

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 20—Clean Water Commission  
Chapter 6—Permits**

**10 CSR 20-6.070 Groundwater Heat Pump Operating Permits**

**WORKING DOCUMENT**

**The Department presents these draft materials for  
stakeholder review and discussion only.  
Subject to the Red Tape Reduction review.**

The Missouri Department of Natural Resources has identified 10 CSR 20-6.070, Groundwater Heat Pump Operating Permits, as a potential rulemaking amendment. This workgroup has been convened for the purpose of informal and voluntary public participation and discussions regarding the development of this rule prior to initiating formal rulemaking.

Under Governor Greitens' leadership, all state agencies are working to reduce regulations and other government processes that unnecessarily burden individuals and businesses while doing little to protect or improve public health, safety, and our natural resources. The Missouri Department of Natural Resources is committed to limiting regulation to what is necessary to protect Missouri's environment, implementing statutory mandates, and maintaining state control of programs. Any further proposed changes to rules discussed on this page are being developed with these goals in mind. We welcome your comments to help ensure that our regulations provide required protections but do not add unnecessary costs.

## 10 CSR 20-6.070 Groundwater Heat Pump Operating Permits

*PURPOSE: This rule sets forth the requirements and process of application for operating permits and the terms and conditions for the permits.*

### (1) Permits—General Information.

- (A) All persons who build, erect, alter, replace, operate, use or maintain existing or proposed groundwater heat pump injection/withdrawal wells that inject more than six hundred thousand (600,000) British thermal units (BTUs) per hour (also termed as fifty (50) tons of capacity) shall apply to the department for the permits required by [section 577.155, RSMo] **Missouri Clean Water Law** and these regulations. The department [shall]<sup>4</sup> issues these permits in order to enforce [section 577.155, RSMo and] the Missouri Clean Water Law and regulations.
- (B) The following are exempt from permit regulations:
  1. Groundwater heat pump injection wells designed for up to eight (8) single family residents where the combined injection rate is less than six hundred thousand (600,000) BTUs per hour;
  2. All other groundwater heat pump injection wells that have a combined injection rate of less than six hundred thousand (600,000) BTUs per hour unless there is a potable water well, not owned by the owner of the heat pump, within one thousand feet (1000') which uses the same aquifer, strata or depth as a source;
  3. Any sampling well constructed in conjunction with any injection/withdrawal well; and
  4. Heat pumps constructed in such a way so as to not utilize groundwater, such as lateral line systems.
- (C) Nothing in these regulations shall prevent the department from taking action where the department finds that any activity exempted under subsection (1)(B) causes pollution of waters of the state, places, or permits to be placed, a water contaminant in a place where it is reasonably certain to cause pollution of any waters of the state or the activity otherwise violates [section 577.155, RSMo,] the Missouri Clean Water Law or these regulations.
- (D) Drillers of injection/withdrawal wells shall comply with 10 CSR 23-5.060 Construction Standards for Open Loop Heat Pump Systems That Use Groundwater and 10 CSR 23-3 Well Construction Code.
- (E) **Within ninety days of notification by the department,** [O]owners or operators of injection wells exempted from the permit requirements of subsection (1)(B) are required[, upon notification by the department,] to submit **completed** injection well inventory information on forms supplied by the department. [The completed form shall be returned to the department no later than ninety (90) days following the receipt of notification.]<sup>3</sup>

