mop to pick up accumulated rain or snow melt, and, if allowed, connecting floor drains to a municipal sewer system or holding tank, and, if allowed, disposing of the holding tank contents through a publicly owned treatment works (“POTW”). The owner/operator should check with the POTW to see if the POTW would accept the wastes. Alternatives that may be available to owners and operators of a large-capacity cesspool include: conversion to a septic system; connection to sewer; and installation of an on-site treatment unit.

Rule 1200-04-06-.14 Class V Wells is further amended with the addition of paragraph (12) such that the new paragraph shall read:

- (12) Prohibition of fluid movement.
  - (a) Injection activity prohibitions
    1. No injection activity can allow the movement of fluid containing any contaminant into USDWs, if the presence of that contaminant may cause a violation of any primary

drinking water standard, or other health based standards, or may otherwise adversely affect the health of persons. This prohibition applies to well construction, operation, maintenance, conversion, plugging, closure or any other injection activity.

2. If the Department learns that an injection activity may endanger USDWs, the Department may require the closure of the well a permit or permit modification, or other appropriate action.

(b) Closure requirements. The owner/operator must close the well in a manner that complies with the above prohibition of fluid movement. Also, the owner/operator must dispose or otherwise manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well in accordance with all applicable Federal, State and local regulations and requirements.

Rule 1200-04-06-.14 Class V Wells is further amended with the addition of paragraph (13) such that the new paragraph shall read:

(13) Authorization by Rule Requirements

All Class V UIC well authorizations by rule shall comply with this rule and all conditions established by the Commissioner as necessary to fulfill the purposes of the Tennessee Water Quality Control Act, T.C.A. §§ 69-3-101 et seq., contain a description of the injection zone being authorized, and contain any necessary corrective action as stated under rule 1200-04-06-.09(5). The authorization conditions shall be set at levels to prevent adverse effects to persons utilizing the ground water resource after consideration of at least the following factors: any guidelines set for certain pollutants by U.S.E.P.A.; the flow characteristics of ground water risk to humans; and the risk of migration. The following conditions, subparagraphs (a) through (n), apply to all Class V UIC authorizations. All conditions applicable to all authorizations shall be incorporated into the authorizations either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the authorizations.

(a) An applicant must comply with all conditions of this authorization and all applicable laws and regulations. Any authorization noncompliance constitutes a violation of the Tennessee Water Quality Control Act and is grounds for enforcement action; for authorization termination, revocation and reissuance, or modification; or for denial of an authorization renewal application.

(b) If the applicant wishes to continue an activity regulated by this authorization after the expiration date of this authorization, the applicant must apply for and obtain a new authorization prior to expiration of this authorization.

(c) It shall not be a defense for an owner or operator in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of this rule.

(d) The owner or operator shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from non-compliance with this rule.

(e) The owner or operator shall at all times properly operate and maintain all facilities and systems of related appurtenances) which are installed or used by the applicant to achieve compliance with the conditions of this rule and authorization. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this rule.

(f) The authorization may be modified, revoked and reissued, or terminated for cause. The filing of a request by the owner or operator for a modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any authorization condition.

(g) This rule and the authorizations issued under it do not convey any property rights of any sort, or any exclusive privilege.

- (h) The owner or operator shall furnish to the Department, within a time specified, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the authorization, or to determine compliance with this rule. The applicant shall also furnish to the Department, upon request, copies of records required to be kept by this rule or the authorization.
- (i) The owner or operator shall allow Department personnel, or an authorized representative of the Department, upon the presentation of credentials to:
  - 1. Enter upon the owner or operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this rule or the authorization;
  - 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this rule or the authorization;
  - 3. Inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this rule or the authorization; and
  - 4. Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by the Tennessee Water Quality Control Act or these rules, any substances or parameters at any location.
- (j) Monitoring and records.
  - 1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The owner or operator shall monitor injection fluids, injection operations, and local ground water supplies, in accordance with the requirements for the applicable class of well stated in this rule.
  - 2. The owner or operator shall retain records of all monitoring information, including the following:
    - (i) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this authorization, and records of all data used to complete the application for the authorization under this rule, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Department at any time; and
    - (ii) The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures. The Department may require the owner or operator to deliver the records to the Department at the conclusion of the retention period.
  - 3. Records of monitoring information shall include:
    - (i) The date, exact place, and time of sampling or measurements;
    - (ii) The individual(s) who performed the sampling or measurements;
    - (iii) The date(s) analyses were performed;
    - (iv) The individual(s) who performed the analyses;
    - (v) The analytical techniques or methods used; and
    - (vi) The results of such analyses.

- (k) All applications, reports, or information submitted to the Department shall be signed and certified.
- (l) Reporting requirements.
1. Planned Changes. The owner or operator shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility.
  2. Anticipated noncompliance. The owner or operator shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with authorization requirements.
  3. Transfers. See paragraphs (6), (7), (8) and (9) of Rule 1200-04-06-.08.
  4. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this rule or the authorization.
  5. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.
  6. Twenty-four hour reporting. The owner or operator shall report any noncompliance which may endanger health or the environment, including:
    - (i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to USDWs; or
    - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Any such information shall be provided orally within 24 hours from the time the owner or operator becomes aware of the circumstances. A written submission shall also be provided within 72 hours of the time the owner or operator becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.
  7. Other noncompliance. The owner or operator shall report all instances of noncompliance not reported under parts 1, 4, 5, and 6 of this subparagraph, at the time monitoring reports are submitted. The reports shall contain the information listed in part 6 of this subparagraph.
  8. Other information. Where the owner or operator becomes aware that the owner or operator has failed to submit any relevant acts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, the owner or operator shall promptly submit such facts or information.
- (m) Requirements prior to commencing injection. Except for all new wells authorized by an area permit under rules 1200-04-06-.11 and 1200-04-06-.12, a new injection well may not commence injection until construction is complete, and
1. The owner or operator has submitted notice of completion of construction to the Director; and
  2. (i) The Department has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of this rule and the authorization; or

- (ii) The owner or operator has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in part 1 of this subparagraph, in which case prior inspection or review is waived and the owner or operator may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well.
- (n) The owner or operator shall notify the Department at such times as this rule or the authorization requires before conversion or abandonment of the well, or in the case of area permits, before closure of the project.
- (o) A Class V authorization may include, conditions to insure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. Where the Department's review of an application indicates that the applicant's plan is inadequate, the Department may require the applicant to revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the authorization.

Authority: T.C.A. § 69-3-105.

Paragraph (1) of Rule 1200-04-06-.16 Fees for Class II Injection Wells is amended by changing the permit renewal fee from \$1,500.00 to \$1,000.00 such that the paragraph shall read:

- (1) Permit Application Fees. Applications for permits to operate a Class II injection well shall be accompanied by the following fees:

|   |            |
|---|------------|
| Application review fee.....             | \$2,500.00 |
| Permit renewal fee (every 5 years)..... | \$1,000.00 |

Paragraph (2) of Rule 1200-04-06-.16 Fees for Class II Injection Wells is amended by changing the annual maintenance fee from \$1,000 to \$500 such that the paragraph shall read:

- (2) Operational Fees. Owners or operators of Class II injection wells shall pay the following fees to the Department:

|   |        |
|---|--------|
| Annual maintenance fee.....                 | \$ 500 |
| Permit modification and reissuance fee..... | \$ 250 |

Authority: T.C.A. § 69-3-105.

Paragraph (1) of Rule 1200-04-06-.18 Fees for Class V Injection Wells is amended with the addition of paragraphs (g) and (h) such that the paragraphs shall read:

- (g) Change of ownership..... \$75
- (h) Modification of recharge point ..... \$350 (per project)

Authority: T.C.A. § 69-3-105.

\* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

| Board Member        | Aye | No | Abstain | Absent | Signature (if required) |
|---------------------|-----|----|---------|--------|-------------------------|
| Elaine Boyd         | X   |    |         |        |                         |
| James Cameron III   | X   |    |         |        |                         |
| Larry Clark         | X   |    |         |        |                         |
| Jill Davis          | X   |    |         |        |                         |
| Geneil Dillehay     | X   |    |         |        |                         |
| C. Monty Halcomb    | X   |    |         |        |                         |
| John McClurkan      | X   |    |         |        |                         |
| Frank McGinley      | X   |    |         |        |                         |
| D. Anthony Robinson | X   |    |         |        |                         |
| Dr. Robert Taylor   | X   |    |         |        |                         |

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Tennessee Water Quality Control Board on 01/19/2010, and is in compliance with the provisions of TCA 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 8/20/08

Notice published in the Tennessee Administrative Register on: 9/15/08

Rulemaking Hearing(s) Conducted on: (add more dates). 10/14/08; 10/15/08; 10/16/08



Date: January 19, 2010

Signature: C. Monty Halcomb

Name of Officer: C. Monty Halcomb

Title of Officer: Chairman of the Water Quality Control Board

Subscribed and sworn to before me on: 1/19/10

Notary Public Signature: Wanda Powers

My commission expires on: 11/7/2012

All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

Robert E. Cooper, Jr.  
 Attorney General and Reporter  
2-16-10

Date

Department of State Use Only

Filed with the Department of State on: 02/17/2010  
Effective on: 05/18/2010

*Tre Hargett*

Tre Hargett  
Secretary of State

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PUBLICATIONS

## Public Hearing Comments

One copy of a document containing responses to comments made at the public hearing must accompany the filing pursuant to T.C.A. §4-5-222. Agencies shall include only their responses to public hearing comments, which shall be summarized. No letters of inquiry from parties questioning the rule will be accepted. When no comments are received at the public hearing, the agency need only draft a memorandum stating such and include it with the Rulemaking Hearing Rule filing. Minutes of the meeting will not be accepted. Transcripts are not acceptable.

Comment: Rule 1200-04-06-.02(51): Revise the definition of "Radioactive waste" to exclude the word fluid - "Radioactive waste" means any waste which contains radioactive material in concentrations which exceed those listed in chapter 1200-02-05, Schedule RHS 8-1, Table II, Column 2. - The definition at 40 CFR §144.3 is broader than just fluid; it includes solid waste.

Response: The Department agrees.

Comment: Rule 1200-04-06-.02(71): Delete definition of "Zone of endangering influence" - This definition should be eliminated since paragraph 1200-04-06-.09(3) describes the zone of endangering influence more completely and accurately than this definition

Response: The Department agrees.

Comment: Rule 1200-04-06-.03(6): Possibly clarify language at 1200-04-06-.03(6) to emphasize that no new wells will be allowed in Zone 1 of a wellhead protection area.

(6) After the effective date of this rule all classes of new injection wells located within Zone 1 of a community water system's wellhead protection area as defined in Rule 1200-05-01-.34 under T.C.A. 68-13-701 et seq., the Tennessee Safe Drinking Water Act.-

Response: The Department does not agree and did not change the proposed rule. The Department believes the proposed rule is sufficient for the intended use.

