
Rules of
Department of Natural Resources
Division 23—Division of Geology and Land Survey
Chapter 1—Definitions and Organizational Structure

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**Title 10—DEPARTMENT OF
NATURAL RESOURCES
Division 23—Division of Geology
and Land Survey
Chapter 1—Definitions and
Organizational Structure**

Editor's Note: Forms mentioned in this chapter may be found following 10 CSR 23-6.

10 CSR 23-1.010 Definitions

PURPOSE: This rule defines the words used in the text of the rules promulgated to implement the Water Well Drillers Law.

- (1) Abandoned well as defined in section 256.603, RSMo means a well shall be deemed abandoned when it is in such a state of disrepair that continued use for the purpose of thermal recovery or obtaining groundwater is impractical and the well has not been in use for a period of two (2) years or more. The term abandoned well includes a test hole or a monitoring well which was drilled in the exploration for minerals or for geological, water quality or hydrologic data from the time that it is no longer used for exploratory purposes and that has not been plugged in accordance with rules pursuant to sections 256.600—256.640, RSMo.
- (2) Act means Missouri Water Well Drillers Law, sections 256.600—256.640, RSMo, under which these rules are promulgated.
- (3) Annular space means the space between two (2)-cylindrical objects one (1) of which surrounds the other, such as the space between a drillhole and a casing pipe or between a casing pipe and liner pipe.
- (4) Applicant means any person who applies for a well, heat pump, monitoring well or pump installation contractor permit pursuant to the law.
- (5) Application for permit means the application submitted by an applicant.
- (6) Aquifer means water-bearing geological material that transmits water in sufficient quantities to supply a well.
- (7) Bedrock means competent rock that is not weathered or fractured.
- (8) Bentonite means any type of sodium bentonitic clay used in well construction, or plugging of wells, which swells or expands when water is added.
- (9) Board as defined in section 256.603, RSMo means the body created in section 256.605, RSMo.
- (10) Casing means an impervious durable pipe placed in a well to prevent the walls from caving and to help seal off surface drainage or undesirable water, gas or other fluids to prevent their entering the well.
- (11) Casing Point Request form means a form that is supplied by the division and contains name and address information, type of well requested to be drilled, location information and other necessary information. The division uses the form to establish construction requirements, proposed total depth of well and proposed yield information for specific types of wells.
- (12) Certification report as defined in section 256.603, RSMo means a form to be sent to the division upon completion of any well which shows the location, static water level, total depth, initial pumpage, hole size, casing size and length, and name of well owner.
- (13) Cesspool means an underground pit or container into which raw household sewage or other untreated liquid waste is discharged and from which the liquid seeps into the surrounding soil or is otherwise removed.
- (14) Chlorination (disinfection) means the use of a chlorine solution to disinfect or sterilize wells, pumps, storage tanks or piping systems. Chlorine is an oxidizing disinfectant that kills bacteria on contact.
- (15) Completion date means the date that the construction of a new well or repair of an existing well or the installation of a pump or the plugging of an abandoned well is completed. It shall not mean the date that payment is received for services provided.
- (16) Construction foundation data means wells drilled to obtain construction foundation data and wells drilled in the construction phase of piers, shafts, caissons, mini-piles, soil and rock anchors, soil and rock grouting procedures on surface water containment structures and other construction sites that utilize drilling within the structure to be built. The well or drill hole must be excavated and incorporated into the construction project or plugged full-length as a part of the construction project.
- (17) Cuttings means geologic material displaced from the drill hole during drilling.
- (18) Director means the director of the Division of Geology and Land Survey, or authorized representatives, who shall carry out the administrative functions of these rules on behalf of the division.
- (19) Division, as defined in section 256.603, RSMo, means the Division of Geology and Land Survey.
- (20) Driller's log, as defined in section 256.603, RSMo, means a record accurately kept at the time of drilling showing the depth, thickness, character of the different strata penetrated, location of water-bearing strata, depth, size and character of casing installed, together with any other data or information required on the certification report forms.
- (21) Drive shoe means the fittings placed at the bottom of the permanent metal casing which enables the driller to more efficiently drive the casing into solid rock.
- (22) Established ground surface means the actual finished grade of the surface of the ground at the site of the well.
- (23) Examination, as defined in section 256.603, RSMo, means an assessment of professional competency administered to applicants.
- (24) Geological material means all materials penetrated in drilling a well.
- (A) Alluvium is a general term for clay, silt, sand, gravel or similar unconsolidated material deposited during comparative recent geologic time by a stream or body of running water as a sorted or semisorted sedimentary deposit.
- (B) Dolomite means rock which contains at least fifty percent (50%) or more magnesium carbonates and has a weak reaction with a ten percent (10%) hydrochloric acid (HCl) solution.
- (C) Glacial drift (unconsolidated) means a general term applied to all rock material (clay, sand, gravel and boulders) transported by a glacier and deposited directly by or from the ice or by running water emanating from the glacier.
- (D) Glacial outwash means a stratified sand and gravel removed or washed out from a glacier by meltwater streams and deposited in front of or beyond the terminal moraine or the margin of an active glacier.
- (E) Limestone means rock which contains fifty percent (50%) or more calcium carbonate and has strong reaction with a ten percent (10%) hydrochloric acid (HCl) solution.