### (2) Application.

- (A) An application for an original operating permit or renewal of a former operating permit shall be made by letter for each injection/withdrawal well **and include the following information.** The application may be supplemented with copies of information submitted for other federal or state permits. [Each application must be accompanied by a filing fee of seventy-five dollars (\$75).]
- (B) *Each application shall contain the following:*<sup>3</sup>
  1. **Appropriate application fee as listed in section 6.011 of this rule;**
  2. [1.] Name and address of the company(s), organization(s), owner(s) or operator of the injection/withdrawal well;
  3. [2.] Description of structure or process, or both, that will utilize the injection/withdrawal well;
  4. [3.] Estimated depth of well, aquifer to be used (or anticipated aquifer), casing and related well construction data as recommended by the office of the state geologist;
  5. [4.] Exact location of the proposed injection withdrawal well and any other wells that exist within two thousand feet (2000') shown on a seven and one-half (7 1/2) minute United States Geological Survey (USGS) topographic quadrangle map[. This map shall also indicate the depth of each well]<sup>3</sup>;
  6. **The depth of each well indicated on the map;**
  7. [5.] Maximum, minimum and average volume of water that will be injected or withdrawn on a daily basis;
  8. [6.] Maximum, minimum and average temperature differential of injected/withdrawn water;
  9. [7.] Computations showing how the temperature differentials were calculated;
  10. [8.] General specifications of the installation including the heat exchange unit, pump and other structures; [9. Application fee of seventy-five dollars (\$75). When a check used for an application is returned to the department as nonnegotiable, review of the application shall cease and the applicant shall be notified. No further action shall be taken on the application until the fees have been resubmitted in the form of a cashier's check or money order payable to the State of Missouri;]
  11. [10.] If the injection/withdrawal well is located within one thousand feet (1000') of any potable water well, [the application shall<sup>3</sup>include] a registered professional geologist's or registered professional geologic engineer's recommendation and justification on the number and location of sampling wells if any are deemed necessary, and an estimate of the effect, in degrees Fahrenheit (F°), on all wells located within one thousand feet (1000'); and
  12. [11.] A copy of the certified heat pump well drillers' report to the Department of Natural Resources' Division of Geology and Land Survey.
- (B) [(C)] **Sign [A]all applications [must<sup>3</sup> be signed]** as follows:
  1. For a corporation—by an officer of at least the level of plant manager;
  2. For a partnership or sole proprietorship—by a general partner or the proprietor; or
  3. For a municipal, state, federal or other public facility—by either a principal executive officer or ranking public official or his/her designee.
- (C) [(D)] All other reports required by the department shall be signed by a person designated in subsection (2)(B)[(C)] of this rule or a duly authorized representative, where—
  1. The representative so authorized is responsible for the overall operation of the facility from which the injection/withdrawal occurs; and
  2. The authorization is made in writing by a person designated in subsection (2)(B)[(C)] of this rule and is submitted to the director.

- (D) [(E)] Any changes in the written authorization which occur after the issuance of a permit shall be reported to the department by submitting a new written authorization which meets the requirements of subsection (2)(C[D]) of this rule.
- (E) [(F)] If an application is incomplete or otherwise deficient, the applicant [shall]<sup>3</sup> will be notified of the deficiency and processing of the application may be discontinued until the applicant has corrected all deficiencies.
- (F) [(G) Applications shall be mailed]<sup>3</sup> **Mail applications** to Water Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

(3) Operating Permits.

- (A) **In order to obtain an operating permit for groundwater heat pump injection/withdrawal wells, applications for an operating permit shall be submitted to the department in accordance with the timeframes listed in section 644.051, RSMo and section 6.010 of this rule.** [Persons who build, erect, alter, replace, operate, use or maintain groundwater heat pump injection/withdrawal wells that are not exempted shall obtain an operating permit from the department.]<sup>3</sup>
- (B) **Prior to issuance of an operating permit, the department shall fulfill the public notice requirements as outlined in section 6.020 of this rule.** [Applications for an original operating permit must be received by the department at least one hundred twenty (120) days before construction of the injection/withdrawal well begins. Applications shall include the earliest date on which the injection/withdrawal is to begin. The department will issue or deny the permit within one hundred twenty (120) days of receipt of the complete application as specified in section (2). No person shall operate an injection/withdrawal well without a valid operating permit, unless s/he is exempted under subsection (1)(B).
- (C) Applications for the renewal of operating permits must be received at least one hundred twenty (120) days before the expiration date of the present operating permit. The department will issue or deny the permit within one hundred twenty (120) days of receipt of the complete application as specified in section (2).
- (D) The public notice requirements at 10 CSR 20-6.020 shall apply.]<sup>3</sup>

(4) Terms and Conditions of Permit.