Comment: Rule 1200-04-06-.04: Revise the title of 1200-04-06-.04 as follows: Prevention of Pollution of Ground Water is amended by adding the phrase "and Identification of Underground Sources of Drinking Water and Exempted Aquifers" at the end of the title such that as amended the Rule shall read: USDWs do not have aquifer exemptions. This rule gives the criteria for getting an aquifer exemption.

Rule 1200-04-06-.04: Prevention of Pollution of Ground Water and Identification of Underground Sources of Drinking Water and Exempted Aquifers. See comment above.

Rule 1200-04-06-.04: Prevention of Pollution of Ground Water and Identification of Underground Sources of Drinking Water and Exempted Aquifers is amended by deleting it in its entirety and replacing it with the following such that as amended the Rule shall read: See comment above.

Response: The Department agrees.

Comment: Rule 1200-04-06-.04(3): Revise 1200-04-06-.04(3) as follows: For class V wells, if at any time the Commissioner learns that a Class V well may cause a violation of primary drinking water regulations he or she shall:

Response: The Department agrees.

Comment: Rule 1200-04-06-.04(6)(b)3(i): Revise 1200-04-06-.04(6)(b)3(i) as follows to be consistent with 40 CFR §144.7(b)(3)(i): "Under paragraph (7)(b) of this Rule shall be treated as a program revision when:"

Response: The Department has not modified Rule 1200-04-06-.04(6)(b)3(i) as suggested, but has modified it to read more like 40 CFR 144.7(b)(3)(i) and incorporated the federal program revision procedure of 40 CFR 145.32. Further, 40 CFR 145.32 has been included in this rule as a note.

Comment: Rule 1200-04-06-.04(6)(b)3(i)(II)II: Fix typos in 1200-04-06-.04(6)(b)3(i)(II)II. The public notice shall be mailed to interested persons and shall be published in the Federal Register and in enough of the largest newspapers in the State to provide Statewide coverage. The public notice shall summarize the proposed revisions and provide for the opportunity to request a public hearing. Such a hearing will be held if there is significant public interest based on requests received.

Response: The Department has not modified Rule 1200-04-06-.04(6)(b)3(i)(II)II as suggested, but has modified Rule 1200-04-06-.04(b)(3)(i) to read more like 40 CFR 144.7(b)(3)(i) and incorporated the federal program revision procedure of 40 CFR 145.32. Further, 40 CFR 145.32 has been included in this rule as a note and the typos have been corrected.

Comment: Rule 1200-04-06-.04(6)(b)3(ii): Revise 1200-04-06-.04(6)(b)3(ii) to be consistent with 40 CFR §144.7(b)(3)(ii). "Under paragraph (7)(c) of this Rule shall become final if the Commissioner submits the exemption in writing to the EPA Administrator and the EPA Administrator has not disapproved the designation within 45 days. Any disapproval by the EPA Administrator shall state the reasons and shall constitute final Agency action for purposes of judicial review."

Response: The Department agrees.

Comment: Rule 1200-04-06-.06(4)(c): Fix typo 1200-04-06-.06(4)(c): Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under subparagraph (1)(a) or (4)(a) and (b) of this rule.

Response: The Department agrees.

Comment: Rule 1200-04-06-.08(6): Revise 1200-04-06-.08(6) as follows: Transfer of permits - A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made.

Response: The Department agrees.

Comment: Rule 1200-04-06-.09(3)(a)2: Make sure the formula and text of 1200-04-06-.09(3)(a)2 is consistent with 40 CFR §146.6(a)(2).

$$r = \left( \frac{2.25KHt}{S10^X} \right)^{1/2}$$

where:

$$X = \frac{4\pi KH(h_w - h_{bo}) S_p G_b}{2.3Q}$$

r = Radius of endangering influence from injection well (length)

K = Hydraulic conductivity of the injection zone (length/time)

H = Thickness of the injection zone (length)

t = Time of injection (time)

S = Storage coefficient (dimensionless)

Q = Injection rate (volume/time)

h<sub>bo</sub> = Observed original hydrostatic head of injection zone (length)

measured from the base of the lowermost underground source of drinking water

h<sub>w</sub> = Hydrostatic head of underground source of drinking water (length)

measured from the base of the lowermost underground source of drinking water

S<sub>p</sub>G<sub>b</sub> = Specific Gravity of fluid in the injection zone (dimensionless)

Π (pi) = 3.142 (dimensionless)

Response: The Department agrees.

- Comment: Rule 1200-04-06-.09(3)(a)3(i)(II)IV: Revise 1200-04-06-.09(3)(a)3(i)(II)IV to include all of the language in 40 CFR §146.7((a)(2))iv.: The well diameter is infinitesimal compared to "r"; when injection time is longer than a few minutes; and
- Response: The Department agrees.
- Comment: Rule 1200-04-06-.09(3)(a)3(i)(II)V: Fix typo in 1200-04-06-.09(3)(a)3(i)(II)V. - The emplacement of fluid into the injection zone creates instantaneous increase in pressure.
- Response: The Department agrees.
- Comment: Rule 1200-04-06-.10(4)(a)3: Revise 1200-04-06-.10(4)(a)3 to include the word "non-hazardous". The compatibility of the non-hazardous injected fluid with both native fluid and the host rock of the intended injection zone must be demonstrated using laboratory or field data.
- Response: The Department agrees.
- Comment: Rule 1200-04-06-.11(11)(d): Revise 1200-04-06-.11(11)(d) Requirements as follows: "The owner or operator of a well authorized under this paragraph shall comply with the applicable requirements of this Rule. Such owner or operator shall comply with the casing and cementing requirements no later than 1 year and other requirements no later than 1 year after authorization."
- Response: The Department agrees.
- Comment: Rule 1200-04-06-.13(4)(a) and (b): Delete subparagraphs 1200-04-06-.13(4)(a) and (b). They are not needed since you have already banned hazardous waste injection.
- Response: The Department agrees.
- Comment: General Comment and Rule 1200-04-06-.03(2) and 1200-04-06-.10(1)(a) notes with significant concern that the proposed modifications to the existing state UIC regulations will now prohibit the use of Class 1 wells for the injection of hazardous waste. Considering the historical development of the existing state UIC regulations, the commenter believes that the direction the division is proposing is ill conceived and contrary to EPA policy and philosophy regarding Class 1 wells.
- In comments previously submitted to the TDWS the commenter notes that in light of EPA's strong endorsement of the safety and effectiveness of the Class I hazardous waste injection program, as noted most recently in its 2001 study entitled "Class I Underground Injection Control Program: Study of the Risks Associated with Class I Underground Injection Wells" (EPA Document EPA. 816-R-01-007) and Tennessee's ability to operate the UIC program which has been demonstrated successfully for more than 25 years, and that the state program has included Class 1 hazardous wells, The commenter would request that the proposed modifications to Rules 1200-04-06-.03(2) and 1200-04-06-.10(1)(a) be deleted and Rule 1200-04-06-.10(2)(c) be retained.
- Response: The existing Class I well rules for Tennessee were not acceptable for primacy and will require major revisions. In the interest of obtaining primacy as quickly as possible, hazardous Class I wells were left out of the revisions and will be revisited at a later date when the Class VI well rules are promulgated.
- Comment: Rule 1200-04-06-.02(3): The definition of "Permit" makes reference to an equivalent document issued by EPA "or an approved state." This definition should be state specific and reference either Tennessee or the Tennessee Division of Water Supply
- Response: This definition is from 40 CFR 144.3: We will change the definition to read "Tennessee" instead of "approved state".
- Comment: Rule 1200-04-06-.02(3): The definition of "Septic System" specifies a facility that is "a 'well' that is used to emplace sanitary waste below the surface ...." This definition is inconsistent with the definition of a "well" which defines a well as "a bored, driven, or dug shaft or hole whose depth is

greater than the largest surface dimension." These two proposed definitions are inconsistent with each other and the division needs to reconcile this difference.

Response: Thank you. The definition of "well" will have the following added after the word dimension "or, an improved sinkhole; or, a subsurface fluid distribution system." This addition will bring the state definition to equal the Federal definition found in 40 CFR 144.3.

Comment: Rule 1200-04-06-.03(2): This proposed rule adds the prohibition of injection of hazardous waste. As noted in previous comments, the commenter believes that excluding Class 1 wells is ill conceived and contrary to EPA policy. The commenter strongly requests that the additional language of "or hazardous" be deleted from these proposed regulations.

Response: The existing Class I well rules for Tennessee were not acceptable for primacy and will require major revisions. In the interest of obtaining primacy as quickly as possible, hazardous Class I wells were left out of the revisions and will be revisited at a later date when the Class VI well rules are promulgated.

Comment: Rule 1200-04-06-.04(2): This paragraph refers to "movement of any contaminant into the underground source of drinking water". The commenter believes that this language should specifically apply to movement of fluid from underground injection activity. Therefore, the Commenter requests that this rule be modified to read as follows:

For Class I, II, and III wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water resulting from underground injection activity...

Response: The paragraph as written complies with federal regulations. The specific regulation quoted refers to monitoring and mentions the permitted underground injection activities.

Comment: Rule 1200-04-06-.04(6)(a): The last sentence of this paragraph appears to arbitrarily classify all aquifers in the state as underground sources of drinking water (USDW). This appears to be in direct conflict with Rule 1200-04-03-.07(4). The commenter believes that the division must reconcile this conflict and insure that this proposed rule is not in conflict with nor will it supersede the existing Groundwater Classification rules.

Response: This question was posed to the Department's legal counsel and in a memo from counsel we feel that this will not be a problem. The memo states:

"You have inquired regarding certain language in the proposed rulemaking hearing rules concerning the amendments intended to obtain primacy for the Underground Injection Control (UIC) Program. Specifically the question is whether the provisions in the rules relating to defining and protecting Underground Sources of Drinking Water would create a new category of ground water classification.

In Tennessee, we have the ground water classification system established by separate rules under authority that protects both surface and ground water for a variety of purposes, not just for drinking. This is different from the federal statutes. As is noted at the beginning of the definition section of the existing UIC rules, the definitions have the given meanings "(f)or the purpose of the underground injection control program established by this chapter. ...". In other words, these rules do not create a ground water classification program, they establish the UIC program. The term, "Underground Source of Drinking Water" (USDW) only has meaning within the UIC rules and the UIC program. It is not used in the ground water classification system. Therefore, USDW only has the meaning and the application given to it under the UIC rules. In other words when an aquifer meets the criteria for a USDW, the department must do what is provided in the UIC rules to protect it from contamination.

Therefore, it is my opinion that the proposed UIC rules do not create another ground water classification for USDWs nor are they inconsistent with the ground water classification rules."

Comment: Rule 1200-04-06-.07(8)(b)3: This proposed paragraph withholds the issuance of an emergency permit until a complete application has been submitted to the division. This requirement appears to defeat the purpose of an emergency permit.

