



Ohio Administrative Code

Rule 3745-34-60 Closure.

Effective: December 16, 1991

(A) The owner or operator of a class I hazardous waste injection well shall prepare, maintain, and comply with a plan for closure of the well that meets the requirements of this rule, is in compliance with rule 3745-34-09 of the Administrative Code and is acceptable to the director. The owner or operator shall implement the approved closure plan upon termination of a permit or the cessation of injection activities:

(1) The owner or operator of a class I hazardous waste injection well shall submit the plan as a part of the permit application and, upon approval by the director, such plan shall be a condition of any permit issued.

(2) The owner or operator of a class I hazardous waste injection well shall submit any proposed significant revision to the method of closure reflected in the closure plan for approval by the director no later than the date on which notice of closure is required to be submitted to the director under this rule.

(3) The closure plan shall assure continuing financial responsibility as required by rule 3745-34-09 of the Administrative Code.

(4) The closure plan shall include the following information:

(a) The type and number of plugs to be used; and

(b) The placement of each plug including the elevation of the top and bottom of each plug; and

(c) The type, grade, and quantity of material to be used in plugging; and

(d) The method of placement of the plugs; and



- (e) Any proposed test or measure to be made; and
 - (f) The amount, size, and location (by depth) of casing and any other materials to be left in the well;
and
 - (g) The method and location where casing is to be parted, if applicable; and
 - (h) The procedure to be used to meet the requirements of this rule; and
 - (i) The estimated cost of closure; and
 - (j) Any proposed test or measure to be made.
- (5) An owner or operator of a class I hazardous waste injection well who ceases injection temporarily, may keep the well open provided he:
- (a) Has received prior authorization from the director; and
 - (b) Has submitted a plan to the director, for approval, that the owner or operator will follow to ensure that the well will not endanger USDWS during the period of temporary disuse. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the director.
- (6) The owner or operator of a class I hazardous waste injection well that has ceased operations for more than two years shall notify the director thirty days prior to resuming operation of the well.
- (B) The owner or operator of a class I hazardous waste injection well shall notify the director at least sixty days before closure of a well. At the discretion of the director, a shorter notice period may be allowed.
- (C) Within sixty days after closure or at the time of the next quarterly report (whichever is sooner) the owner or operator of a class I hazardous waste injection well shall submit a closure report to the director. If the quarterly report is due less than fifteen days after completion of closure, then the



report shall be submitted within sixty days after closure. The report shall be certified as accurate by the owner or operator and by the person who performed the closure operation (if other than the owner or operator). Such report shall consist of either:

(1) A statement that the well as closed in accordance with the closure plan previously submitted and approved by the director; or

(2) Where actual closure differed from the plan previously submitted, a written statement specifying the differences between the previous plan and the actual closure.

(D) Standards for well closure.

(1) Prior to closing a class I hazardous waste injection well, the owner or operator shall observe and record the pressure decay for a time specified by the director. The director shall determine whether the injection activity has conformed with predicted values by analysis of the pressure decay and the transient pressure observations conducted pursuant to rule 3745-34-57 of the Administrative Code.

(2) Prior to well closure, the owner or operator of a class I hazardous waste injection well shall conduct appropriate mechanical integrity testing to ensure the integrity of that portion of the long string casing and cement that will be left in the ground after closure. Testing methods may include:

(a) Pressure tests with liquid or gas; or

(b) Radioactive tracer surveys; or

(c) Noise, temperature, pipe evaluation, or cement bond logs; or

(d) Any other test required by the director.

(3) Prior to well closure, the well shall be flushed with a buffer fluid.

(4) Upon closure, a class I hazardous waste well shall be plugged with cement in a manner that will not allow the movement of fluids into or between USDWs.



- (5) Placement of the cement plugs shall be accomplished by one of the following:
- (a) The balance method; or
 - (b) The dump bailer method; or
 - (c) The two-plug method; or
 - (d) An alternate method, approved by the director, that will reliably provide a comparable level of protection.
- (6) Each plug used shall be appropriately tagged and tested for seal and stability before closure is completed.
- (7) The well to be closed shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method approved by the director, prior to the placement of the cement plug(s).