(F) Residuum means a product formed from the in-place disintegration and decomposition of bedrock.

(G) Sandstone means cemented or otherwise compacted sediment composed predominantly of sand.

(H) Shale means a laminated rock consisting predominantly of clay-sized particles.

(25) Grout means cement slurry, sixteen (16) lbs/gal density—one (1) bag Type I cement to six (6) gallons water mix, Type II—V cement mix to manufacturers' specification, high solids twenty percent (20%) or more solids, bentonite slurry, sodium bentonite chips or pellets or any other commercially available grout approved by the division.

(26) Heat exchange or heat pump well means any well constructed to utilize the heat exchange properties of either groundwater or of geologic material penetrated in the well.

(27) Heat pump installation contractor, as defined in section 256.603, RSMo, means any person, including owner, operator or drilling supervisor who engages for compensation in the drilling, boring, coring or construction of any well in the state for extracting thermal energy.

(28) Lakes are defined as the major reservoirs in Missouri. They are considered a sensitive area under these rules. They include: Clearwater Lake, Lake of the Ozarks, Stockton Lake, Pomme de Terre Lake, Bull Shoals Lake, Norfolk Lake, Table Rock Lake, Lake Wappapello and Truman Reservoir (see map following 10 CSR 23-6).

(29) Liner means plastic or steel pipe which is smaller in diameter than the casing and used to solve problems encountered in deeper geologic formations or to reconstruct a well.

(30) Major reconstruction means the alteration or repair of any well that changes the original specifications or casing depths or total depth of the well; for example: liners, packers or deepening of well or extension of casing above finished grade.

(31) Monitoring well installation contractor, as defined in section 256.603, RSMo, means any person, including owner, operator or drilling supervisor who engages for compensation in the drilling, boring, coring or construction of any well in this state which is drilled for geologic data, water quality or hydrologic data.

(32) Packer in these rules means a rubber or neoprene collar (boot) installed on casing or liner to hold the grout material in the annular space and to help affect a seal of the casing.

(33) Permitted well driller, as defined in section 256.603, RSMo, means any person who holds a permit issued pursuant to the provisions of sections 256.600—256.640, RSMo.

(34) Permittee means a person who is permitted as a well, heat pump, monitoring well or pump installation contractor pursuant to the provision of the law and these rules.

(35) Person, as defined in section 256.603, RSMo, means any individual, whether or not connected with a firm, partnership, association, corporation or any other group or combination acting as a unit.

(36) Pitless adapter means a device for above or below ground discharge designed for attachment to one (1) or more openings through a well casing and constructed so as to prevent the entrance of contaminants into the well.

(37) Pitless unit means an assembly with cap which extends from the upper end of the well casing to above grade and is constructed so as to prevent the entrance of contaminants into the well.

(38) Plastic means a thermoplastic pipe or casing material composed of either polyvinyl chloride (PVC) or acrylonitrile-butadienestyrene (ABS).

(39) Point of entry means the point when the main water supply line hooks up to the central plumbing in a building.

(40) Potable water means water which is safe for human consumption in that it is free from impurities in amounts sufficient to cause disease or harmful physiological effects.

(41) Pressure grout refers to the process of applying grout material under pressure to the annular space of a well for the purpose of sealing it and thus preventing vertical movement of fluids through the annular space. Grout must be introduced from the bottom of the annular space.

(42) Pressure tank or hydropneumatic tank means a closed water storage container constructed to operate under a designed pressure rating to modulate the water system pressure within a selected pressure range.

(43) Priming means the first filling of a pump with water and action of starting the flow in a pump.

(44) Pump installation contractor, as defined in section 256.603, RSMo, means any person, firm or corporation engaged in the business of installing or repairing pumps and pumping equipment.

(45) Pump installation machine or service rig means any vehicle, hoist or machine used to install or remove pumps or liners from wells.

(46) Pumps and pumping equipment means materials used or intended for use in withdrawing or obtaining groundwater for any use, except as applies to sampling, development, maintenance or testing equipment used or inserted into monitoring wells including, without limitation, seals and other safeguards to protect the water from pollution and together with plumbing fittings, electric wiring and accessories, and controls provide sanitary water storage facilities. Installation of pumps and pumping equipment means the selection of and the procedure employed in the placement and preparation for operation of pumps and pumping equipment. This includes the construction involved in making entrance to the well and into the building served, water distribution lines from the well through the pressure tank and water treatment equipment, to the main point of entry and establishing proper seals and other safeguards to protect groundwater from pollution, including repairs to existing installations.

(47) Registration report, as defined in section 256.603, RSMo, means a form to be sent to the division upon completion of plugging of an abandoned well, raising casings, lining wells, deepening of wells, major repairs and alterations and jetted wells.