In the situation where a facility is in need of an emergency permit, the time required to complete a permit application might be extensive. In this case a facility would not be able to address the situation requiring immediate action. The commenter recommends that the division eliminate the requirement for submission of a complete permit and instead apply constraints which would insure the safe operation of an underground injection facility.

Response: This rule applies to Class II wells. The intent is that the application is submitted but the operator can operate before the review time is completed.

Comment: Rule 1200-04-06-.09(3)(a)3(i)(I) and II: Each of these proposed paragraphs reference lateral distance "in which the pressures in the injection zone may cause migration of the injection and/or formation fluid into an underground source of drinking water". Theoretically, any pressure greater than zero would have a potential to cause in-situ fluid migration. The commenter strongly suggests that the division specify a de-minimus pressure. It should also be recognized that the addition of such a de-minimus limit to the regulation would be subject to public comment and review prior to adoption.

Response: The state has intentionally not specified a number because there is not one in the federal rule. Specifying a number, could lead to EPA construing it as less stringent and a delay in obtaining primacy.

Comment: Rule 1200-04-06-.09(3)(a)3(i)(II): In this proposed paragraph a methodology for the computation of the zone of endangering influence is given. The rule, however, states that the listed method "may" be used but does not specifically state that the permittee has the flexibility to use some other valid computational method for determining the zone of endangering influence. The commenter believes that the division should modify the language of this paragraph to state that the permittee can use any other valid computational method. The commenter suggests that the first sentence of this paragraph be reworded to read as follows:

"Computation of the zone of endangering influence may be based upon the parameters listed below, or any other valid and approved computational method, and should be calculated for an injection time period equal to the expected life of the injection well or pattern."

Response: The Department will look at allowing other methods but the one prescribed is one of choice by EPA.

Comment: Rule 1200-04-06-.09(6)(k)2: This paragraph assigns approval of temporary abandonment to the EPA Regional Administrator. Since the division will be obtaining primacy for the federal implementation of the UIC program it would be more appropriate to change the approving authority to the TDWS Director.

Response: The Department agrees.

Comment: Rule 1200-04-06-.10(2)(c): The division is proposing to delete this entire subparagraph of the rules. By doing so the division is eliminating the potential use of Class 1 wells. As noted in previous comments, the commenter believes that excluding Class 1 wells is ill conceived and contrary to EPA policy. The commenter strongly requests that this subparagraph not be deleted from the current UIC regulations.

Response: The existing Class I well rules for Tennessee were not acceptable for primacy and will require major revisions. In the interest of obtaining primacy as quickly as possible, hazardous Class I wells were left out of the revisions and will be revisited at a later date when the Class VI well rules are promulgated.

- Comment: Rules 1200-04-06-.13(3): This paragraph references approval by "the state". The commenter suggests that this reference be made specific to Tennessee or the division of Water Supply.
- Response: The Department agrees.
- Comment: Rule 1200-04-06-.13(4)(a): This proposed rule appears to conflict with the changes to Rule 1200-04-06-.03(2) and 1200-04-06-.10(1)(a). The division cannot prohibit the injection of hazardous waste in one portion of the rules and allow it in another. This is another reason for deleting Rule 1200-04-06-.03(2) and 1200-04-06-.10(1)(a).
- Additionally, it should be noted that an aquifer which underlies the lowermost formation' containing a USDW does not require an exemption in order to be used for underground injection. Such a well is, by definition, a Class 1 well.
- Response: The existing Class I well rules for Tennessee were not acceptable for primacy and will require major revisions. In the interest of obtaining primacy as quickly as possible, hazardous Class I wells were left out of the revisions and will be revisited at a later date when the Class VI well rules are promulgated.
- Comment: Rule 1200-04-06-.13(4)(b): As with this paragraph (a), this proposed rule appears to conflict with the changes to Rule 1200-04-06-.03(2) and 1200-04-06-.10(1)(a). Additionally the commenter believes that the requirements of proposed Rule 1200-04-06-.09(3)(a)3(i) - Zone of endangering influence would have to be satisfied. This requirement should be added to the requirements of this proposed paragraph.
- Response: This is language specifically from EPA allowing the use of injection wells for remediation.
- Comment: Rule 1200-04-06-.14(12)(a)1: The language of this proposed rule states that "No injection activity can allow the movement of fluid .... or may otherwise adversely affect the health of persons". The commenter believes that such language is extremely vague to the extent that any claim of health affects, provable or not, would result in injection prohibition. The commenter agrees, in principle, with the proposed requirement but believes that the broad generality of the language is completely subjective in nature and will inevitably lead to the prohibition of all Class V underground injection. The commenter strongly requests that the division delete this language from the proposed rule.
- Response: This is specifically from EPA regulations.
- Comment: Rule 1200-04-06-.09(12): This provision requires injection wells to be placed on "plats" of the individual properties. It is our experience that the location of the septic tank and disposal field is often depicted on drawings that are not plats. Accordingly, we recommend that the language in this paragraph be made more flexible to read "(12) All injection wells must be placed on a plat or other layout drawing ....."
- Response: The plat was chosen to fulfill a newly passed statute at T.C.A. § 66-5-212 requiring all injection wells be placed on a permanent legal document.
- Comment: Rule 1200-04-06-.14(8)(e): We believe that several existing sites were subdivided such that property was sold without consideration being given to retaining access to the point of injection. Obtaining easements at this late stage to gain legal access to the point of injection would be virtually impossible. Therefore, we recommend that this provision apply to new facilities as well as those existing facilities that have already acquired such access. Accordingly, this subparagraph could be changed to read "(e) The operator if not the property owner for all Class V injection wells shall maintain, by easement or deed restriction, access to the "point of injection" for the Class V well where such access exists at the time this rule becomes effective."
- Response: The Department is not requiring this regulation on existing facilities only those that are done after this regulation change.

Comment: Rule 1200-04-06-.14: We do not think that we should have to obtain dual permits for certain Class V wells, which are also permitted under Water Pollution Control as no discharge.

Response: Any facility that discharges to the subsurface is required to obtain a Class V authorization. The Department is making adjustments on the State operating Permit (SOP) to make a more streamlined application process. In order to facilitate this process some additions to 1200-04-06-.14 were made.

## Regulatory Flexibility Addendum

Pursuant to Public Chapter 464 of the 105<sup>th</sup> General Assembly, prior to initiating the rule making process as described in § 4-5-202(a)(3) and § 4-5-202(a), all agencies shall conduct a review of whether a proposed rule or rule affects small businesses.

(If applicable, insert Regulatory Flexibility Addendum here)

The foregoing amendments to Rule Chapter 1200-04-06 are to comply with 40 CFR 144 – 148 of the federal Safe Drinking Water Act in order for the State to obtain the status of a delegated state program. These amendments relate to the Underground Injection Control Regulations required under the Safe Drinking Water Act, making this rule amendment federally mandated and exempt from the requirements of T.C.A. § 4-5-401 et seq. Amendments to Rules 1200-04-06-.02 "Injection Well", "Modified Recharge Point", "Recharge Point", and 1200-04-06-.03(6) and 1200-04-06.06(5)(q) and 1200-04-06-.09(12) and 1200-04-06-.09(13) and 1200-04-06-.14(8)(e) and 1200-04-06-.14(14)(11)(b) and 1200-04-06-.16(1) and 1200-04-06-.16(2) and 1200-04-06-.18(1)(f) and 1200-04-06-.18(1)(g) are State initiated but are designed to clarify regulatory questions and adjust fees.

- (1) The type or types of small business and an identification and estimate of the number of small businesses subject to the proposed rule that would bear the cost of, or directly benefit from the proposed rule:

Rule Chapter 1200-04-06 requirements will have an effect on the small businesses that utilize underground injection as a method for disposal of waste fluids. These systems would generally fall in areas where no sanitary sewer system is available or that the facility wishes to use injection as a way to dispose of waste fluids such as campgrounds, motels and industries or housing developments utilizing a decentralized waste disposal system and the oil and gas industry utilizing injection wells for brine injection which are currently regulated by the Federal and State UIC program.

- (2) The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed rule, including the type of professional skills necessary for preparation of the report or record:

The UIC Rules are federally mandated requirement. Projected additional reporting, recordkeeping and other administrative costs to small businesses under Rule Chapter 1200-04-06 are expected to be minimal.

- (3) A statement of the probable effect on impacted small businesses and consumers:

The proposed changes to Rule Chapter 1200-04-06 will have a minimal impact on the regulated community as a whole. The changes involve minor adjustments to the regulations so that EPA will grant primacy to the Tennessee program. The regulated community will not notice several of the proposed changes. Additional changes were made to correct terminology and clear up confusion based on suggestions from the regulated community and to require notification regarding T.C.A. § 66-5-212.

The permits for most injection systems are renewed every five years and when renewed a permit renewal fee is due. All of the fees included in these proposed changes are not onerous. The revenues generated from collecting fees are used to cover the cost of site inspections as well as administration.

- (4) A description of any less burdensome, less intrusive or less costly alternative methods of achieving the purpose and objectives of the proposed rule that may exist, and to what extent the alternative means might be less burdensome to small business:

All existing and proposed UIC facilities must meet the federally mandated requirements.

- (5) A comparison of the proposed rule with any federal or state counterparts:

Rule Chapter 1200-04-06 is proposed meet the Federal Requirements and mirror 40 CFR Parts 144 through 148. Amendments to Rule 1200-04-06-.02 "Injection Well", "Modified Recharge Point", "Recharge Point", and 1200-04-06-.03(6) and 1200-04-06.06(5)(q) and 1200-04-06-.09(12) and 1200-04-06-.09(13) and 1200-04-06-.14(8)(e) and 1200-04-06-.14(14)(11)(b) and 1200-04-06-.16(1) and 1200-04-06-.16(2) and 1200-04-06-.18(1)(f) and 1200-04-06-.18(1)(g) are State initiated but are designed to clarify current regulatory questions and meet new legislative initiatives and adjust fees.

- (6) Analysis of the effect of the possible exemption of small businesses from all or any part of the requirements contained in the proposed rule.

Small businesses that utilize injection wells must meet the regulatory standards under both state and federal law. Exemptions from this are not possible.

## Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to TCA 4-5-226(i)(1).

- (A)** A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

The majority of the Amendments to Rule Chapter 1200-04-06 are intended to meet the Federal Requirements and mirror 40 CFR Parts 144 through 148. Most of these amendments result from the state Underground Injection Control ("UIC") seeking to obtain Federal primary enforcement authority and Federal UIC funding for the program. The State UIC program is the primary groundwater protection portion of the Tennessee's water quality control act.

Other amendments to the regulation were made in response to requests that the state clarify some of the terminology used in previous versions of the regulations. These clarifications are reflected in the amendments to Rule 1200-04-06-.02 "Injection Well", "Modified Recharge Point", "Recharge Point". Rule 1200-04-06-.03(6) and Rule 1200-04-06-.06(5)(q).

