

1501:9-3-07 **Operating, monitoring and reporting of saltwater injection wells.**

The following provisions shall apply to the operation of all saltwater injection wells:

- (A) A well completion record in accordance with section 1509.10 of the Revised Code and Chapter 1501:9-3 of the Administrative Code, shall be filed with the division within thirty days after completion of or conversion to a saltwater injection well. This record shall include results of initial testing of construction as described in paragraph (C) of rule 1501:9-3-05 of the Administrative Code.
- (B) The injection well owner shall notify the appropriate ~~mineral~~ division of oil and gas resources management inspector when injection is to commence. A division office shall be notified when the appropriate inspector cannot be contacted.
- (C) Under no circumstances shall liquids or waste matter from any source, other than saltwater from oil and gas operations or standard well treatment fluid, be injected into any injection well for which a permit is issued under Chapter 1501:9-3 of the Administrative Code.
- (D) The maximum allowable operating pressure for any injection well shall be determined by one of the following methods:
- (1) The formula $pm = (0.75 - pg)d$; where pm equals the maximum allowable injection pressure gradient (psi/ft), and d equals the depth to the highest perforation or the top of the open formation or injection zone; or
 - (2) Such other formula or test found to be accurate as applied to the facts presented in an application and approved by the division.
- (E) The injection well owner shall monitor injection pressures and injection volumes for each saltwater injection well on a daily operational basis with average and maximum pressures and volumes compiled monthly and filed annually with the division on a form supplied by the division.
- (F) The annulus between the casing and tubing shall be monitored during injection of fluids at least monthly at a pressure, as noted on the permit, sufficient to detect leaks or as otherwise required by the chief. Monitoring results for wells permitted prior to the effective date of this rule shall be reported to the division annually on a form supplied by the division. All wells permitted after the effective date of this rule shall be continuously monitored using a method acceptable to the chief. All data from such monitoring shall also be available for review by the division at any time and the chief may require the injection well owner to submit the data to the division on a form supplied by the division.

(G) The injection well owner shall install an automatic shut-off device set to terminate injection operations if the permitted maximum allowable surface injection pressure on the injection pump is exceeded.

~~(G)~~(H) In the event the monitoring in paragraph (F) of this rule is not feasible as determined by the chief, the injection well owner shall show mechanical integrity once every five years. Prior to the commencement of any mechanical integrity test, the injection well owner shall notify the appropriate ~~mineral~~division of oil and gas resources management inspector, or a division office when the appropriate ~~injection~~injection inspector cannot be contacted. All records of tests shall be retained by the injection well owner for a period of at least five years or until a subsequent mechanical integrity test is performed. Results of all mechanical integrity tests shall be recorded on a form provided by the division and shall be filed with the division within thirty days after the completion of the mechanical integrity test. Mechanical integrity shall be shown by one or more of the following methods:

- (1) The casing, tubing, and packer shall be tested by pressurizing the annulus between the ~~tubing~~subtubing and the casing outside the tubing to an amount equal to the maximum allowable injection pressure as determined in paragraph (D) of this rule or to a pressure of three hundred pounds per square inch (psi), whichever is greater, for a duration of fifteen minutes with no more than five per cent decline in pressure unless otherwise approved by the division;
- (2) Tracer surveys;
- (3) Noise logs;
- (4) Temperature surveys; or
- (5) Any other logs or tests considered effective by the chief.

~~(H)~~(I) When mechanical failures or downhole problems cause contamination of the land, surface waters, or subsurface waters, the injection well owner shall cease all injection operations immediately until the chief determines that the problems have been corrected. The chief may require the injection well owner to furnish a written plan for testing or repairing the well. Within five days of receipt, the chief shall review the plan and either accept, modify, or if the plan is inadequate, order necessary corrective action. The injection well owner shall submit a description of the incident, the actions taken to correct the situation, and the results of those actions on the next required annual report as described in ~~paragraph~~paragraph (E) and (F) of this rule and on the next required report as described in paragraph (F) of

this rule.

(J) The division shall have the authority to sample injection fluids at any time during injection operations.

(K) Any well which is or becomes incapable of ~~injection~~ injecting fluids shall be plugged in accordance with sections 1509.13 and 1509.15 of the Revised Code unless written permission is granted by the chief. If the chief finds that a well should be plugged, ~~he~~ the chief shall notify the injection well owner to that effect by order, in writing, and shall specify in such order a reasonable time within which to comply. No injection well owner shall fail or refuse to plug a well within the time specified in the order. Each day on which such a well remains unplugged thereafter constitutes a separate offense.

Effective: 07/10/2012

CERTIFIED ELECTRONICALLY

Certification

07/10/2012

Date

Promulgated Under: 119.03
Statutory Authority: 1509.03, 1509.10, 1509.12, 1509.13, 1509.15, 1509.22
Rule Amplifies: 1509.10, 1509.12, 1509.13, 1509.15, 1509.22
Prior Effective Dates: 11/6/67, 6/1/82, 5/31/98, 4/15/04