(48) Scope. For the purposes of these rules promulgated pursuant to Missouri Water Well Drillers Act, section 256.600, RSMo, the terms defined in this part have the meanings given them, except where the context clearly indicates otherwise.

(49) Screen means a filtering device used to keep sediment from entering a well.

(50) Septic tank means a watertight tank of durable materials through which sewage flows very slowly and in which solids separate from liquid to be decomposed or broken down by bacterial action.

(51) Service connection means a supply line from the well that is connected to one (1) single family dwelling or in a farming application it shall include all additional water hookups for the outbuildings. If the outbuildings are dwellings for persons or additional businesses then they would be considered additional service connections.

(52) Sewage means the water carried waste products from residences, public buildings, including the excrementitious or other discharges from the bodies of human beings or animals.

(53) Sewer means a pipe or conduit carrying sewage or into which sewage may back up.

(54) Site means a plot of land on which wells are drilled or are going to be drilled that is not more than forty (40) acres and is owned by a person as defined in section 256.603, RSMo. If larger sites exist, contact the division for reporting requirements.

(55) Static water level means the distance measured from the established ground surface to the water surface in a well neither being pumped, nor under the influence of pumping nor flowing under artesian pressure.

(56) Subsurface disposal field, seepage bed, drainfield, percolation system or tile absorption field means a system composed of open jointed tile, plastic lines or lines composed of other material buried in stones and shallow trenches or beds through which septic tank effluent is disposed. The septic tank effluent is applied to land by distribution beneath the surface through the open jointed lines.

(57) Suction line means a pipe or line connected to the inlet side of a pump or pumping equipment or any connection to a well casing that may conduct nonsystem water into the well because of negative pressures.

(58) Tremie pipe means a small diameter conductor pipe, hose or tubing used in the down hole placement of well construction material.

(59) Upper termination of the well casing means a point twelve inches (12") or greater above the finished ground surface.

(60) Variance means any modification to the application of these rules. A variance may be applied for through the procedure set out in 10 CSR 23-1.040 of these rules.

(61) Water varieties mean—

(A) Groundwater means the water in subsurface zone of saturation. The water that supplies springs and wells is groundwater; and

(B) Surface water means water that rests or flows on the surface of the ground.

(62) Well, as defined in section 256.603, RSMo, means an excavation that is drilled, cored, bored, washed, driven, dug, jetted, trenched or otherwise constructed when the intended use of the excavation is for the acquisition of groundwater supply, for monitoring, thermal exchange or for exploration for minerals or geologic or hydrologic data; but does not include a cistern, an excavation made for the purpose of obtaining or for prospecting for oil or natural gas, or for construction foundation data, dewatering of construction sites or dewatering of existing structures, observation wells used as a part of an underground storage tank leak detection system of a minimal depth, as determined by the board by rule, or for inserting media to repressure oil or natural gas-bearing formations.

(63) Well certification means the well certification report form and certification fee have been submitted to the division, the form has been reviewed by the division to verify the well has been constructed in accordance with the rules, and the division has assigned a well certification number to the well. The well certification number will be sent to the well owner by the division.

(64) Well drilling machine or service rig means any machine or device such as a cable tool, rotary, hollow rod auger, and the like used for construction of wells or a hoist, machine or vehicle used in well service which involves the modification to the well casing, screen depth or diameter below the upper termination of the well casing. This excludes trenching machines in heat pump applications.

(65) Well installation contractor, as defined in section 256.603, RSMo, means any person, including owner, operator and drilling supervisor who engages for compensation in the drilling, boring, coring or construction of any well in this state. The term, however, shall not include any person who drills, bores, cores or constructs a water well on his/her own property for his/her own use or a person who assists in the construction of a water well under the direct supervision of a permitted well installation contractor and is not primarily responsible for drilling operations.

(66) Well owner, as defined in section 256.603, RSMo, means any person or corporation who is the party responsible for having a well drilled and whose name appears on the well registration or certification form.

(67) Well registration means the registration report form and registration fee have been submitted to the division, the form has been reviewed by the division which documents certain types of activities according to the requirements. If the documented activities meet the requirements then a registration number is assigned by the division and sent to the well owner.

(68) Well seal means a device or method used to protect a well casing or water system from the entrance of any external pollutant at the point of entrance into the casing.

(69) Well vent means an outlet at the upper terminal of a well casing to allow equalization of air pressure in the well and escape of toxic or flammable gasses when present.

(70) Yield or production means the quantity of water per unit of time which may flow or be pumped from a well under specified conditions.

*AUTHORITY: sections 256.603 and 256.626, RSMo (1994). * Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed July 13, 1994, effective Jan. 29, 1995. Amended: Filed Nov. 1, 1995, effective June 30, 1996.*

**Original authority 1985, amended 1991.*

10 CSR 23-1.020 Application to All Wells

PURPOSE: This rule explains the application of the law to the wells in the state.

10 CSR 23 Chapters 1—6 shall apply to all wells in Missouri except those specifically exempted by the act. Those aspects covered are the construction of new wells, installation of pumps and pumping equipment, the repair and maintenance of wells and pumps and pumping equipment where specified, the proper plugging of wells and the proper isolation of possible sources of contamination from existing wells to protect the quality of

groundwater aquifers for providing safe drinking water supplies.