Changes to Rule 1200-04-06-.09(12) are a direct result of legislation passed requiring location information of injection wells during property transfers. The amendment to Rule 1200-04-06-.09(13) requires regulated persons to notify the Department if moving and that they accept mail from the department.

An amendment to Rule 1200-04-06-.14(8)(e) is in response to a request for clarification as to an existing policy in the Department as to the necessity of easements.

The changes to Rule 1200-04-06-.14(13) were made to improve the enforceability of the existing Authorization by Rule requirements for Class V UIC wells.

Changes to Rules 1200-04-06-.16(1) and (2) reduce fees for the Oil and Gas program in order to encourage the industry to seek more opportunities to utilize this technology and at the request of the industry. Amendments to Rule 1200-04-06-.18(1)(g) and (h) change fees that are to offset expenses occurred in the operation for an authorized facility.

- (B)** A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

Rule Chapter 1200-04-06 is authorized by T.C.A § 69-3-105 and is intended to be the state equivalent of the Federal regulations found in Title 40, Part 144, 145, 146, 147, and 148 of the Code of Federal Regulations.

- (C)** Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

These proposed regulations would affect persons wishing to inject waste into the subsurface. The Division received comments from three commenters. All suggested changes in the proposed language. The one government commenter was very supportive, a major utility commenter sought additional clarification in the regulatory language, and one commenter representing a major manufacturer was concerned that the regulations no longer allowed deep well injection of hazardous waste.

On-site wastewater disposal industry representatives objected very strongly to the existing regulations and the need to be regulated in general. The amended rules do not directly impact this industry group and they did not offer any substantive comments regarding the amended rules.

- (D)** Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule;

The Department is not aware of any.

- (E)** An estimate of the probable increase or decrease in state and local government revenues and expenditures, if any, resulting from the promulgation of this rule, and assumptions and reasoning upon which the estimate

is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars (\$500,000), whichever is less;

The Class II injection well permit renewal fee (every five years) is being reduced from \$1,500 to \$1,000. The annual maintenance fee for Class II injection wells is being reduced from \$1,000 to \$500. Two new fees are being added for Class V wells: a change of ownership is \$75 and a modification of the recharge point is \$350 per project. These changes are expected to generate an increase to the program of about \$13,300 annually.

- (F) Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Scotty Sorrells  
Division of Water Supply  
6<sup>th</sup> Floor L & C Tower  
Nashville, Tennessee

- (G) Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Alan M. Leiserson  
Legal Services Director  
Tennessee Department of Environment and Conservation

- (H) Office address and telephone number of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

Office of General Counsel  
Tennessee Department of Environment and Conservation  
20<sup>th</sup> Floor L & C Tower  
Nashville, Tennessee 37243-1548  
(615) 532-0131

- (I) Any additional information relevant to the rule proposed for continuation that the committee requests.

The Department is not aware of any.

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**For Department of State Use Only**

Sequence Number: REDLINE  
Rule ID(s): \_\_\_\_\_  
File Date: \_\_\_\_\_  
Effective Date: \_\_\_\_\_

# Rulemaking Hearing Rule(s) Filing Form

*Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing. TCA Section 4-5-205*

|                                 |  |
|---------------------------------|--|
| <b>Agency/Board/Commission:</b> | Environment and Conservation   |
| <b>Division:</b>                | Water Supply   |
| <b>Contact Person:</b>          | Scotty Sorrells  |
| <b>Address:</b>                 | 6 <sup>th</sup> Floor L & C Tower<br>401 Church Street<br>Nashville, Tennessee |
| <b>Zip:</b>                     | 37243-1539   |
| <b>Phone:</b>                   | (615) 532-9224   |
| <b>Email:</b>                   | <a href="mailto:scotty.sorrells@state.tn.us">scotty.sorrells@state.tn.us</a>   |

**Revision Type (check all that apply):**

- Amendment  
 New  
 Repeal

**Rule(s) Revised (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables.)**

| Chapter Number | Chapter Title  |
|----------------|--|
| 1200-04-06     | Underground Injection Control  |
| Rule Number    | Rule Title   |
| 1200-04-06-.02 | <b>Definitions General</b>   |
| 1200-04-06-.03 | Injection Prohibited   |
| 1200-04-06-.04 | Prevention Of Pollution Of Ground Water <b>and Identification of Underground Sources of Drinking Water and Exempted Aquifers</b> |
| 1200-04-06-.06 | Classification Of Injection Wells  |
| 1200-04-06-.07 | Permit Required  |
| 1200-04-06-.08 | Authorization By Permit For Injection Wells Not Authorized By Rule   |
| 1200-04-06-.09 | General Standards And Methods  |
| 1200-04-06-.10 | Class I Wells  |
| 1200-04-06-.11 | Class II Wells   |
| 1200-04-06-.13 | Class IV Wells   |
| 1200-04-06-.14 | Class V Wells  |
| 1200-04-06-.16 | Fees For Class II Injection Wells  |
| 1200-04-06-.18 | Fees For Class V Injection Wells   |

(Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to <http://state.tn.us/sos/rules/1360/1360.htm>)

## Substance of the Proposed Rules

### Amendments in redline form

The Table of Contents to Chapter 1200-04-06 Underground Injection Control shall be amended by changing the title of Rule 1200-04-06-.02 from "Definitions" to "General" and the title of Rule 1200-04-06-.04 from "Prevention Of Pollution Of Ground Water" to "Prevention Of Pollution Of Ground Water and Identification of Underground Sources of Drinking Water and Exempted Aquifers".

Rule 1200-04-06-.02 Definitions is amended by deleting it in its entirety and substituting the following so that, as amended, the Rule shall read as follows (actual changes shown in redline form):

#### 1200-04-06-.02 ~~Definitions~~ General

##### (1) Use of Number and Gender

As used in these Rules:

- (a) Words in the masculine gender also include the feminine and neuter genders; and
- (b) Words in the singular include the plural; and
- (c) Words in the plural include the singular.

##### (2) Rule Structure

These Rules are organized, numbered, and referenced according to the following outline form:

- (1) paragraph
  - (a) subparagraph
    - 1. part
      - (i) subpart
        - (I) item
          - I. subitem
            - A. section
              - (A) subsection

##### (3) Definitions

For the purposes of the Underground Injection Control program established in this chapter, the definition of any word or phrase used in these regulations shall be the same as given in T.C.A. 69-3-103 except the following words or phrases shall have the following meanings:

~~(1)~~ "Aquifer" means a formation, group of formations, or part of a formation that contains a sufficient quantity of permeable material to yield significant quantities of water for wells and springs.

~~(2)~~ "Area of Review" (AOR) means the area surrounding an injection well described according to the criteria set forth in ~~the horizontal extent of the zone of endangering influence to include not less than the area within a one-mile radius of the injection well~~ Rule 1200-04-06-.09(3) or in the case of an area permit,

the project area plus a circumscribing area the width of which is either a mile or a number calculated according to the criteria set forth in the formula for injection well AOR.

~~(3)~~ "Casing" means a tubular retaining structure which is installed in an excavated hole to maintain the well opening.

~~(4)~~ "Cementing" means the act of employing cementitious material in the annulus behind the well casing.

~~(5)~~ "Cesspool" means a drywell that receives untreated sanitary waste containing human excreta, and which sometimes has an open bottom and/or perforated sides.

"Commissioner" means the Commissioner of environment and conservation or the commissioner's duly authorized representative and, in the event of the commissioner's absence or a vacancy in the office of commissioner, the deputy commissioner.

~~(6)~~ "Compatibility" means substances capable of being mixed or existing together.

~~(7)~~ "Composite sample" means a mixture of grab samples collected at the same sampling point at different times.

~~(8)~~ "Confining unit or zone" means a geological formation, group of formations, or part of a formation that limits fluid movement from an injection zone.

~~(9)~~ "Confining bed" means a layer of distinctly less permeable material stratigraphically adjacent to one or more aquifers.

~~(10)~~ "Contamination" means the addition of any substance or matter to water.

"Draft permit" means a document prepared under Rule 1200-04-06-.08(7) indicating the Commissioner's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in Rule 1200-04-06-.08(9) are types of "draft permits." A denial of a request for modification, revocation and reissuance, or termination, as discussed in Rule 1200-04-06-.08(9) is not a "draft permit."

"Drilling mud" means a heavy suspension used in drilling an "injection well," introduced down the drill pipe and through the drill bit.

~~(11)~~ "Drywell" means 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.

~~(12)~~ "Enhanced recovery" means increased recovery from a pool achieved by artificial means or by the application of energy extrinsic to the pool.

"Emergency permit" means a UIC "permit" issued in accordance with Rule 1200-04-06-.07(8).

"Environmental Protection Agency" ("EPA") means the United States Environmental Protection Agency.

"EPA" means the United States Environmental Protection Agency.

"Exempted aquifer" means an "aquifer" or its portion that meets the criteria in the definition of "underground source of drinking water" but which has been exempted according to the procedures in Rule 1200-04-06-.04.

~~(13)~~ "Existing injection well" means an "injection well" that began injection of fluids into the subsurface prior to the effective date of this rule.

~~(14)~~ "Facility or activity" means any waste facility or activity (including land or appurtenance thereto) that is subject to regulation under the Tennessee Solid Waste Disposal Act, the Tennessee Hazardous Waste Management Act, the Tennessee Water Quality Control Act or the Tennessee Safe Drinking Water Act.

- ~~(15)~~ “Fluids” means materials or substances that flow or move whether semi-solid, liquid, sludge, gas or any other form or state.
- ~~(16)~~ “Formation” means a body or stratum of rock characterized by a degree of lithologic homogeneity and is mappable on the earth’s surface or traceable in the subsurface.
- ~~(17)~~ “Formation fluid” means “fluid” present in a “formation” under natural conditions as opposed to fluids introduced into a formation by injection or emplacement by man. This term is synonymous with “native water.”
- ~~(18)~~ “Grab sample” means a sample collected at a particular time and place that represents the composition of the source at that time and place.
- ~~(19)~~ “Ground water” means water below the land surface and free to move under the influence of gravity.
- ~~(20)~~ “Grout” means a fluid mixture of cement and water or other cementitious material of a consistency that can be forced through a pipe under hydraulic pressure.
- ~~(21)~~ “Hazardous waste” means a hazardous waste as defined by rule 1200-01-11-.02(1)(c).
- ~~(22)~~ “Host Rock” means the naturally occurring solid phase of an injection zone.
- ~~(23)~~ “Hydrofracture” means the application of pressure sufficient to cause rupture of a subsurface formation.
- ~~(24)~~ “Improved Sinkhole” means a naturally occurring karst depression which has been modified by man for the purpose of directing and emplacing fluids into the subsurface in such a manner that the chemical, physical, biological, radiological, or bacteriological properties of the water or fluids moving into the subsurface through it have been or will be altered.
- ~~(25)~~ “Infiltration cell” means an unlined man-made structure designed for the distribution of fluids into or above a “USDW.”
- ~~(26)~~ “Injection well” means structure or device which is used for the emplacement of fluids into a subsurface stratum including, but not limited to:
- (a) a well used for the emplacement of fluids;
  - (b) a subsurface fluid distribution system;
  - (c) an improved sinkhole; or
  - (d) infiltration cell and any other structures or devices designed, constructed or used to emplace fluids into the subsurface, except as provided in rule 1200-04-06-.03(3); or
  - (e) modified recharge point.
- ~~(27)~~ “Injection zone” means the formation, group of formations, or part of a formation that receives fluids through an injection well.
- ~~(28)~~ “Injectivity index” means the rate of injection in gallons per minute per unit of applied injection pressure in pounds per square inch.
- ~~(29)~~ “Innovative technology” means an experimental or unproven procedure, which has not been demonstrated to be feasible under the conditions in which it is being tested.
- ~~(30)~~ “Lease” means real property upon which the right to extract oil and gas or other minerals has been granted under contract for a share of the value of the production or an annual rental for a specified period.

