



## Ohio Administrative Code Rule 1501:9-11-07 Materials.

Effective: June 30, 2024

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(A) Wells to be plugged or plugged back with cement include all of the following:

(1) A well drilled with rotary tools;

(2) A Class II brine injection well regulated under Chapter 1509. of the Revised Code and Chapter 1501:9-3 of the Administrative Code;

(3) An enhanced recovery well regulated under Chapter 1509. of the Revised Code and Chapter 1501:9-5 of the Administrative Code;

(4) A Class III solution mining well regulated under Chapter 1501:9-7 of the Administrative Code;

(5) A well associated with underground storage of natural gas; and

(6) A well drilled to extract natural or artificial brine, or oil field waters.

(B) A person, with the approval of the chief, may plug a cable tool drilled well with either cement or approved prepared clay.

(C) Cement used to plug a well or plug back a well may only be cement manufactured to meet the standards of API "10A Specification for Cements and Materials for Well Cementing" - or ASTM "C150/C150M/C595 Standard Specification for Portland Cement" or is otherwise approved by the chief in writing. The chief may disapprove or suspend use of a cement that is found not to meet the objectives of this rule.

(D) A cement slurry has to attain a minimum compressive strength of five hundred pounds per square inch after twenty-four hours when tested in accordance with API standards established in "R.P. 10 B-2 Recommended Practice for Testing Well Cements." If a pozzolan cement mixture is



used, pozzolanic materials cannot exceed fifty per cent by volume of a cement blend.

(E) A cement slurry has to be mixed in a manner that ensures consistent and optimum slurry density. Cement slurry systems are to be mixed to standards contained in commonly accepted oil and gas industry engineering handbooks that are based on tests conducted in accordance with standards found in API Specification 10A as referenced in paragraph (C) of this rule. A person may only propose to use a cement slurry system not found in a commonly accepted oil and gas industry engineering handbook, if the person provides laboratory data that defines optimum properties based upon tests conducted in accordance with API Specification 10A as referenced in paragraph (C) of this rule. The density of a cement slurry may only be based upon a laboratory free fluid separation test demonstrating an average fluid loss of no more than three milliliters per two hundred fifty milliliters of cement tested in accordance with API "RP 10 B-2 Recommended Practice for Testing Well Cement."

(F) The chief may approve the use of a fine grout that is able to attain a minimum compressive strength of five hundred pounds per square inch after twenty-four hours when tested in accordance with API standards established in "R.P. 10 B-2 Recommended Practice for Testing Well Cements" at a test temperature within ten degrees Fahrenheit of the formation equilibrium temperature of the cemented interval.

(G) A person has to ensure that the cement mix water quality and chemistry is compatible for the cement slurry design.

(H) The chief will evaluate sources of prepared clay to determine whether the clay satisfies the standards of this rule. The chief will approve prepared clay sources based upon tests demonstrating that the material has a clay content of not less than forty per cent and sand or greater size content not exceeding thirty per cent. For purposes of the evaluation, clay means the same as in rule 1501:9-11-01 of the Administrative Code. The division will collect a composite sample of material from the clay seam, stockpile, or bagged product that is deemed representative of the source material. The division will seal, label, and deliver the sample to a qualified laboratory for testing. Upon receipt of the analysis, the division will inform the person that owns the clay mining or processing operation whether the sample meets applicable standards and provide a copy of the analysis. In addition to meeting the grain size standards, the person that owns an approved clay mining or processing



operation shall process the material and store the material in a dry condition for delivery. The division will maintain an updated list of approved prepared clay sources and post the list on the division's website.

(I) A person may only place materials or substances in a wellbore that have been approved by the chief.