



Ohio Administrative Code Rule 1501:9-3-11 Annular disposal.

Effective: April 15, 2004

(A) Approval required.

(1) Disposal of brine into any annular space of any well shall be prohibited except where approved in writing by the chief and performed in accordance with this rule. Said approval shall be subject to conditions required by the chief as are necessary to protect surface and subsurface soils and waters and to ensure the conservation of other natural resources.

(2) Each owner or his agent shall give the appropriate division inspector at least six hours' notice in advance of the time the cementing, of casing and hookup for annular disposal are to be performed. A division office shall be notified when the appropriate inspector cannot be contacted. Said work shall be done pursuant to the instructions of a representative of the division in accordance with Chapter 1509. of the Revised Code and the rules adopted thereunder. If at least six hours' notice is not given, annular disposal will not be authorized on the well.

(3) Approval for annular disposal shall be granted by the chief if the construction requirements in paragraph (B) of this rule have been satisfied and the mechanical integrity of the well has been demonstrated to the chief in accordance with paragraph (C)(2) of this rule.

(4) The chief may rescind approval for annular disposal where the owner or his agent fails to conduct annular disposal operations in accordance with Chapter 1509. of the Revised Code and the rules adopted thereunder.

(B) Construction requirements. Any well authorized to use annular disposal shall be constructed as follows:

(1) The surface casing of any annular disposal well permitted after the effective date of this rule shall be set and sealed with cement in accordance with the following standards:



(a) Surface casing requirements;

(i) Surface casing shall be set at least fifty feet below the base of the deepest underground source of water containing less than ten thousand mg/l total dissolved solids;

(ii) Surface casing shall be free of all apparent defects including but not limited to bent joints, split seams, stripped threads, and holes;

(iii) No cement baskets shall be used above the deepest underground source of drinking water unless a cement bond log is run to verify a continuous seal from the casing seat to the surface; and

(iv) No well shall be approved for annular disposal unless a division representative is present while casing is installed and cemented or unless an affidavit is submitted by the operator attesting to conditions subject to the requirements of paragraph (A)(2) of this rule.

(b) Cement requirements:

(i) Cement shall be mixed with fresh water;

(ii) Cement shall be circulated to surface by the pump and plug method;

(iii) The density of the cement circulated prior to dropping the top plug shall range within five per cent, plus or minus, of the "American Petroleum Institute" optimum density standard for the type of cement used;

(iv) The record of all cement and mix water additives and percentages by weight of mix water shall be included on the cement ticket;

(v) A copy of the cement ticket shall be supplied to the appropriate division inspector;

(vi) The cement head shall not be removed until the cement reaches a compressive strength of five hundred pounds per square inch (psi); and



(vii) Cement shall provide a continuous seal from the casing seat to the surface.

(2) Any annular disposal well being used for disposal of brine produced on an adjacent lease shall have surface-casing sealed by circulating cement to the surface.

(3) All brine shall be transported in a liquid tight piped system.

(4) The connection between the brine pipeline and the annulus of the annular disposal well shall be visible and accessible for inspection by the division.

(5) All annular systems shall be liquid tight.

(C) Mechanical integrity.

(1) An annular disposal well has mechanical integrity if:

(a) There is no significant leak in the surface casing; and

(b) There is no significant fluid movement into an underground source of drinking water through channels adjacent to the well bore.

(2) Prior to obtaining approval from the chief for the use of annular disposal and prior to commencement of injection of brine, each owner or his agent shall demonstrate that the well has mechanical integrity in the following manner:

(a) Cement records shall be accepted as demonstration that there is no significant fluid movement into an underground source of drinking water through channels adjacent to the injection well bore if all requirements of paragraph (B)(1) of this rule have been satisfied; and

(b) After the well has been drilled to the depth attained prior to running production casing, a temporary plug consisting of either a packer run on tubing, or an electric bridge plug run on a wireline, shall be set at the base of the surface casing. The surface casing shall be filled with fresh water, pressurized to three hundred psi and shut in. If the pressure of three hundred psi is maintained



for fifteen minutes with no more than a five per cent decline, the demonstration that there is no significant leak in the casing is satisfied; or

(c) The positive differential gas pressure test may be performed as a demonstration of mechanical integrity; or

(d) Such other test approved by the chief.

(3) The owner or his agent shall demonstrate mechanical integrity for all annular disposal wells at least once every five years by use of a method approved by the chief. By written notice, the chief may require the owner or his agent to comply with a schedule describing when such demonstrations shall be made.

(D) Volume limitations.

(1) Any annular disposal well with surface casing sealed by circulating cement to the surface may be used to dispose of a maximum average volume of ten barrels a day per year.

(E) Operating and monitoring requirements.

(1) Well identification. The following information shall be posted in a conspicuous place on or near the storage tank(s) of any annular disposal operation: owner's name, lease name, well number, permit number, county, township, and emergency telephone number. In addition, the permit number shall be displayed in a conspicuous place on or near the wellhead of any annular disposal well.