~~(31)~~ “Mechanical integrity” means mechanically complete, performs the function for which it was intended and is unimpaired.

“Modified recharge point” means a naturally occurring karst feature that has been modified by man with a structure or in any other manner that the chemical, physical, biological, radiological or bacteriological properties of the water or fluids moving into the subsurface through it or the ground water has been or will be altered.

~~(32)~~ “New injection well” means any well that begins injection of fluids into the subsurface after ~~the effective date of this rule~~ August 9, 1985.

“Owner or operator” means the owner or operator of any “facility or activity” subject to regulation under the UIC program.

~~(33)~~ “Packer” means a device placed in a well to produce a fluid-tight seal in a section of the well bore or the annulus between the well casing and the inner injection tubing.

“Permit” means an authorization, license, or equivalent control document issued by EPA or the Department to implement the requirements of this rule. “Permit” includes an area permit and an emergency permit. “Permit” as used in these UIC rules means an individual permit issued under the Water Quality Control Act and does not include an authorization by rule which is a type of general permit under the Water Quality Control Act.

“Person” means an individual, association, partnership, corporation, municipality, State, Federal, or Tribal agency, or an agency or employee thereof.

~~(34)~~ “Plugging” means the act or process of stopping the flow of water, oil, or gas into or out of a formation through a bore hole or well penetrating that formation.

~~(35)~~ “Point of Injection” means the last accessible point where a sample may be collected prior to waste fluids being released into the subsurface environment through a Class V injection well.

~~(36)~~ “Pollution” means such alteration of the physical, chemical, biological, bacteriological, or radiological properties of waters of this State including but not limited to changes in temperature, taste, color, turbidity, or odor of the waters:

- (a) as will result or will likely result in harm, potential harm or detriment of the public health, safety, or welfare;
- (b) as will result or will likely result in harm, potential harm or detriment to the health of animals, birds, fish, or aquatic life;
- (c) as will render or will likely render the waters substantially less useful to domestic, municipal, industrial, agricultural, recreational, or other reasonable uses; or
- (d) as will leave or will likely leave the waters in such condition as to violate any standards of water quality established by Water Quality Control Board.

~~(37)~~ “Project” means a group of wells in a single operation.

~~(38)~~ “Produced water” means those waters produced in conjunction with the production of crude oil or natural gas and commonly collected at field storage or disposal facilities including: lease tanks, commingled tank batteries, burn pits, and community or lease wastewater disposal systems.

~~(39)~~ “Public water system” means a system for the provision of piped water for human consumption if such system has at least fifteen (15) connections or regularly serves at least twenty-five (25) individuals at least sixty (60) days out of the year.

~~(40)~~ “Radioactive material” means any material, solid, liquid, or gas, which emits radiation spontaneously.

~~(41)~~ "Radioactive waste" means any waste fluid which contains radioactive material in concentrations which exceed those listed in ~~chapter Rule 1200-02-05-.161~~ Schedule RHS 8-430, Table II, Column 2.

"Recharge point" means a naturally occurring sinkhole or other karst feature that accepts stormwater runoff from unimproved properties.

~~(42)~~ "Regional rock deformation" means folded, faulted, sheared, compressed or extended rocks which result from various earth forces.

~~(43)~~ "Sanitary waste" means liquid or solid wastes originating solely from humans and human activities, such as wastes from toilets, showers, wash basins, cleaning, clothes washing, or food preparation, together with any waters mixed with or used to convey such wastes, and provided that the waste or water is not mixed with industrial waste.

"Schedule of compliance" means a schedule of remedial measures included in a "permit," including an enforceable sequence of interim requirements (for example: actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations."

"Septic system" means a "well" that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system.

~~(44)~~ "Sewage" means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present; (T.C.A. § 69-3-103(27)).

~~(45)~~ "Sinkhole" means a naturally occurring closed depression in a karst area characterized by inward drainage (inlets) accepting runoff from the surrounding area and having no visible surface outlet.

~~(46)~~ "Site" means the land or water area where any facility or activity is physically located or conducted including adjacent land used in connection with the facility or activity.

"Stratum" (plural strata) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.

~~(47)~~ "Subsurface fluid distribution system" (SFDS) means an assemblage of perforated pipes, drain tiles, or mechanisms intended to distribute fluids below the surface of the ground.

~~(48)~~ "Total Dissolved Solids" means a material that passes through a standard glass fiber filter disk and remains after evaporation and drying to constant weight at 180°C.

"Transferee" means the owner or operator receiving ownership and/or operational control of the well.

"Transferor" means the owner or operator transferring ownership and/or operational control of the well.

~~(49)~~ "Tremie pipe" means a device, usually small diameter pipe, that carries grouting materials to the bottom of a drill hole and allows the emplacement of the grout from the bottom up without the introduction of appreciable air pockets.

"UIC" means the Underground Injection Control program.

"Underground injection" means a "well injection."

~~(50)~~ "Underground source of drinking water" (USDW) means an aquifer or its part that:

- (a) currently supplies any public water system; or
- (b) contains a sufficient quantity of ground water to supply a public water system; and
  1. currently supplies drinking water for human consumption; or

2. contains fewer than 10,000 mg/L total dissolved solids; and
- (c) which is not a portion of an aquifer which has been designated by the Department as ~~a Class I or Class II injection zone~~ an Exempted Aquifer.

~~(51) "Well" means a bored, drilled, driven or dug shaft or hole whose depth is greater than the largest surface dimension or an improved sinkhole; or, a subsurface fluid distribution system.~~

~~(52) "Well injection" means the subsurface emplacement of fluids through a "well."~~

~~(53) "Zone of endangering influence" means the portion of an injection zone that appears to lie in the path of a waste plume from an injection well or well field. A zone of endangerment has both a horizontal and vertical extent.~~

Authority: T.C.A. § 69-3-105.

Paragraph (2) of Rule 1200-04-06-.03 Injection Prohibited is amended by adding the phrase "or hazardous" after the word "radioactive" such that, as amended, the paragraph shall read:

- (2) Wells may not be used for the disposal of radioactive ~~or hazardous~~ waste.

Subparagraph (a) of paragraph (3) of Rule 1200-04-06-.03 Injection Prohibited is amended by adding the phrase "with the capacity of" after the word "waste" such that, as amended, the subparagraph shall read:

- (a) Operation of domestic subsurface distribution systems disposing of exclusively sanitary waste ~~with the capacity of~~ serving less than 20 persons;

Rule 1200-04-06-.03 Injection Prohibited is further amended with the addition of paragraph (6) such that, as amended, the paragraph shall read:

- (6) ~~After the effective date of this rule all classes of new injection wells located within Zone 1 of a community water system's wellhead protection area as defined in Rule 1200-05-01-.34 under T.C.A. §§ 68-221-701 et seq., the Tennessee Safe Drinking Water Act are prohibited.~~

Authority: T.C.A. § 69-3-105.

Rule 1200-04-06-.04 Prevention of Pollution of Ground Water is amended by adding the phrase "and Identification of Underground Sources of Drinking Water and Exempted Aquifers" at the end of the title such that, as amended, the Rule title shall read:

Rule 1200-04-06-.04 Prevention of Pollution of Ground Water ~~and Identification of Underground Sources of Drinking Water and Exempted Aquifers.~~

Rule 1200-04-06-.04 Prevention of Pollution of Ground Water and Identification of Underground Sources of Drinking Water and Exempted Aquifers is amended by deleting it in its entirety and replacing it with the following such that, as amended, the Rule shall read:

- (1) ~~No permit or authorization by rule shall be allowed where an injection well causes or allows the movement of fluid containing any contaminant that would result in the pollution of USDWs. A permit or authorization by rule shall include terms and conditions reasonably necessary to protect USDWs from pollution.~~ No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.
- (2) ~~The Department shall protect from pollution any USDW.~~ For Class I, II and III wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, except as authorized under this Rule, the Commissioner shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or

reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, the Commissioner may impose additional requirements by modifying the permit in accordance with Rule 1200-04-06-.08(8) or may terminate the permit in accordance with Rule 1200-04-06-.08(9). Additionally, the Commissioner may assess civil penalties for all permit or rule violations in accordance with T.C.A § 69-3-115.

- (3) ~~If any water quality monitoring of USDWs indicates the movement of any contaminant into that ground water, the Department shall prescribe such additional requirements for construction, corrective action, operation, monitoring or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, these additional requirements shall be imposed by modifying the permit in accordance with rule 1200-04-06-.08(8) or the permit may be terminated if cause exists, or appropriate enforcement action may be taken if the permit has been violated.~~ For class V wells, if at any time the Commissioner learns that a Class V well may cause a violation of primary drinking water regulations he or she shall:
- (a) Require the injector to obtain an individual permit; and/or
  - (b) Order the injector to take such actions (including, where required, closure of the injection well) as may be necessary to prevent the violation.
  - (c) Take enforcement action.
- (4) Whenever the Commissioner learns that a Class V well may be otherwise adversely affecting the health of persons, he or she may prescribe such actions as may be necessary to prevent the adverse effect, including any action authorized under paragraph (3) of this Rule and assess civil penalties in accordance with T.C.A § 69-3-115.
- (5) Notwithstanding any other provision of this rule, the Commissioner may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health of persons. The Commissioner must first determine that local authorities have not taken appropriate action to protect the health of such persons, before taking emergency action.
- (6) Identification of Underground Sources of Drinking Water
- (a) The Commissioner may identify (by narrative description, illustrations, maps, or other means) and shall protect, except where exempted under subparagraph (b) of this paragraph, as an underground source of drinking water, all aquifers or parts of aquifers which meet the definition of an "underground source of drinking water" in Rule 1200-04-06-.02. Even if an aquifer has not been specifically identified by the commissioner, it is an underground source of drinking water if it meets the definition in Rule 1200-04-06-.02.
  - (b)
    - 1. The Commissioner may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the Commissioner proposes to designate as exempted aquifers using the criteria in paragraph (7) of this Rule.
    - 2. No designation of an exempted aquifer submitted as part of a UIC Program shall be final until approved by the EPA Administrator.
    - 3. Subsequent to program approval or promulgation by the EPA, the Commissioner may, after notice and opportunity for a public hearing, identify additional exempted aquifers.
      - (i) Exemption of aquifers identified under subparagraph (7)(b) of this Rule shall be treated as a program revision under 40 CFR 145.32.