AUTHORITY: sections 256.615, 256.620 and 256.626, RSMo (Cum. Supp. 1991). * Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994.

*Original authority: 256.615, RSMo (1991) and 256.620 and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.030 Types of Wells

PURPOSE: This rule describes the types of wells covered by the law.

(1) Public Water System. A system for the provision to the public of piped water for human consumption, if this system has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year. This system includes any collection, treatment, storage or distribution facilities used in connection with the system. A public water system is either a community water system, transient noncommunity water system or nontransient noncommunity water system. Any community or noncommunity public water supply well must be constructed according to Missouri Public Drinking Water rules.

(A) Community Water System. A public water system which serves at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) residents on a year-round basis.

(B) Transient Noncommunity Water System. A public water system that is not a community water system which has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily on a year-round basis.

(C) Nontransient Noncommunity Water System. A public water system that is not a community water system, which has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days of the year.

(2) Petroleum Distribution Site Well. A water supply well constructed adjacent to and in connection with petroleum distribution sites is considered a noncommunity water supply.

(3) Multiple Family Well. A private water supply well constructed for the purpose of

serving more than three (3) dwellings, but having less than fifteen (15) service connections and serving less than twenty-five (25) individuals daily at least sixty (60) days out of the year.

(4) High Yield Well. Those water supply wells that are constructed to meet required standards and are equipped with a pump that has the capacity to produce more than seventy (70) gallons of water per minute (see 10 CSR 23-3.030 for construction requirements).

(5) Domestic Well. A private water supply well that is constructed to meet minimum standards and is equipped with a pump that does not have the capacity to produce more than seventy (70) gallons of water per minute and services three (3) or less service connections. A private domestic water supply well that produces less than seventy (70) gallons of water per minute regardless of the use is a domestic well.

(6) Grade A Dairy Well. Water supply well installed to service and supply Grade A dairy operations and is constructed to domestic well standards.

(7) Unconsolidated Material Irrigation Well. Water supply well drilled into alluvial, glacial drift or glacial outwash aquifers and is not deeper than two hundred feet (200'), and produces water not for human consumption and is equipped with a pump which has the capacity to produce more than seventy (70) gallons of water per minute (see 10 CSR 23-3.030 for construction requirements).

(8) Bedrock Irrigation Well. Water supply well drilled into bedrock aquifers that is constructed to meet required standards and is equipped with a pump that has the capacity to produce more than seventy (70) gallons of water per minute. The produced water is for irrigating crops but may be used for human consumption (see 10 CSR 23-3.030 for construction requirements).

AUTHORITY: sections 256.606 and 256.626, RSMo (1994). * Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed July 13, 1994, effective Jan. 29, 1995. Amended: Filed Nov. 1, 1995, effective June 30, 1996.

*Original authority: 256.606, RSMo (1991) and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.040 Modification by the Division

PURPOSE: This rule explains how the division may make modifications to the application of the provisions of the rules.

(1) When strict applicability of any provision of these rules presents practical difficulties or unusual hardships, the division, in a specific instance, may modify the application of those provisions consistent with the general purpose of these rules and the law. The division may then impose certain conditions as are necessary, in the opinion of the division, to protect the groundwater of the state and health, safety and general well-being of persons using or potential users of the groundwater supply.

(2) Any request for modification shall be submitted in advance to the division in writing on a variance form obtained from the division and shall be signed by the permittee. This request shall specify in detail the nature of the modification being sought, the reasons and the special precautions to be taken to avoid contamination of the well. The request shall also include the proposed well depth, casing type and depth, method of construction and grouting, geological conditions likely to be encountered and location of the well and possible sources of contamination. Whether or not the requests are granted, the division shall state in detail the reasons for the decision. If the requested modification is approved, the division will send or fax the requestor a copy of the approved variance form. The approved variance form must be received by the permittee before construction or modification of the well begins. The approved variance form must be attached to the well certification or registration report form when it is submitted to the division.

(3) A modification request may be initiated by telephone if there are extenuating circumstances associated with a particular well. This request shall be followed by the proper notification procedures as stated previously.

AUTHORITY: sections 256.606 and 256.626, RSMo (1994). * Original rule filed April 2, 1987, effective July 27, 1987. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996.

**Original authority: 256.606, RSMo (1991) and 256.626, RSMo (1985), amended 1991.*

10 CSR 23-1.050 Qualifications

PURPOSE: This rule establishes the criteria and procedures used in permitting a well installation, heat pump installation, monitoring well installation, pump installation, employee and drilling supervisor in Missouri.

