10 CSR 23-6.050 Plugging of Test Holes. The Board is amending the Division name, chapter name, amending section (1), (2), and (3) and adding a new section (4).

PURPOSE: This amendment improves readability by removing unnecessary language and clarifies the type and amount of grout plug required for these types of wells to bring them in line with industry standards.

(1) All test holes, except those that are converted to other types of wells are to be plugged in accordance with this chapter within sixty (60) days from the date that the well was drilled. [Extensions of this time limit are available on a case-by-case basis from the division.] Submit plugging registration records pursuant to section 256.614.1, RSMo. Test holes are exempt from submitting construction certification records.

(A) Plugging the Test Hole.

1. Test holes with no surface casing.

A. Test holes must be filled with grout via tremie to within two feet (2') of the ground surface. If the Davis Formation is penetrated, an expanding packer must be placed in the bottom portion of the formation and grouted to within two feet (2') of the surface.

B. The top two feet (2') of hole must be filled with soil.

C. A registration report form must be submitted to the division which documents the method of plugging the test hole.

A. Fill the test hole from total depth to within two feet (2') of ground surface with grout.

B. If the Davis Formation is penetrated, a grout plug shall extend from the bottom of the formation to within two feet of ground surface.

C. A mechanical packer may be installed at the bottom of the Davis Formation or emplace clean fill from total depth to the bottom of the Davis Formation to hold the grout plug in place.

D. Fill the top two feet of hole with soil.

2. Test holes with removable surface casing pipe.

A. If the Davis Formation is penetrated, an expanding packer must be set in the bottom portion of the formation.

B. The hole must be filled with grout from the packer to the bottom of the interior casing pipe via tremie pipe. This grout plug must extend from near the bottom of the Davis Formation to at least fifty feet (50') above the top of the Davis Formation.
C. The hole must be backfilled with chlorinated clean fill such as varied sized agricultural lime, gravel or sand to the base of the surface casing pipe, while the interior casing is being pulled.

D. A fifty-foot (50')-grout plug must be pumped through the surface casing pipe as it is being removed, filling the hole to the top of bedrock.

E. Chlorinated clean fill must be used to backfill the hole above the upper plug while the surface casing pipe is being removed. The clean fill must extend from the top of the grout plug to within two feet (2') of the surface.

F. The top two feet (2') of the hole must be filled with on-site soil.

G. A registration report form must be submitted to the division which documents the method of plugging.

[H. The test hole may be filled from total depth to surface with grout. ]

A. Remove the surface casing and any interior casing if used.

B. Fill the test hole from total depth to within two feet (2') of ground surface with grout.

C. If the borehole has collapse potential, add grout as casing is withdrawn.

D. If the Davis Formation is penetrated, a grout plug shall extend from the bottom of the formation to within two feet of ground surface.

E. A mechanical packer may be installed at the bottom of the Davis Formation or emplace clean fill from total depth to the bottom of the Davis Formation to hold the grout plug in place.

F. Fill the top two feet of hole with soil.

3. Test holes with grouted nonremovable surface casing.

[A. Cut off casing three feet (3') below ground surface making a hole at least two feet (2') in diameter larger than the surface casing.

B. Fill the hole from total depth to within two feet (2') of the surface with grout.

C. Fill remaining hole with soil.

D. Submit a registration report form to the division. ]

A. Cut the casing off two feet (2') below ground surface or three feet in in an agricultural area. If bedrock is encountered, cut the casing flush with the top of bedrock.

B. Fill the test hole from total depth to within two feet (2') of ground surface with grout.

C. If the Davis Formation is penetrated, a grout plug shall extend from the bottom of the formation to within two feet (2') of ground surface.
D. A mechanical packer may be installed at the bottom of the Davis Formation or emplace clean fill from total depth to the bottom of the Davis Formation to hold the grout plug in place.

E. Fill the top two feet of hole with soil.

(2) Test Holes Drilled to Expand Quarrying and Surface Mining Operations. When test holes are drilled in the process of expanding quarrying and surface mining operations and are destroyed within one (1) year by the advance of the mine or quarry, they are required to be plugged by only inserting a temporary surface plug into the hole which will prevent surface water from entering the hole. Reporting requirements are not required for these temporary holes. If these test holes are drilled deeper than the quarry or mine floor, they must be plugged from the mine floor to the total depth of the hole with approved grout. If these holes are not destroyed by the mining process within one (1) year then the requirements of subsection (1)(A) must be met. Extensions of this time limit will be considered on a case-by-case basis by the division.

(2) Test holes drilled to expand quarrying and surface mining operations

(A) Test holes completely destroyed within one (1) year of the advance of the mine or quarry shall have a ten foot (10’) surface grout plug and are exempt from plugging registration requirements.

(B) Test holes that are not destroyed within one (1) year of the advance of the mine or quarry are subject to plugging requirements pursuant to 10 CSR 23-6.050(1).

(C) Test holes that penetrate the quarry or mine floor which are not completely destroyed by the quarry or mine operation shall be plugged with grout from total depth to the bottom of the quarry or mine and are subject to plugging registration requirements.

(3) Test Holes Drilled in Association with Clay Mining Operations, Shallow Industrial Minerals Exploration and Miscellaneous Geologic Data Holes.

(A) When the test hole is drilled that bottoms in an impermeable fire clay deposit a temporary surface plug must be inserted which prevents surface water from entering the hole. This type of well is exempted from reporting requirements.
(B) When a test hole is drilled that bottoms at the bedrock-unconsolidated material contact or above, it must be plugged when no longer needed for exploratory purposes. If the test hole is less than one hundred feet (100’) in depth and does not encounter a potable water horizon, the test hole must be plugged by filling the hole from bottom to top with the type of uncontaminated material removed from the hole or other approved grout. A registration report is required per site for holes drilled and plugged that are greater than twenty feet (20’) in depth. One (1) registration fee is required per report form for this type of hole. If a test hole is less than twenty feet (20’) in depth, it must be filled with the material removed from the hole as soon as it is no longer needed for exploratory purposes. Test holes less than twenty feet (20’) in depth are exempted from the rules. These wells can not be used in any way relative to monitoring well sites.

(C) If a test hole is greater than one hundred feet (>100’) in depth, it must be plugged as stated in 10 CSR 23-6.050(1).

(3) Clay mining operations. Test holes that do not penetrate beneath an impermeable fire clay deposit shall have a ten foot (10’) surface grout plug and are exempt from plugging registration requirements.

(4) Unconsolidated material test holes less than one hundred feet (<100’) deep.

(A) Test holes less than twenty feet (<20’) in depth may be plugged using clean fill or uncontaminated native material and are exempt from plugging registration requirements.

(B) One (1) registration report and fee is required per site for test holes that are twenty feet (20’) in depth or greater. All test holes plugged may be reported on one form.

(C) Test holes where no ground water is encountered, may be plugged using clean fill or uncontaminated native material.

(D) Test holes may not be used for monitoring.


**PUBLIC COST:** This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.
PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Department of Natural Resources’ Geological Survey Program attention to Amber Steele at P.O. Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to amber.steele@dnr.mo.gov. To be considered, comments must be received by the close of the public comment period on {September 14}, 2018 at 5:00 p.m. A public hearing is scheduled for {time, September 7, 2018, place, and address of hearing}. 