(Note: 40 CFR 145.32 provides that:

- (a) Either EPA or the approved State may initiate program revision. Program revision may be necessary when the controlling federal or state statutory or regulatory authority is modified or supplemented. The state shall keep EPA fully informed of any proposed modifications to its basic statutory or regulatory authority, its forms, procedures, or priorities.
- (b) Revision of a state program shall be accomplished as follows:
  - (1) The state shall submit a modified program description, Attorney General's statement, Memorandum of Agreement, or such other documents as EPA determines to be necessary under the circumstances.
  - (2) Whenever EPA determines that the proposed program revision is substantial, EPA shall issue public notice and provide an opportunity to comment for a period of at least 30 days.
 

The public notice shall be mailed to interested persons and shall be published in the Federal Register and in enough of the largest newspapers in the state to provide statewide coverage. The public notice shall summarize the proposed revisions and provide for the opportunity to request a public hearing. Such a hearing will be held if there is significant public interest based on requests received.
  - (3) The Administrator shall approve or disapprove program revisions based on the requirements of this part and of the Safe Drinking Water Act.
  - (4) A program revision shall become effective upon the approval of the Administrator. Notice of approval of any substantial revision shall be published in the Federal Register. Notice of approval of non-substantial program revisions may be given by a letter from the Administrator to the State Governor or his designee.)
- (ii) Exemption of aquifers identified under subparagraph (7)(c) of this Rule shall become final if the Commissioner submits the exemption in writing to the EPA Administrator and the EPA Administrator has not disapproved the designation within 45 days. Any disapproval by the EPA Administrator shall state the reasons and shall constitute final Agency action for purposes of judicial review.
- (c)
  1. For Class III wells, the Commissioner shall require an applicant for a permit which necessitates an aquifer exemption under part (7)(b)1 of this Rule to furnish the data necessary to demonstrate that the aquifer is expected to be mineral or hydrocarbon producing. Information contained in the mining plan for the proposed project, such as a map and general description of the mining zone, general information on the mineralogy and geochemistry of the mining zone, analysis of the amenability of the mining zone to the proposed mining method, and a time-table of planned development of the mining zone shall be considered by the Commissioner in addition to the information required.
  2. For Class II wells, a demonstration of commercial producibility shall be made as follows:
    - (i) For a Class II well to be used for enhanced oil recovery processes in a field or project containing aquifers from which hydrocarbons were previously produced, commercial producibility shall be presumed by the Commissioner upon a demonstration by the applicant of historical production having occurred in the project area or field; and
    - (ii) For Class II wells not located in a field or project containing aquifers from which hydrocarbons were previously produced, information such as logs, core data,

formation description, formation depth, formation thickness and formation parameters such as permeability and porosity shall be considered by the Commissioner, to the extent such information is available.

(7) Exempted Aquifers

An aquifer or a portion thereof which meets the criteria for an "underground source of drinking water" may be determined to be an "exempted aquifer" if it meets the following criteria:

- (a) It does not currently serve as a source of drinking water; and
- (b) It cannot now and will not in the future serve as a source of drinking water because:
  - 1. It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible;
  - 2. It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;
  - 3. It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or
  - 4. It is located over a Class III well mining area subject to subsidence or catastrophic collapse;
- or
- (c) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

Authority: T.C.A. § 69-3-105.

Paragraph (1) of Rule 1200-04-06-.06 Classification of Injection Wells is amended by adding subparagraph (c) such that, as amended, the subparagraph shall read:

- (c) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one mile of the well bore.

Paragraph (4) of Rule 1200-04-06-.06 Classification of Injection Wells is amended by adding subparagraph (c) such that, as amended, the subparagraph shall read:

- (c) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under subparagraph (1)(a) or subparagraphs (4)(a) and (b) of this rule.

Subparagraph (g) of paragraph (5) of Rule 1200-04-06-.06 Classification of Injection Wells is amended by adding the sentence "This does not allow the injection of hazardous waste into a Class V well" after the first sentence such that, as amended, the subparagraph shall read:

- (g) Injection systems associated with remedial activity. This subparagraph does not allow the injection of hazardous waste into a Class V well. Systems used to inject contaminated ground water that has been treated and is being reinjected into the same formation from which it was drawn are not prohibited by this rule if such injection is approved by state or federal agencies operating under the Tennessee Hazardous Waste Management Act, Part 1 or Part 2, T.C.A. Sections 68-212-101 et seq. or 68-212-201 et seq. or Tennessee Petroleum Underground Storage Tank Act, T.C.A. Sections 68-215-101 et seq. or Tennessee Water Quality Control Act, T.C.A. Sections 69-3-101 et seq. or Resource Conservation and Recovery Act (RCRA); 42 USC

Paragraph (5) of Rule 1200-04-06-.06 Classification of Injection Wells is amended with the addition of subparagraphs (p), (q) and (r) such that, as amended, the subparagraphs shall read:

- (p) Dry wells used for the injection of wastes into a subsurface formation;
- (q) Modification of a recharge point or the area where the recharge originates; and
- (r) Improved sinkholes

Authority: T.C.A. § 69-3-105.

Rule 1200-04-06-.07 Permit Required is amended with the addition of paragraph (8) such that the paragraph shall read:

- (8) Emergency permits.
  - (a) Coverage. Notwithstanding any other provision of this Rule the Commissioner may temporarily permit a specific underground injection if:
    - 1. An imminent and substantial endangerment to the health of persons will result unless a temporary emergency permit is granted, provided the injection will not result in the movement of fluids into underground sources of drinking water; or
    - 2.
      - (i) A substantial and irretrievable loss of oil or gas resources will occur unless a temporary emergency permit is granted to a Class II well; and
      - (ii) Timely application for a permit could not be practically made; and
      - (iii) The injection will not result in the movement of fluids into underground sources of drinking water; or
    - 3. A substantial delay in production of oil or gas resources will occur unless a temporary emergency permit is granted to a new Class II well and the temporary authorization will not result in the movement of fluids into an underground source of drinking water.
  - (b) Requirements for issuance.
    - 1. Any temporary permit under part (a)1 of this paragraph shall be for no longer term than required to prevent the hazard.
    - 2. Any temporary permit under part (a)2 of this paragraph shall be for no longer than 90 days, except that if a permit application has been submitted prior to the expiration of the 90-day period, the Commissioner may extend the temporary permit until final action on the application.
    - 3. Any temporary permit under part (a)3 of this paragraph shall be issued only after a complete permit application has been submitted and shall be effective until final action on the application.
    - 4. Notice of any temporary permit under this paragraph shall be published in accordance with paragraph (7) of Rule 1200-04-06-.08 within ten days of the issuance of the permit.
    - 5. The temporary permit under this paragraph may be either verbal, or written. If verbal authorization, it must be followed within 5 calendar days by a written temporary emergency permit.

6. The Commissioner shall condition the permit in any manner he or she determines is necessary to ensure that the injection will not result in the movement of fluids into an underground source of drinking water.

Authority: T.C.A. § 69-3-105.

Subparagraph (c) of paragraph (1) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the acronym "SIC" and replacing it with "North American Industry Classification System (NAICS)" such that, as amended, the subparagraph shall read:

- (c) Up to four ~~SIC~~ North American Industry Classification System (NAICS) codes which best reflect the principal products or services provided by the facility.

Subparagraph (c) of paragraph (5) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the word "properly" and replacing it with the word "property" such that, as amended, the subparagraph shall read:

- (c) The issuance of a permit does not authorize any injury to persons or ~~properly property~~ or invasion of other property rights, or any infringement of other State, Federal or local laws or regulations. In particular, the issuance of a permit does not relieve a Class I, Class IV or Class V permittee from any applicable requirement he may be subject to under the Tennessee Hazardous Waste Management Act (T.C.A. 6-46-101 et seq.).

Paragraph (6) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the word "only" and inserting the phrase "as a minor modification" at the end of the paragraph such that, as amended, the paragraph shall read:

- (6) Transfer of permits – A permit may be transferred by the permittee to a new owner or operator ~~only~~ if the permit has been modified or revoked and reissued ~~or a minor modification made~~.

Subparagraph (b) of paragraph (9) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by adding the phrase "or terminate" at the end of the first sentence and the phrase "or notice of intent to terminate" after the word "revoke" in the second sentence such that, as amended, the subparagraph shall read:

- (b) Notice of intent to revoke ~~and reissue, or terminate~~. If the Department tentatively decides to revoke ~~and reissue~~ a permit, a notice of intent to revoke ~~and reissue, or notice of intent to terminate~~ shall be issued.

Paragraph (10) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended with the addition of subparagraph (g) such that, as amended, the subparagraph shall read:

- (g) Allow for a change in ownership or operational control of a facility where the Commissioner determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the commissioner.

Paragraph (13) of Rule 1200-04-06-.08 Authorization by Permit for Injection Wells not Authorized by Rule is amended by deleting the phrase "the effects of interaction with the host rock" in the second sentence such that, as amended, the paragraph shall read:

- (13) Permit Requirements—All UIC permits shall contain permit conditions established by the Commissioner as necessary to fulfill the purposes of the Tennessee Water Quality Control Act, T.C.A. §§69-3-101 et seq., a description of the injection zone being permitted, and any necessary corrective action as stated under Rule 1200-04-06-.09(5). The permit conditions shall be set at levels to prevent adverse effects to persons utilizing the ground water resource after consideration of at least the following factors: any guidelines set for certain pollutants by U.S.E.P.A., the flow characteristics of ground water, ~~the effects of interaction with the host rock~~ risk to humans and the risk of migration. The following conditions (a) through (n) apply to all UIC permits. All conditions applicable to all permits shall be incorporated into the

permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit.

Authority: T.C.A. § 69-3-105.