(1) All applicants for well installation, heat pump installation, monitoring well installation, monitoring-test hole installation and pump installation contractor permits shall meet the following requirements:

(A) A minimum of one thousand (1000) hours of experience is required in the type of well drilling the applicant requests to receive a permit for. A minimum of five hundred (500) hours of experience is required in pump installation for that type of permit. At least three (3) different people familiar with the experience must document that the applicant has the required amount of experience on experience vouchers supplied by the division. The experience must have been gained in Missouri except that an applicant may provide the division with information demonstrating that his/her experience was gained in an area with the same or similar geological and other well drilling conditions as in the applicant's proposed well drilling operations territory in Missouri. This experience may be considered as meeting the experience requirement of these rules.

(B) Submission to the division of properly completed experience vouchers, application and submission of appropriate fee.

(C) Knowledge of the rules promulgated by the law, knowledge of basic drilling, completion and plugging techniques as evidenced by a passing grade on an examination administered by the division. The following procedures must be followed when applying for and taking the appropriate proficiency tests:

1. Applicants for well installation contractor, heat pump installation contractor, monitoring well installation contractor, monitoring-test hole installation contractor or pump installation contractor must pass the appropriate examinations. There are six (6) tests that can be taken—

A. General test. Every prospective permittee must pass this test. The questions will be over the rules and will be an open book test. The purpose of this test is to ensure that all permitted persons are familiar with the rules and are able to locate information as needed;

B. Well driller contractor test. All applicants for a nonrestricted well installation

permit must pass this test. The questions will be based on the skills necessary to operate as a well installation contractor;

C. Pump contractor test. All applicants for a nonrestricted pump installation permit must pass this test. The questions will be based on the skills necessary to operate as a pump installation contractor;

D. Heat pump contractor test. All applicants for a nonrestricted heat pump installation permit must pass this test. The questions will be based on the skills necessary to operate as a heat pump installation contractor;

E. Monitoring well contractor test. All applicants for a nonrestricted monitoring well installation permit must pass this test. The questions will be based on the skills necessary to operate as a monitoring well installation contractor; and

F. Monitoring-test hole contractor test. All applicants for a nonrestricted monitoring-test hole installation permit must pass this test. The questions will be based on the skills necessary to operate as a monitoring-test hole installation contractor;

2. Most drilling applications in Missouri require the drilling of some unconsolidated material before consolidated material is encountered. Therefore, the drilling examinations will cover, among other things, drilling in consolidated and unconsolidated material. There are some areas in Missouri, like the Bootheel region of southeast Missouri, where thick deposits of unconsolidated material are present. A special restricted permit and examination are available, upon request, for those persons who only drill unconsolidated material wells or set pumps in them. If a restricted permittee is found to be drilling in a type of material they are not permitted to drill in, they will be subject to appropriate enforcement action. If a restricted permittee is found to be installing pumps in a consolidated material well, they will be subject to appropriate enforcement action;

3. Information on where to obtain applicable study material will be available to each applicant prior to testing;

4. A testing schedule will be available upon the request of the applicant;

5. A completed application for testing must be received fifteen (15) days prior to the testing date for which the applicant wishes to be scheduled. The division will notify the applicant within ten (10) days from receiving the completed application for testing if the applicant has qualified to take the test applied for and the date of the next available test. The testing fee is due before the test is given;

6. A minimum score of seventy percent (70%) on the general test, and a minimum

score of seventy percent (70%) on each required specific test must be achieved by the applicant prior to being permitted. The applicant will be sent the results of the test as soon as possible. If applicant has a passing score, the appropriate applications for permit will be included with the results;

7. Applicant may retake all tests on the same day if time allows. All retakes must be accompanied by the testing fee;

8. If a request is made and documented more than thirty (30) days in advance, the exam may be taken orally. The same exam will be given and the same results must be achieved on an oral exam as for a written exam. Due to the special nature of this type of exam, special scheduling dates will be necessary. People with disabilities requiring special services or accommodations can make arrangements by contacting the division;

9. Any applicant who does not agree with his/her test results, may appeal to the Well Installation Board;

10. If an applicant wishes to withdraw his/her application for testing, s/he may do so by requesting, in writing, ten (10) days in advance. If the applicant does not cancel as stated and is not present for the test, they may reschedule up to two (2) times. If after the second reschedule the applicant does not appear, the testing application will be cancelled and the fee will be forfeited. If the applicant wishes to take the test after the testing application has been cancelled, they must reapply and submit the appropriate fee;

11. All well installation contractors and pump installation contractors that were operating with a valid permit on the December 11, 1993, are not required to take any test to renew their permit, but must submit an affidavit supplied by the division stating that they have read and understand the new rules. Those people who wish to apply for a contractor's permit that have at least one thousand (1000) hours of documented experience do not have to take any test if they apply by March 30, 1994, but must submit an affidavit supplied by the division stating that they have read and understand the rules currently in effect;

12. Persons who contract the drilling of wells, installation of pumps, or both, but do not drill the wells or set the pumps must be permitted well installation, heat pump installation, monitoring well installation, monitoring-test hole installation, pump installation contractor, or any combination of these. The only test required is the general test and drilling or pump setting experience is not required but is highly recommended. A restriction must be placed on the permit which states that any well drilling or pump

work contracted be done by a nonrestricted permitted installation contractor;

13. A nonrestricted permitted well installation, heat pump installation, monitoring well installation, monitoring-test hole installation, pump installation contractor, or any combination of these, must be present at all times while a well is being drilled and completed, a pump is being set, or any combination of these; and

14. Persons who wish to only drill the heat pump hole and grout the closed-loop into the heat pump hole must obtain a permit to do so. The permit will be restricted to the previously mentioned activities and a current nonrestricted water well installation contractor's permit is required as one (1) of the qualification criteria. Those people who wish to apply for this type of heat pump installation contractor's permit that have at least one thousand (1000) hours of documented water well experience must take only the general test covering heat pump construction.

