

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 1—Organization, Purpose, and Definitions**

**PROPOSED AMENDMENT**

**10 CSR 50-1.010 Organization.** The council is amending sections (1)–(3).

*PURPOSE: This amendment updates the names of council member entities to reflect the current entity names and adds a representative from the Missouri Independent Oil and Gas Association as a member, consistent with the authorizing statute.*

(1) Chapter 259, RSMo, establishes [T]the State Oil and Gas Council [is composed of the following state agencies: Division of Geology and Land Survey, Division of Commerce and Industrial Development,]. The council consists of eight (8) members: the state geologist; members representing Department of Economic Development, Missouri Public Service Commission, Clean Water Commission, [and] Missouri University of [Missouri.] Science and Technology Petroleum Engineering Program, and Missouri Independent Oil and Gas Association; and [T]two (2) other persons knowledgeable of the oil and gas industry are appointed to the council by the governor with the advice and consent of the senate.

(2) Member agencies are represented on the council by the executive head of the agency, except that the Missouri University of [Missouri] Science and Technology shall be represented by a professor of petroleum engineering and the Missouri Independent Oil and Gas Association shall be represented by a designated member of the association.

(3) The state geologist shall act as a supervisor charged with the duty of enforcing the rules and orders of the council applicable to the crude [petroleum] oil and natural gas resources of the state. The authority to engage in oil and gas drilling or producing operations will be granted by the state geologist when the requirements of 10 CSR 50[-2.010–10 CSR 50-2.110] and Chapter 259, RSMo have been complied with. [The state geologist also serves as director of the Division of Geology and Land Survey (DNR) with offices at Rolla, Missouri. Address P.O. Box 250, Rolla, MO 65401, (314) 364-1752.]

*AUTHORITY: sections 259.010, 259.020, 259.030, and 259.040, RSMo [1986] Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 22, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed June 14, 1976, effective Nov. 12, 1976. Amended: Filed Sept. 15, 2015.*

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.

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**PROPOSED AMENDMENT**

**10 CSR 50-1.020 General Procedures [and Purpose].** The council is amending the title of the rule, the purpose, sections (3), (4), and (7), deleting sections (2), (5), and (6), adding new sections (5), (6), and (7), and renumbering as needed.

*PURPOSE: This amendment provides additional detail on notice requirements for hearings, specifies that Missouri nomenclature shall be used, and provides the process and requirements for records to be held confidential.*

*PURPOSE: This rule provides for the general practice and procedure of the council[,] and the application of rules promulgated by the council [and declares the purpose of these rules].*

*[(2) Special rules will be promulgated when required and shall take precedence over general rules if in conflict therewith.]*

*[(3)](2) No order or amendment, except in an emergency, shall be made by the council without a public hearing upon at least ten (10) days' notice. The public hearing shall be held at a time and place as may be prescribed by the council and any interested person shall be entitled to be heard. The notice requirements in this regulation apply to each hearing arising under Chapter 259, RSMo, and implementing regulations heard by the council or any agent appointed by the council.*

*(A) Notice of the hearing shall be published by the council in a newspaper of general circulation in the county where the land affected, or some part thereof, is situated. If the notice is applicable throughout the state, then it shall be published in a newspaper of general circulation which is published in Jefferson City.*

*(B) A copy of the notice of the hearing shall be mailed by the council to each person who has filed for the purpose of receiving notice. The notice shall be mailed not less than ten (10) business days prior to the hearing date.*

*(C) In addition to notice required in subsection (2)(A), the council also shall provide notice to any person whose property interests may be affected by the outcome of the hearing.*

*[(4)](3) When the council determines an emergency requiring immediate action [is found to] exists, the council is authorized to issue an emergency order without notice of hearing, which shall be effective [upon promulgation] when issued. No emergency order shall remain effective for more than fifteen (15) calendar days.*

*[(5) It is hereby declared to be in the public interest—*

*(A) To foster, to encourage and to promote the orderly and economic development, production and utilization of natural resources of oil and gas;*