Paragraph (3) of Rule 1200-04-06-.09 General Standards and Methods is amended by deleting the phrase "(Horizontal extent of endangering influence)" from the paragraph's title such that, as amended, the paragraph's title shall read:

(3) Area of Review (~~Horizontal extent of endangering influence~~)

Subparagraph (a) of paragraph (3) of Rule 1200-04-06-.09 General Standards and Methods is amended by deleting it in its entirety and replacing with the following such that, as amended, the subparagraph shall read (~~actual changes shown in redline form~~):

(a) Descriptions of the area of review are subject to approval by the Department. ~~In no event shall the boundary of an area of review be less than a radius of one (1) mile from any injection well covered by the appropriate authorization.~~ according to either subpart 4(i) or (ii) of this subparagraph. The Commissioner may solicit input from the owners and operators of injection wells within the State as to which method is most appropriate for each geographic area or field. ~~In no event shall the boundary of an area of review be less than a radius of one (1) mile from any injection well covered by the appropriate authorization.~~ The following factors are to be included in the description:

1. Chemistry of the injection and formation fluids;
2. Hydrogeology, including the direction of ground water movement; ~~and~~
3. Ground water use and dependence; past, present, and future, as documented by public record; ~~and~~
4. ~~The area of potential impact as determined by either subpart (i) the calculated zone of endangering influence or subpart (ii) a fixed radius.~~

(i) ~~Zone of endangering influence.~~

(I) ~~The zone of endangering influence shall be:~~

- I. ~~In the case of application(s) for well permit(s) under Rule 1200-04-06-.08, that area the radius of which is the lateral distance in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water; or~~
- II. ~~In the case of an application for an area permit, the project area plus a circumscribing area the width of which is the lateral distance from the perimeter of the project area, in which pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water.~~

(II) ~~Computation of the zone of endangering influence may be based upon the parameters listed below and should be calculated for an injection time period equal to the expected life of the injection well or pattern. The following modified Theis equation illustrates one form which the mathematical model may take.~~

$$r = \left( \frac{2.25KHt}{S} \right)^{1/2}$$

where:

$$X = \frac{4\pi KH(h_w - h_{bo})XS_pG_b}{2.3Q}$$

r = Radius of endangering influence from injection well (length)

K = Hydraulic conductivity of the injection zone (length/time)

H = Thickness of the injection zone (length)

t = Time of injection (time)

S = Storage coefficient (dimensionless)

Q = Injection rate (volume/time)

$h_{bo}$  = Observed original hydrostatic head of injection zone (length) measured from the base of the lowermost underground source of drinking water

$h_w$  = Hydrostatic head of underground source of drinking water (length) measured from the base of the lowermost underground source of drinking water

$S_pG_b$  = Specific Gravity of fluid in the injection zone (dimensionless)

$\Pi$  (pi) = 3.142 (dimensionless)

The above equation is based on the following assumptions:

- I. The injection zone is homogeneous and isotropic;
- II. The injection zone has infinite areal extent;
- III. The injection well penetrates the entire thickness of the injection zone;
- IV. The well diameter is infinitesimal compared to "r"; when injection time is longer than a few minutes; and
- V. The emplacement of fluid into the injection zone creates instantaneous increase in pressure.

(ii) Fixed radius.

- (I) In the case of application(s) for a well permit(s), a fixed radius around the well of not less than one mile may be used.
- (II) In the case of an application for an area permit, a fixed width of not less than one mile for the circumscribing area may be used.

In determining the fixed radius, the following factors shall be taken into consideration: chemistry of the injected and formation fluids; hydrogeology; population and ground-water use and dependence; and historical practices in the area.

Paragraph (5) of Rule 1200-04-06-.09 General Standards and Methods is amended by the addition of subparagraph (e) such that the subparagraph shall read:

(e) Class III wells only.

When setting corrective action requirements, the Commissioner shall consider the overall effect of the project on the hydraulic gradient in the potentially affected USDWs, and the corresponding changes in potentiometric surface(s) and flow direction(s) rather than the discrete effect of each well. If a decision is made that corrective action is not necessary based on the determinations

above, the monitoring program required in Rule 1200-04-06-.12 shall be designed to verify the validity of such determinations.

Paragraph (6) of Rule 1200-04-06-.09 General Standards and Methods is amended by the addition of subparagraph (k) such that the subparagraph and its accompanying parts shall read:

- (k) After a cessation of operations of two years, the owner or operator shall plug and abandon the well in accordance with the plan unless he:
  - 1. Provides notice to the commissioner; and
  - 2. Describes actions or procedures, satisfactory to the Commissioner that the owner or operator will take to ensure that the well will not endanger USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the Commissioner.

Rule 1200-04-06-.09 General Standards and Methods is further amended with the addition of paragraphs (11), (12) and (13) such that the paragraphs shall read:

- (11) The Commissioner may require, by written notice on a selective well-by-well basis, an owner or operator of an injection well to establish and maintain records, make reports, conduct monitoring, and provide other information as is deemed necessary to determine whether the owner or operator has acted or is acting in compliance with T.C.A. § 69-3-101 et seq., Tennessee Water Quality Control Act or its implementing regulations.
- (12) All injection wells must be placed on a plat with the Register of Deeds by the seller of the individual properties that the injection well is located on or the injection zone is beneath. The owner/operator of the injection well shall have contractual agreement for access to the injection well at all reasonable times.
- (13) Any person owning or operating an injection well shall keep the Department advised of his or her current address and must readily accept all mail sent by the Department. For the purposes of this Rule, registered or certified mail sent with proper postage to the registered owner or operator's last known address shall be considered adequate notification regardless of whether the mail is accepted or returned unclaimed.

Authority: T.C.A. § 69-3-105.

Subparagraph (a) of paragraph (1) of Rule 1200-04-06-.10 Class I Wells is amended by deleting the phrase "unless it can be demonstrated that the wastes become nonhazardous as a result of interaction with the host rock" such that, as amended, the subparagraph shall read:

- (a) Subsurface emplacement of fluids containing hazardous waste into ground water ~~unless it can be demonstrated that the wastes become nonhazardous as a result of interaction with the host rock.~~

Subparagraph (c) of paragraph (2) of Rule 1200-04-06-.10 Class I Wells is amended by deleting it in its entirety.

- ~~(c) Class I Injection Zone Designation. Class I wells may be operated in areas where the injection zone has been specifically designated for that use only in those counties listed under 1200-04-06-.10(2)(b). The zone may be so designated provided that:~~

- ~~1. The ground water in the proposed zone has met the following criteria for designation:
  - ~~(i) The ground water in the proposed zone is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical.~~
  - ~~(ii) The ground water in the proposed zone is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption.~~~~

- ~~2. The total dissolved solids content of the ground water is more than 3,000 mg/l and it is not reasonably expected to supply a public water system.~~
- ~~3. Concurrence with the Environmental Protection Agency has been reached after a public notice has been issued regarding the proposed Class I injection zone. The public notice shall include a notice to the Environmental Protection Agency. The zone designation shall become final when the Department submits the designation in writing to the EPA Administrator, or an authorized delegate, and the Administrator or an authorized delegate has not disapproved the designation within forty five (45) days. Any disapproval by the Administrator shall state the reasons and shall constitute final EPA action for purposes of judicial review.~~

Part 3 of subparagraph (a) of paragraph (4) of Rule 1200-04-06-.10 Class I Wells is amended by deleting the second sentence such that, as amended, the part shall read:

3. The compatibility of the non-hazardous injected fluid with both native fluid and the host rock of the ~~in tended~~ intended injection zone must be demonstrated using laboratory or field data. ~~If the applicant intends to inject a hazardous waste, the applicant must demonstrate that the injected fluid becomes non-hazardous as a result of interaction with the host rock.~~

Authority: T.C.A. § 69-3-105.

The introductory text to Rule 1200-04-06-.11 Class II Wells is amended by deleting it in its entirety and substituting the following so that, as amended, the introductory text to the Rule shall read (actual changes shown in redline form):

1200-04-06-.11 Class II Wells. A permit must be obtained from the Department prior to the operation of any Class II injection well ~~except for existing Class II enhanced recovery wells and hydrocarbon storage wells~~. This requirement is in addition to and separate from any approval or regulatory procedure required by the Tennessee Oil and Gas Board, Department of ~~Environment and Conservation~~.

Subparagraph (c) of paragraph (1) of Rule 1200-04-06-.11 Class II Wells is amended by deleting it and reserving it such that, as amended, the subparagraph shall read:

- (c) ~~Reserved Class II Injection Zone designation. Class II wells may be operated in areas where the injection zone has been specifically designated for that use. The zone may be so designated if the total dissolved solids content of the ground water is greater than 3,000 ppm, it is not reasonably expected to supply a public water system and it is situated at a depth or location which makes recovery of water for drinking water uses economically or technologically impractical. The zone must be a mineral, hydrocarbon or geothermal energy producing zone, or it must be demonstrated by the permit applicant as a part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quality and location, are expected to be commercially producible. Upon Departmental review, a public notice on the zone designation will be required to include a notice to EPA. The designation shall become final if the Department submits the designation in writing to the EPA Administrator, or an authorized delegatee, and the Administrator or an authorized delegatee has not disapproved the designation within forty five (45) days. Any disapproval by the Administrator shall state the reasons and shall constitute final EPA action for purposes of judicial review.~~

Paragraph (11) of Rule 1200-04-06-.11 Class II Wells is amended by deleting it and replacing it with the following such that, as amended, the paragraph shall read (actual changes shown in redline form):

- (11) Existing Class II ~~enhanced recovery wells and hydrocarbon storage wells~~.

Class II wells in current operation upon the effective date of this rule shall file an application within 6 months of the effective date of this rule. No application fee will be required. Failure to file an application by the required date shall make the wells in violation of Rule ~~Chapter~~ 1200-04-06 and subject to the new application fee or closure.

Paragraph (11) of Rule 1200-04-06-.11 Class II Wells is further amended with the addition of subparagraphs (a), (b), (c) and (d) such that the paragraphs shall read:

- (a) An existing Class II enhanced recovery or hydrocarbon storage injection well is authorized by rule, if the owner or operator injects into the existing well within one year after the date which the State of Tennessee's UIC program is authorized under the Federal Safe Drinking Water Act and becomes effective. An owner or operator of a well which is authorized by rule pursuant to this paragraph shall re-work, operate, maintain, plug, abandon or inject into the well in compliance with applicable regulations.
- (b) Duration of well authorization by rule. Well authorization under this paragraph expires upon the effective date of a permit issued after plugging and abandonment in accordance with an approved plugging and abandonment plan pursuant to these Rules and upon submission of a plugging and abandonment report.
- (c) Prohibitions on injection. An owner or operator of a well authorized by rule pursuant to this paragraph is prohibited from injecting into the well:
  - 1. Upon the effective date of an applicable permit denial;
  - 2. Upon failure to submit a permit application in a timely manner;
  - 3. Upon failure to submit inventory information in a timely manner;
  - 4. Upon failure to comply with a request for information in a timely manner;
  - 5. Upon failure to provide alternative financial assurance;
  - 6. Forty-eight hours after receipt of the determination by the Commissioner that the well lacks mechanical integrity, unless the Commissioner requires immediate cessation; or
  - 7. Upon receipt of notification from the Commissioner that the transferee has not demonstrated financial responsibility.
- (d) Requirements. The owner or operator of a well authorized under this paragraph shall comply with the applicable requirements of this Rule. Such owner or operator shall comply with the casing and cementing requirements no later than 1 year and other requirements no later than 1 year after authorization.

Authority: T.C.A. § 69-3-105.

Rule 1200-04-06-.13 Class IV Wells is amended with the addition of paragraph (3) such that the paragraph shall read:

- (3) Wells used to inject contaminated ground water that has been treated and is being re-injected into the same formation from which it was drawn are not prohibited by this Rule if such injection is approved by EPA or the Department, pursuant to provisions for cleanup of releases under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601-9657, or pursuant to requirements and provisions under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 – 6987.