(2) Applicants for contractor permits who do not meet the requirements set out in this rule may petition the board. The board has the authority to rule upon the qualifications of the applicants and may require additional evidence of qualifications.

AUTHORITY: sections 256.606, 256.607, 256.611, 256.613 and 256.626, RSMo (1994). * Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed July 13, 1994, effective Jan. 29, 1995. Amended: Filed Nov. 1, 1995, effective June 30, 1996.

*Original authority: 256.606, RSMo (1991); 256.607, RSMo (1985), amended 1991; 256.611, RSMo (1985), amended 1991; 256.613, RSMo (1991); and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.060 Application for a Permit

PURPOSE: This rule outlines the division's requirements for filing an application for a permit.

(1) All applicants shall submit an application. The division shall not act upon the application until they have received all required information including experience vouchers from individuals who are familiar with the applicant's work experience, for the type of permit applied for, the appropriate fee and a

passing grade on the appropriate examinations. An application will not be acted upon or it will be denied if the applicant has violated any rules and has not remediated these violations. The division may issue a permit on a probationary status.

(2) The application shall be accompanied by the appropriate fee(s). The fee shall be made payable to the Missouri Water Well Driller's Fund. There will be no refund of monies paid for the permits after the fee has been transferred to the Water Well Drillers Fund in Jefferson City unless the request is made in writing. In the case of any change of status of any permittee, that permittee shall notify the division and submit a new application and appropriate fee required pursuant to these rules. In the case of either change in ownership of a rig or the purchase of a new rig, a new application form and the appropriate fee must be sent to the division and a new card will be issued.

AUTHORITY: sections 256.606, 256.611 and 256.623, RSMo (1994). * Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996.

*Original authority: 256.606, RSMo (1991) and 256.611 and 256.623, RSMo (1985), amended 1991.

10 CSR 23-1.070 Permit Review Procedures

(Rescinded March 10, 1994)

10 CSR 23-1.075 Disciplinary Action and Appeal Procedures

PURPOSE: This rule outlines the procedures the division will take when a permittee is affected by disciplinary action.

(1) The division may cause an investigation to be made in order to determine whether there has been any violation of the law or of these rules and, in doing so, may request the permittee, well owner or other individuals to appear before them to determine the merits of the situation in question. If requested individuals do not appear before the division, a determination will be made based on the available information. Any person who willfully obstructs, hinders or prevents agents of

the division in the performance of the duties imposed on them by sections 256.600—256.640, RSMo is guilty of a class A misdemeanor and may be liable for civil and criminal penalties as set out in section 256.637, RSMo. If the division determines that the holder of any permit issued according to sections 256.600—256.640, RSMo has violated any provision of this law or any rule adopted according to this law, the division shall reprimand, place a permit holder on probation, suspend or revoke a permit. For minor violations, the division will issue a reprimand or a notice of violation, the remediation required and the time period allowed to remedy the violation.

(2) As a condition of any order, the division will specify and schedule any remediation required, and will be present, if deemed necessary, while the remediation is performed. The division shall issue and serve on the permittee, a written notice of the order issued under sections 256.600—256.640, RSMo. The order shall specify the particular part of sections 256.600—256.640, RSMo or particular rule of which the permittee is alleged to be in violation and a statement explaining the alleged violation. The order must be sent registered or certified mail, return receipt requested.

(3) Any person to whom the division issues an order may appeal it by filing a petition with the board within thirty (30) days of the date of the order. The appeal must be sent registered or certified mail, return receipt requested, to the chairperson of the board. The appeal shall stay the enforcement of the order until a final determination is made by the board.

(4) The board may schedule a hearing or after due consideration of the record, make a final determination as it deems appropriate under the circumstances. The board will inform the person appealing of its decision to consider the record or call a hearing. If the board decides to call a hearing, it will notify the person appealing within thirty (30) days of the time and place of the hearing. At any public hearing all testimony taken before the board, or a hearing officer appointed by the board, shall be under oath and recorded stenographically. The transcript shall be available to any person, for the cost of reproduction.

(5) The board may sustain, reverse or modify the division's order or may make other orders as it deems appropriate under the circumstances. It shall notify the affected per-

sons in writing by certified or registered mail, return receipt requested.