*(B) To authorize and to provide for the operation and development of oil and gas properties in a manner that a greater ultimate recovery of oil and gas be had and that the correlative rights of all owners be fully protected;*

*(C) To encourage and to authorize the development and use of physical processes to obtain the greatest possible economic recovery of oil and gas in so-called primary, secondary and tertiary operations;*

*(D) To provide for complete protection of strata containing fresh water or water of present value or probable future value in all wells; and*

*(E) To provide for the elimination of surface or subsurface pollution or waste during and after drilling, producing and*

*abandonment procedures in all wells.*

*(6) In the interest of conservation of natural resources, waste of oil and gas is prohibited.]*

*[(7)](4) The [state geologist, member of the council] department or its authorized representatives shall have the authority to enter property, with the consent of the owner or [person in possession] operator, to conduct investigations or inspections as are consistent with the intent of Chapter 259, RSMo.*

*(5) The council, after a hearing as provided by law, may order an operation to cease or wells to be plugged upon a finding that any provisions of the laws, rules, or conditions of the council have been violated or that any fraud, deceit, or misrepresentation was made to obtain the approval of a permit. Appeals of any decision of the council may be made as provided by law.*

*(6) Information submitted pursuant to Chapter 259, RSMo, and implementing regulations shall use Missouri nomenclature.*

*(7) Confidentiality. Information gathered pursuant to Chapter 259, RSMo, and implementing regulations is public record pursuant to the Missouri Sunshine law, Chapter 610, RSMo. Confidentiality may be granted upon request, in accordance with section 640.155.1, RSMo. Cancelled permits are not considered confidential.*

*(A) If a written request for confidentiality is made to the state geologist within one hundred twenty (120) days of the spud date or the date of commencement of recompletion of the well, all information, samples, or cores filed as required in 10 CSR 50-2.050 shall be held in confidential custody for an initial period of one (1) year from the written request.*

*(B) All rights to confidentiality shall be lost if the filings are not timely, as provided in 10 CSR 50-2.050, or if the request for confidentiality is not timely, as provided in subsection (9)(A).*

*(C) Samples, cores, or information may be released before the expiration of the one- (1-) year period only upon written approval of the operator.*

*(D) If a request for an extension is made at least thirty (30) days before the expiration of the initial one- (1-) year period, the period of confidentiality may be extended for one (1) additional year.*

*AUTHORITY: sections 259.070 and 259.140, RSMo [1986] Supp. 2013, and sections 259.190 and 259.200, RSMo 2000. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Sept. 13, 1983, effective Dec. 11, 1983. Amended: Filed Sept. 15, 2015.*

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, III Fairgrounds Rd., Rolla, MO.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 1—Organization, Purpose, and Definitions**

**PROPOSED AMENDMENT**

**10 CSR 50-1.030 Definitions.** The council is amending the purpose and sections (1) and (2).

*PURPOSE: This amendment adds definitions for additional terms used throughout the rules, deletes terms that are not used in the rules, and updates existing terms to be consistent with their statutory definitions.*

*PURPOSE: [Since many of the terms used in the oil and gas industry are unique to that industry, t]This rule provides the definitions [found in section 259.050, RSMo for the convenience of those using these rules.] for terms used in 10 CSR 50.*

*(1) [See Chapter 259, RSMo,] The terms used in 10 CSR 50 shall have the meanings set forth in section 259.050 [for those words specifically defined by statute—], RSMo, or this rule, unless the context of the term clearly indicates otherwise.*

*[(A) Applicant well, the well or group of wells from which an area of review is calculated;]*

*(A) Terms beginning with the letter A.*

*1. Abandoned site, any property or lease that is no longer operated as an active site for oil and gas production and injection projects.*

*2. Abandoned well, a well that is no longer operated for its intended use and has not been shut in, converted to another type of well, or plugged.*