Authority: T.C.A. § 69-3-105.

Subparagraph (a) of paragraph (1) of Rule 1200-04-06-.14 Class V Wells is amended by deleting it in its entirety and substituting the following so that the subparagraph shall read:

- (a) The use of any well to dispose of water carrying human waste, household or business waste, raw sewage or the effluent from any septic tank or other sewer system of any kind, unless such well is

a subsurface fluid distribution system (SFDS) which is part of a Subsurface Sewage Disposal System (SSDS) permitted under the provisions ~~of rule 1200-1-6-.05~~ of T.C.A. §§ 68-221-401 et seq. ~~or a drip disposal system permitted pursuant to T.C.A. §§ 69-3-108 et seq.~~

Paragraph (1) of Rule 1200-04-06-.14 Class V Wells is amended by the addition of subparagraph (e) such that the subparagraph shall read:

- (e) **Motor Vehicle Waste Disposal Wells (MVWDWs) are prohibited and must be properly closed and abandoned.**

Subparagraph (b) of paragraph (2) of Rule 1200-04-06-.14 Class V Wells is amended by adding the phrase “a list of all wells owned or operated along with the following information for each well to include” after the word “supply” and before the word “the” such that, as amended, the subparagraph shall read:

- (b) The owner or operator shall within six (6) months after the promulgation of this rule supply **a list of all wells owned or operated along with the following information for each well to include** the following.

Paragraph (2) of Rule 1200-04-06-.14 Class V Wells is further amended by the addition of subparagraph (f) such that the subparagraph shall read:

- (f) **Prohibition of injection. An owner or operator of a well which is authorized by rule pursuant to this paragraph is prohibited from injecting into the well:**
  1. **Upon the effective date of an applicable permit denial;**
  2. **Upon failure to submit a permit application in a timely manner;**
  3. **Upon failure to submit inventory information in a timely manner; or**
  4. **Upon failure to comply with a request for information in a timely manner.**

Paragraph (8) of Rule 1200-04-06-.14 Class V Injection Wells is amended by the addition of subparagraph (e) such that the subparagraph shall read:

- (e) **After the effective date of this rule, the operator, if not the property owner, for all Class V injection wells shall have access to the “point of injection” for the Class V wells. This is to be maintained by easement or deed restrictions on all injection points.**

Paragraph (11) of Rule 1200-04-06-.14 Class V Wells is amended by the addition of subparagraph (e) such that the subparagraph shall read:

- (e) **Closure does not mean that the owner or operator will need to cease operations at the facility, only that the owner or operator will need to close the well. A number of alternatives are available for the disposal of waste fluids. Examples of alternatives that may be available to motor vehicle stations include: recycling and reusing wastewater as much as possible; collecting and recycling petroleum-based fluids, coolants, and battery acids drained from vehicles; washing parts in a self-contained, recirculating solvent sink, with spent solvents being recovered and replaced by the supplier; using absorbents to clean up minor leaks and spills, and placing the used materials in approved waste containers and disposing of them properly; using a wet vacuum or mop to pick up accumulated rain or snow melt, and, if allowed, connecting floor drains to a municipal sewer system or holding tank, and, if allowed, disposing of the holding tank contents through a publicly owned treatment works (“POTW”). The owner/operator should check with the POTW to see if the POTW would accept the wastes. Alternatives that may be available to owners and operators of a large-capacity cesspool include: conversion to a septic system; connection to sewer; and installation of an on-site treatment unit.**

Rule 1200-04-06-.14 Class V Wells is further amended with the addition of paragraph (12) such that the new paragraph shall read:

(12) Prohibition of fluid movement.

(a) Injection activity prohibitions

1. No injection activity can allow the movement of fluid containing any contaminant into USDWs, if the presence of that contaminant may cause a violation of any primary drinking water standard, or other health based standards, or may otherwise adversely affect the health of persons. This prohibition applies to well construction, operation, maintenance, conversion, plugging, closure or any other injection activity.
2. If the Department learns that an injection activity may endanger USDWs, the Department may require the closure of the well, a permit or permit modification, or other appropriate action.

- (b) Closure requirements. The owner/operator must close the well in a manner that complies with the above prohibition of fluid movement. Also, the owner/operator must dispose or otherwise manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well in accordance with all applicable Federal, State and local regulations and requirements.

Rule 1200-04-06-.14 Class V Wells is further amended with the addition of paragraph (13) such that the new paragraph shall read:

(13) Authorization by Rule Requirements

All Class V UIC well authorizations by rule shall comply with this rule and all conditions established by the Commissioner as necessary to fulfill the purposes of the Tennessee Water Quality Control Act, T.C.A. §§ 69-3-101 et seq., contain a description of the injection zone being authorized, and contain any necessary corrective action as stated under rule 1200-04-06-.09(5). The authorization conditions shall be set at levels to prevent adverse effects to persons utilizing the ground water resource after consideration of at least the following factors: any guidelines set for certain pollutants by U.S.E.P.A.; the flow characteristics of ground water risk to humans; and the risk of migration. The following conditions, subparagraphs (a) through (n), apply to all Class V UIC authorizations. All conditions applicable to all authorizations shall be incorporated into the authorizations either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the authorizations.

- (a) The applicant must comply with all conditions of this authorization and all applicable laws and regulations. Any authorization noncompliance constitutes a violation of the Tennessee Water Quality Control Act and is grounds for enforcement action; for authorization termination, revocation and reissuance, or modification; or for denial of an authorization renewal application.
- (b) If the applicant wishes to continue an activity regulated by this authorization after the expiration date of this authorization, the applicant must apply for and obtain a new authorization prior to expiration of this authorization.
- (c) It shall not be a defense for an owner or operator in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of this rule.
- (d) The owner or operator shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from non-compliance with this rule.
- (e) The owner or operator shall at all times properly operate and maintain all facilities and systems of related appurtenances which are installed or used by the applicant to achieve compliance with the conditions of this rule and authorization. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this rule.

- (f) The authorization may be modified, revoked and reissued, or terminated for cause. The filing of a request by the owner or operator for a modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any authorization condition.
- (g) This rule and the authorizations issued under it do not convey any property rights of any sort, or any exclusive privilege.
- (h) The owner or operator shall furnish to the Department, within a time specified, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the authorization, or to determine compliance with this rule. The applicant shall also furnish to the Department, upon request, copies of records required to be kept by this rule or the authorization.
- (i) The owner or operator shall allow Department personnel, or an authorized representative of the Department, upon the presentation of credentials to:
  - 1. Enter upon the owner or operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this rule or the authorization;
  - 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this rule or the authorization;
  - 3. Inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this rule or the authorization; and
  - 4. Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by the Tennessee Water Quality Control Act or these rules, any substances or parameters at any location.
- (j) Monitoring and records.
  - 1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The owner or operator shall monitor injection fluids, injection operations, and local ground water supplies, in accordance with the requirements for the applicable class of well stated in this rule.
  - 2. The owner or operator shall retain records of all monitoring information, including the following:
    - (i) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this authorization, and records of all data used to complete the application for the authorization under this rule, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Department at any time; and
    - (ii) The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures. The Department may require the owner or operator to deliver the records to the Department at the conclusion of the retention period.
  - 3. Records of monitoring information shall include:
    - (i) The date, exact place, and time of sampling or measurements;
    - (ii) The individual(s) who performed the sampling or measurements;

- (iii) The date(s) analyses were performed;
  - (iv) The individual(s) who performed the analyses;
  - (v) The analytical techniques or methods used; and
  - (vi) The results of such analyses.
- (k) All applications, reports, or information submitted to the Department shall be signed and certified.
- (l) Reporting requirements.
1. **Planned Changes.** The owner or operator shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility.
  2. **Anticipated noncompliance.** The owner or operator shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with authorization requirements.
  3. **Transfers.** See paragraphs (6), (7), (8) and (9) of Rule 1200-04-06-08.
  4. **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this rule or the authorization.
  5. **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.
  6. **Twenty-four hour reporting.** The owner or operator shall report any noncompliance which may endanger health or the environment, including:
    - (i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to USDWs; or
    - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.
- Any such information shall be provided orally within 24 hours from the time the owner or operator becomes aware of the circumstances. A written submission shall also be provided within 72 hours of the time the owner or operator becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.
7. **Other noncompliance.** The owner or operator shall report all instances of noncompliance not reported under parts 1, 4, 5, and 6 of this subparagraph, at the time monitoring reports are submitted. The reports shall contain the information listed in part 6 of this subparagraph.
  8. **Other information.** Where the owner or operator becomes aware that the owner or operator has failed to submit any relevant acts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, the owner or operator shall promptly submit such facts or information.
- (m) Requirements prior to commencing injection. Except for all new wells authorized by an area permit under rules 1200-04-06-.11 and 1200-04-06-.12, a new injection well may not commence injection until construction is complete, and

1. The owner or operator has submitted notice of completion of construction to the Director; and
2. (i) The Department has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of this rule and the authorization; or
  - (ii) The owner or operator has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in part 1 of this subparagraph, in which case prior inspection or review is waived and the owner or operator may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well.
- (n) The owner or operator shall notify the Department at such times as this rule or the authorization requires before conversion or abandonment of the well, or in the case of area permits, before closure of the project.
- (o) A Class V authorization may include, conditions to insure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. Where the Department's review of an application indicates that the applicant's plan is inadequate, the Department may require the applicant to revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the authorization.

Authority: T.C.A. § 69-3-105.

Paragraph (1) of Rule 1200-04-06-.16 Fees for Class II Injection Wells is amended by changing the permit renewal fee from \$1,500.00 to \$1,000.00 such that the paragraph shall read:

- (1) Permit Application Fees. Applications for permits to operate a Class II injection well shall be accompanied by the following fees:

|   |                                  |
|---|----------------------------------|
| Application review fee.....             | \$2,500.00                       |
| Permit renewal fee (every 5 years)..... | <del>\$1,500.00</del> \$1,000.00 |

Paragraph (2) of Rule 1200-04-06-.16 Fees for Class II Injection Wells is amended by changing the annual maintenance fee from \$1,000 to \$500 such that the paragraph shall read:

- (2) Operational Fees. Owners or operators of Class II injection wells shall pay the following fees to the Department:

|   |                         |
|---|-------------------------|
| Annual maintenance fee.....                 | <del>\$1000</del> \$500 |
| Permit modification and reissuance fee..... | \$ 250                  |

Authority: T.C.A. §§69-3-105.

Paragraph (1) of Rule 1200-04-06-.18 Fees for Class V Injection Wells is amended with the addition of paragraphs (g) and (h) such that the paragraphs shall read:

- (g) Change of ownership..... \$75
- (h) Modification of recharge point ..... \$350 (per project)

Authority: T.C.A. § 69-3-105.