(6) All final orders and determinations of the board or the division made according to sections 256.600—256.640, RSMo are subject to judicial review according to the provisions of section 536.100, RSMo. Any person who has exhausted all administrative remedies provided by Chapter 536, RSMo and who is aggrieved by a final decision in a contested case, whether the decision is affirmative or negative in form, shall be entitled to judicial review in the form of a trial *de novo* in the circuit court of the county where the alleged impropriety occurred.

AUTHORITY: sections 256.600 and 256.623 and 256.630, RSMo (1994).* *Emergency rule file Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996.*

*Original authority: 256.600, RSMo (1985) and 256.623 and 256.630, RSMo (1985), amended 1991.

10 CSR 23-1.080 Denial of Application

PURPOSE: This rule describes the reasons for denial of permit.

(1) An application for any permit or permit renewal may be denied for any of the following reasons:

(A) Failure of the applicant to accurately complete the application;

(B) Failure of the applicant to submit the application with the appropriate fee, late fee, or both;

(C) Failure of the applicant to meet the experience and other qualifications required by the law and these rules or receive a passing grade on the examination;

(D) Noncompliance with sections 256.600—256.640, RSMo or with these rules; and

(E) Other sufficient causes as determined after notice and hearing in accordance with 10 CSR 23-1.075.

AUTHORITY: sections 256.606, 256.611 and 256.626, RSMo (Cum. Supp. 1991).* *Original rule filed April 2, 1987, effective July 27, 1987. Amended: Filed Aug. 17, 1993, effective March 10, 1994.*

*Original authority: 256.606, RSMo (1991) and 256.611 and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.090 Permit Requirement

PURPOSE: This rule explains that a permit is required in order to construct or repair a well in the state.

(1) No person shall drill, construct, install pumps or pumping equipment, repair a well or plug a well within this state unless in possession of a valid permit to do so issued by the division. A well installation contractor's permit is valid for drilling and repair on wells that produce water for human consumption, animal, industrial or irrigation purposes, open-loop heat pump wells and water return wells. A monitoring well installation contractor's permit is valid for drilling and repair of monitoring wells and test holes. A monitoring-test hole installation contractor's permit which is a restriction on the monitoring well installation permit is valid for drilling or coring of wells in the exploration for minerals or geologic data. A heat pump installation contractor's permit is valid for drilling and repair of heat pump wells (excluding open-loop heat pump and water return wells), construction of trenched systems and installation of loops used in heat pump systems. A pump installation contractor's permit is valid for setting pumps and liners and removal of pumps for repair and/or replacement in wells that produce water for human consumption, animal or irrigation purposes. It is also valid for setting pumps in extraction type monitoring wells. All contractor's permits are valid for plugging wells, except monitoring wells must be plugged by monitoring well installation contractors. The previously mentioned permits can be issued on a restricted or non-restricted basis. Restricted permits are issued to persons who only contract the work specific to the type of permit requested or to primary contractor on site drilling supervisors. All permits issued pursuant to these rules shall expire one (1) year after issuance.

(2) Nothing in sections 256.600—256.640, RSMo shall prevent a person who has not obtained a permit pursuant to sections 256.600—256.640, RSMo from constructing or plugging a well on his/her own or leased property intended for use only in a single family house which is his/her permanent residence or intended for use only for farming purposes on his/her farm and where the waters to be produced are not intended for use by the public or in any residence other

than his/her own. Each person shall comply with all rules adopted under sections 256.600—256.640, RSMo. The landowner may hire an unpermitted person to plug a hand dug well but the landowner is responsible to make sure the well is plugged according to 10 CSR 23-3.110 and reported on a registration report form with the accompanying fee. All other types of wells must be plugged by a permitted contractor unless the landowner does the work as provided in this section.

AUTHORITY: sections 256.606, 256.607, 256.613, 256.615 and 256.626, RSMo (1994).* *Original rule filed April 2, 1987, effective July 27, 1987. Emergency rescission and emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Rescinded and readopted: Filed Aug. 17, 1993, effective March 10, 1994. Amended filed July 13, 1994, effective Jan. 29, 1995. Amended: Filed Nov. 1, 1995, effective June 30, 1996.*

*Original authority: 256.606, RSMo (1991); 256.607, RSMo (1985), amended 1991; 256.613 and 256.615, RSMo (1991); and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.100 Permit Renewal (Rescinded March 10, 1993)

10 CSR 23-1.105 Permit Renewal

PURPOSE: This rule outlines the procedure for renewing a permit.

The permittee shall file for the renewal with the division and submit the appropriate fee prior to the expiration date of his/her permit. Any forms that are improperly completed will be returned to the contractor for completion. A penalty fee also shall be paid if the renewal is submitted within thirty (30) days of the expiration date. If a permit has been expired more than thirty (30) days, permittee must reapply and take the appropriate exam to obtain a new permit. Upon receipt of any completed renewal request, renewal fee and appropriate forms completed in a manner acceptable to the division, a permittee shall be sent a renewal permit if still qualified for the permit. A permit will not be renewed if the permittee has any unresolved violations pending against his/her permit, unless a schedule to remedy the violations has been approved in advance by the division. The division may issue a renewal permit on a probationary basis. The renewal permit shall consist of a card and contain the name of the

permittee, expiration date and permit number. The permit card shall be carried by the permittee and the rig cards must be placed in each rig.

