

3745-34-15

**Class I permit to operate applications.**

In addition to the information required in accordance with rules 3745-34-12 and 3745-34-13 of the Administrative Code, the owner shall include the following in an application for a permit to operate a class I injection well:

(A) The results of the formation testing program, including a completion report for the injection well that includes all the following information:

(1) Drilling and completion reports including:

(a) Daily reports;

(b) Driller's log or record of strata;

(c) Casting and tubing records, including the pipetallys;

(d) Cement records;

(e) Details of centralizers, scratchers, and other such information; and

(f) Engineering drawings of the following:

(i) Well completion;

(ii) Packer assembly and setting; and

(iii) Well head, including the parts list.

(2) Testing records including the following:

(a) Well testing:

(i) Static fluid level and fluid pressure;

(ii) Bottom hole temperature and pressure;

(iii) Injectivity test result, permeability determination, reservoir limits, and storage;

(iv) Fracture pressure;

(v) Spinner or tracer surveys; and

- (vi) Casing testing results including a demonstration of mechanical integrity pursuant to rules 3745-34-34 and 3745-34-58 of the Administrative Code.
- (b) Laboratory testing results:
- (i) Cores for permeability;
  - (ii) Cores for compatibility;
  - (iii) Cores for porosity; and
  - (iv) Descriptive core analysis and sieve analysis.
- (3) The data from the formation testing program including the analysis of the chemical, physical and radiological characteristics of and other information on the receiving formation.
- (B) The final report of the seismic reflection data survey in compliance with rule 3745-34-40 of the Administrative Code.
- (C) A plan for conducting a passive seismic monitoring program if the director determines that the operation of the class I injection well may cause seismic disturbances.
- (D) The proposed injection procedure including all of the following:
- (1) Average and maximum daily rate and volume of the substance(s) to be injected.
  - (2) Average and maximum injection pressure.
- (E) A description of all of the following:
- (1) The chemical composition and physical properties of the substance(s) to be injected. This should include the source and an analysis of the chemical (including corrosiveness), physical (including density and temperature), radiological and biological characteristics of the injection fluid.
  - (2) The compatibility of substance(s) to be injected with the fluids in the injection zone and minerals in both the injection zone and confining zone.
- (F) A determination accompanied by supporting documentation describing all areas around the well where formation pressures are predicted by the

applicant to be increased due to the operation of the well and an evaluation of whether any resulting potential exists for contamination of any underground source of drinking water or migration of substances injected into the well outside the anticipated injection zone. The determination shall be made through the use of an hydraulic model acceptable to the director.

- (G) A descriptive report interpreting the results of logs and tests performed during the drilling and construction of the injection well shall be submitted. This report shall be prepared by a knowledgeable log analyst. At a minimum, this report shall contain the applicable information required by paragraph (D) of rule 3745-34-37, and rule 3745-34-55 of the Administrative Code. This report shall include the final prints of all logs run on the well and the results of the directional and inclinational survey.
- (H) Contingency plans to cope with all shut-ins or well failures so as to prevent migration of fluids into any underground source of drinking water.
- (I) A plan for ensuring the annual review and testing of the integrity of the well casing and associated well features. This plan shall comply with the requirements of rule 3745-34-34 of the Administrative Code. Renewal permit applications shall include results of all mechanical integrity tests performed on the injection well since the issuance of the previous permit. If the results of the mechanical integrity tests have already been submitted to Ohio EPA they may be included in the permit application by reference.
- (J) A plan for monitoring the lowermost underground source of drinking water near the injection well.
- (K) A plan for plugging and abandonment pursuant to the applicable provisions of paragraph (B)(5) of rule 3745-34-27, rule 3745-34-36, paragraph (C) of rule 3745-34-39, rule 3745-34-60, and rule 3745-34-61 of the Administrative Code. The plugging and abandonment plan shall including all of the following information:
  - (1) The type and number of plugs to be used;
  - (2) The placement of each plug including the elevation of the top and bottom;
  - (3) The type and grade and quantity of cement to be use;
  - (4) The method for placement of the plugs; and
  - (5) The procedure to be used to meet the applicable requirements of paragraph (B)(5) of rule 3745-34-27, rule 3745-34-36, paragraph (C) of rule 3745-34-39, rule 3745-34-60, and rule 3745-34-61 of the Administrative Code.

- (L) Plans (including maps) for meeting the applicable testing and monitoring requirements of rules 3745-34-38 and 3745-34-57 of the Administrative Code; and
- (M) If hazardous waste is to be injected and is generated at the same facility where the injection well will be placed, provide a certification that:
  - (1) The generator of the hazardous waste has a program to reduce the volume or quantity and toxicity of such waste to the degree determined by the generator to be economically practicable; and
  - (2) Injection of the waste is that practicable method of disposal currently available to the generator which minimizes the present and future threat to human health and the environment.
- (N) A report submitting the applicable information required by and demonstrating compliance with the applicable requirements of rules 3745-34-37, 3745-34-54, and 3745-34-55 of the Administrative Code.
- (O) Procedures and forms for collecting and submitting the information required by rule 3745-34-58 of the Administrative Code.

Replaces: Part of 3745-34-16

Effective: 04/23/2009

R.C. 119.032 review dates: 04/23/2014

Promulgated Under: 119.03

Statutory Authority: 6111.043

Rule Amplifies: 6111.043

Prior Effective Dates: 7/25/84, 9/15/92, 1/24/00, 10/17/03