(2) If the chief has reason to believe that mechanical failures have occurred or that downhole problems exist at an annular disposal well that causes or could reasonably be anticipated to cause contamination of the land, surface waters, or subsurface waters, the chief may suspend the annular disposal operations until the owner demonstrates to the chief that the mechanical failures or downhole problems have been corrected. If the chief suspends annular disposal operations under this rule, the chief may require the owner or operator to test the well for mechanical failure or other problems. Any test conducted or corrective action taken shall be approved by the chief and conducted under the chief's supervision.



(3) If mechanical failures or downhole problems cause or could reasonably be anticipated to cause contamination of surface or subsurface soils or waters, the annular disposal well owner or operator shall immediately cease all annular disposal operations and immediately notify the division. Within five days of the incident, the owner or operators shall submit to the chief a written report which shall include a detailed description of the incident, the actions taken to correct the situation and the results of such action.

(4) A flow meter or other quantitative monitoring method shall be required if annular disposal is used.

(5) No pressure, except that created by the force of gravity, shall be applied to brine disposed of into an annular space unless otherwise approved by the chief.

(6) Disposal of brine transported to the annular disposal well by any means other than pipeline, either on lease or across lease lines, shall be prohibited.

(7) Under no circumstances shall liquids or waste matter from any source, other than brine or other waste substances resulting, obtained, or produced in connection with oil or gas drilling, exploration, or production on the same lease or, where authorized, on adjacent leases, be injected into any annular disposal well.

(8) The owner shall notify the chief in writing within fifteen days upon abandonment of annular disposal operations.

(9) When an annular disposal well becomes incapable of producing oil or gas, all annular disposal operations shall cease and the well shall be plugged and abandoned in accordance with Chapter 1509. of the Revised Code and any rules adopted thereunder.

(F) Reporting and recordkeeping requirements.

(1) 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 any annular disposal well.

(2) The owner shall keep an accurate record of the volume of fluid injected and a copy of such record shall be furnished to the chief upon request. Such owner shall file an annual report with the chief, on or before the fifteenth day of April, setting forth the total volume of fluid injected during the preceding calendar year. Such report shall also contain, if applicable, a description of any mechanical failures or downhole problems, the actions taken to correct the situation, and the results of such actions as described in paragraph (E)(3) of this rule.

(3) The owner shall retain mechanical integrity test data and monitoring records for a period of not less than five years or until a subsequent mechanical integrity test is performed.

(G) Public notification and participation.

(1) All annular disposal applications submitted to the division shall be listed in the weekly circular as described in section 1509.06 of the Revised Code. Such listing shall contain at least the following information:

(a) The name and address of the applicant;

(b) The location of the proposed well;

(c) The fact that further information may be obtained by contacting either the applicant or the division;

(d) The address and phone number of the division; and

(e) The fact that for full consideration all comments or objections must be received by the division, in writing, within twenty calendar days of the date the weekly circular was received or posted.

(2) The weekly circular shall be made available to the general public or any other interested party at each county engineer's office where the proposed well is located and must be posted at the engineer's office and at each division office. In addition, the circular shall be available to subscribers or to



anyone that requests the information for a minimal printing and administrative cost.

(3) Comments and objections.

(a) Any person desiring to comment or to submit an objection with reference to an application for a permit to construct, convert to, or operate an annular disposal well shall file such comments or objections, in writing, with the "Underground Injection Control Section, division of mineral resources management, Fountain Square, Columbus, Ohio 43224." Such comments or objections shall be filed with the division no later than twenty calendar days from receipt of the circular at the county engineer's office or division offices.

(b) If no objections are received within the twenty-day period, the chief shall consider that no objection exists and shall issue a permit unless he finds that the application does not comply with this rule or other applicable laws and rules, is in violation of law, jeopardizes public health or safety, or is not in accordance with good conservation practices.

(c) If an objection is received, the chief shall rule upon the validity of the objection. If, in the opinion of the chief, such objection is not relevant to the issues of public health or safety, or to good conservation practices, or is without substance and the permit otherwise meets all other requirements of this rule, a permit shall be issued. If the chief considers any objection to be relevant to the issues of public health or safety, or to good conservation practices, or to have substance, a hearing may be called within thirty days of receipt of the objection. Such hearing shall be held at the central office of the division or other location designated by the chief. Notice of the hearing shall be published in a newspaper of general circulation and sent by the chief to the applicant and to the person who filed the objection.

(d) If the chief finds, after hearing, and upon consideration of the evidence and the application, that the following conditions have been met, the application shall be approved and a permit conditionally issued; otherwise, the chief shall deny the permit by order:

- (i) The application complies with the requirements of Chapter 1501-9-3 of the Administrative Code;
- (ii) The method of injection proposed in the application will not be in violation of law; and



(iii) The proposed method of injection will not jeopardize public health or safety, or the conservation of natural resources.

(e) The chief shall issue a permit granting annular disposal or an order denying annular disposal within fifteen days after a hearing.

(f) A response to the comments as a final division action shall be prepared summarizing the substantive comments received and the disposition of the comments. These comments shall be available for viewing by the general public at the division's central office.