AUTHORITY: sections 256.606, 256.607, 256.611 and 256.626 RSMo (1994). * Original rule filed Aug. 17, 1993, effective March 10, 1994. Amended: Filed Nov. 1, 1995, effective June 30, 1996.

*Original authority: 256.606, RSMo (1991) and 256.607, 256.611 and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.110 Permitting of Partnerships, Corporations and Business Associations

(Rescinded March 10, 1994)

10 CSR 23-1.120 Suspension or Revocation of Permit

(Rescinded March 10, 1994)

10 CSR 23-1.130 Reinstatement

PURPOSE: This rule describes the steps that must be taken to have a permit reinstated.

(1) A revoked permit may not be reinstated. The permittee who has had a permit revoked may be re-permitted by filing the usual applications and fees. The division shall require an investigation or hearing to determine whether the person should be issued a new permit; provided, however that in no case shall a new permit be issued prior to one (1) year after the revocation has taken effect.

(2) A permit suspended for a specified period of time shall be automatically reinstated at the end of that time. Nothing in these rules shall be interpreted to prevent the making of the reinstatement conditional upon terms established by the division's order of suspension. A permittee suspended for an indefinite period of time may be reinstated at the division's own motion after due investigation to determine that the conditions upon which the suspension was based have been corrected or upon the division receiving reasonable assurance to its satisfaction that these conditions will not reoccur.

(3) A well installation, heat pump installation, monitoring well installation, monitoring-test hole installation or pump installation contractor who has had a permit revoked or a person found guilty of a Class A misde-

meanor in accordance with section 256.637, RSMo shall provide to the division a performance bond or letter of credit in order to obtain a permit. Section 256.616, RSMo describes the procedures to be followed.

AUTHORITY: section 256.606, 256.616, 256.626 and 256.630, RSMo (Cum. Supp. 1991). * Original rule filed April 2, 1987, effective July 27, 1987. Emergency amendment filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Amended: Filed Aug. 17, 1993, effective March 10, 1994.

*Original authority: 256.606 and 256.616, RSMo (1991) and 256.626, 1991 and 256.630, RSMo (1985), amended 1991.

10 CSR 23-1.140 Placement of Permit Number

PURPOSE: This rule describes how to place the permit number on the machine.

(1) A permittee shall place in a conspicuous location on both sides on each well drilling machine or pump installation machine the words MO PERMIT and the permit number in figures not less than three inches high and one and one-half inches wide (3" x 1 1/2"). The number shall be in a contrasting color to the background. This change is not required until new equipment is purchased, operator changes equipment or the rig is painted. If new permit numbers are issued, they must be placed on the drilling or pump installation machine within six (6) months.

AUTHORITY: section 256.606, 256.617 and 256.626, RSMo (Cum. Supp. 1991). * Original rule filed April 2, 1987, effective July 27, 1987. Amended: Filed Aug. 17, 1993, effective March 10, 1994.

*Original authority: 256.606, RSMo (1991); 256.617, RSMo (1985); and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.150 Well Drilling and Pump Installation Machine Registration

(Rescinded March 10, 1994)

10 CSR 23-1.155 Well Drilling and Pump Installation Machine Registration

PURPOSE: This rule describes the registration procedures for the drill and pump installation machines.

For the registration with the division of each drilling machine or pump installation service machine, the permittee will send in the appropriate application and fee. Upon receipt of the required fee and information, a well drilling or pump installation machine registration card shall be issued for identification purposes for each drilling or pump installation machine registered by the well installation, heat pump installation, monitoring well installation or pump installation contractor. The card shall be carried on the well drilling or pump installation machine at all times where it may be inspected by the division or its representative. The card expires one (1) year from the date of issue.

AUTHORITY: sections 256.606 and 256.626, RSMo (Cum. Supp. 1991). * Emergency rule filed Nov. 16, 1993, effective Dec. 11, 1993, expired April 9, 1994. Original rule filed Aug. 17, 1993, effective March 10, 1994.

*Original authority: 256.606, RSMo (1991) and 256.626, RSMo (1985), amended 1991.

10 CSR 23-1.160 Mail and Notification Procedures

PURPOSE: This rule informs the permittees of Division of Geology and Land Survey mailing and notification procedures.

(1) Mail. All persons permitted by the division shall keep the division advised of current address and must readily accept all mail sent to them by the division.

(2) Registered or certified mail sent with proper postage and last known address that is returned unclaimed shall be considered adequate notification of notice served.

(3) The division shall be notified of any change of address within thirty (30) days of change.

(4) Refusal to accept mail is a violation of these rules and may result in disciplinary action. Mail not accepted by the permittee that has proper postage and last known address shall be considered adequate notification.

AUTHORITY: section 256.600, RSMo (1994). * Original rule filed April 18, 1990, effective June 28, 1990. Amended: Filed Nov. 1, 1995, effective June 30, 1996.

*Original authority 1985.