- (A) The following shall be incorporated as terms and conditions of all permits:
  - 1. All injection/withdrawals shall be consistent with the terms and conditions of the permit;
  - 2. The permit may be modified or revoked after reasonable notice for causes including, but not limited to:
    - A. A violation of any term or condition of the permit;
    - B. A misrepresentation or failure to disclose fully all relevant facts in obtaining a permit;
    - C. A change in the operation, size or capacity of the permitted facility; or
    - D. An increase of more than ten degrees Fahrenheit (10°F) in any nearby potable water well that was in existence when the original operating permit was issued.
  - 3. The injection/withdrawal permit may be issued for a period up to five (5) years, **in accordance with section 644.051, RSMo and section 6.010 of this rule.** [The permit may not be modified so as to extend the term of the permit beyond five (5) years after its issuance]<sup>3</sup>;
  - 4. Permittees shall operate and maintain facilities to comply with [section 577.155, RSMo,] the Missouri Clean Water Law, corresponding regulations and applicable permit conditions;
  - 5. For the purpose of inspecting for compliance with the Clean Water Law and these regulations, authorized representatives of the department shall be allowed by the permittee, upon presentation of credentials and at reasonable times, to—
    - A. Enter upon permittee's premises in which a groundwater heat pump injection/withdrawal well is located or in which any records are [required to be]<sup>3</sup> kept under terms and conditions of the permit;
    - B. Have access to, or copy, any records [required to be]<sup>3</sup> kept under terms and conditions of the permit;
    - C. Inspect any sampling wells, monitoring equipment or method [required]<sup>3</sup> listed in the permit; and
    - D. Sample for permit compliance;
  - 6. Facility expansions, production increases or process modifications which will result in a new or substantially different injection/withdrawal must be reported sixty (60) days before the facility or process modification begins. Notification may be accomplished by application for a new permit, or by submission of notice to the department;
  - 7. Copies of well location, driller's logs, sample logs, casing schedule, volume of water, temperature, water quality and other information developed or determined for the completed installation shall be sent to the Missouri Department of Natural Resources (DNR), Water Pollution Control Program and to the Missouri DNR, Division of Geology and Land Survey;
  - 8. **Measure and record [M]** maximum, minimum and average water temperature [measurements shall be made and recorded]<sup>3</sup> monthly for each injection/withdrawal well and each monitoring well;
  - 9. **Measure and record [M]** maximum, minimum and average injection/withdrawal rates [shall be measured and recorded]<sup>3</sup> monthly;
  - 10. **Measure and record [T]** total dissolved solids [shall be measured and recorded]<sup>3</sup> monthly for each injection/withdrawal well and each monitoring well; and
  - 11. **Submit [A]** a yearly report [shall be submitted]<sup>3</sup> to the agencies listed in paragraphs (4)(A)4, [. And] which contains the following information:
    - A. Volume of water withdrawn and injected;
    - B. Temperature records for each monitoring well; and
    - C. Copies of water quality analyses performed.

(5) Prohibitions.

- (A) No permit shall be issued: [where the terms and conditions of the permit do not comply with applicable guidelines or requirements of section 577.155, RSMo the Missouri Clean Water Law and corresponding regulations or the Federal Clean Water Act and federal regulations.]
  - 1. **Where the terms and conditions of the permit do not comply with applicable guidelines or requirements of RSMo the**

**Missouri Clean Water Law and corresponding regulations or the Federal Clean Water Act and federal regulations;**

- [(B) *No permit shall be issued*] **2. W**[w]here the permit conditions do not ensure compliance with the applicable water quality requirements of any other affected states;[.]
- [(C) *No permit shall be issued*] **3. F**[f]or the discharge of any pollutant, except thermal discharges; those pollutants contained in the withdrawal water may be reinjected;[.]
- [(D) *No permit shall be issued*] **4. F**[f]or the discharge of any radiological, chemical or biological warfare agent or radioactive waste; **and**[.]
- [(E) *No permit shall be issued*] **5. F**[f]or the construction or operation of a new injection/withdrawal well which could degrade the usefulness of water withdrawn from earlier permitted wells.

(6) Permits Transferable.

- (A) Subject to section (3), an operating permit may be transferred upon submission to the department of an application to transfer signed by a new owner. Until, such time as the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- (B) The department, within thirty (30) days of receipt of the application, shall notify the new applicant of its intent to revoke and reissue or transfer the permit.

**AUTHORITY: section 644.026, RSMo Supp. 1987.\* Original rule filed Nov. 9, 1983, effective June 1, 1984.**

**\*Original authority: 644.026, RSMo 1972, amended 1973, 1987.**

*[577.155, RSMo 1994.\* Original rule filed Nov. 10, 1980, effective April 11, 1981. Amended: Filed March 9, 1984, effective Oct. 1, 1984. Amended: Filed March 1, 1996, effective Nov. 30, 1996.*

*\*Original authority: 644.051, RSMo 1971, amended 1976, 1980.]*