*[(B)]3. Area of review, an area surrounding an [single applicant] injection well(s) [or extending from the outer perimeter of a group of applicant wells to] that extends a minimum of one-half (1/2) mile from the well(s) [and including the project area of the well(s);] or from the unit boundary of an enhanced recovery project.*

*[(C)]4. Area of review well, any well including, but not limited to, water wells, [and] abandoned wells, plugged wells and dry holes, located within the area of review, which penetrates the injection interval[;].*

*(B) Terms beginning with the letter B.*

*1. (Reserved)*

*(C) Terms beginning with the letter C.*

*1. Casing, the impervious, durable, tubular materials used to line a wellbore.*

*2. Casinghead gas, gas produced that was in solution with oil in its original state in the reservoir.*

*3. Cement, portland cement or a blend of portland cement.*

*[(D) Certificate of clearance means a permit prescribed by the council for the transportation or the delivery of oil or gas or product and issued or registered in accordance with the rule or order requiring the permit;]*

*4. Coalbed natural gas, natural gas produced from either coal seams or associated shale.*

*5. Commercial well, a well from which oil or gas is recovered and sold, traded or otherwise used for profit.*

*6. Common source of supply, synonymous with "pool" as defined in this rule.*

*7. Confining strata, geologic stratum or strata that serve as a barrier between water-, oil-, or gas-bearing strata.*

*8. Core, a continuous section of geologic materials recovered during drilling.*

*[(E)]9. Corrective action, remedial action on any [area of review] well to prevent the migration of fluids from the surface or from one (1) stratum to another[;].*

10. Correlative rights, the right of each owner or operator in a pool to obtain that owner's or operator's just and equitable share of the oil or gas resource, or an economic equivalent of that share of the resource, produced in a manner or amount that will not have any of the following effects:

- A. Damage the reservoir;
- B. Take an undue proportion of the obtainable oil or gas;

or

- C. Cause undue drainage between developed leases.

[(F)]1. Council, the State Oil and Gas Council established by section 259.010[;], RSMo.

(D) Terms beginning with the letter D.

- 1. Department, the Department of Natural Resources.
- 2. Disposal well, an injection well used to place produced water, non-usable gas or other liquid or gaseous waste associated with the production of oil or gas or both into an injection zone and is not used for enhanced recovery.

(E) Terms beginning with the letter E.

- 1. Enhanced recovery, any process used to increase the recovery of oil or gas from a pool through secondary or tertiary recovery. Enhanced recovery includes, but is not limited to, water floods, pressure maintenance projects, cycling or recycling projects, steam floods, fire floods, carbon dioxide injection projects, high-density well drilling projects, and approved technologies that are either unconventional or in any way redirect the natural movement of oil or gas or formation water in the pool. Enhanced recovery typically involves the use of injection wells of some kind as part of a production unit.

- 2. Enhanced recovery injection well, an injection well used to move underground fluids to production wells through the use of water, steam, gas, or any other substance in order to redirect or facilitate the natural movement of oil, gas, or water in a pool.

[(G)]3. Exempted aquifer, an aquifer or its portion that meets the criteria in the definition of Underground Source of Drinking Water set forth in [subsection] paragraph (1)(X/U)1. of this rule but which has been exempted [by the director of the Department of Natural Resources because the aquifer or its portion is oil- or gas-producing:] for operation of an injection well.

(F) Terms beginning with the letter F.

[(H)]1. Field, the general area underlain by one (1) or more pools[;].

[(I)]2. Fluid, any material or substance which flows or moves whether in a semi-solid, liquid, sludge, or gaseous state[;].

- 3. Formation water, water that occurs naturally within the pores of a geologic formation or stratum.

(G) Terms beginning with the letter G.

[(J)]1. Gas, all natural gas and all other fluid hydrocarbons which are produced at the wellhead and not herein below defined [in this rule] as oil[;].

(H) Terms beginning with the letter H.

- 1. Horizontal well, a well drilled at an angle to the vertical, typically parallel to the geologic strata containing oil or gas.

(I) Terms beginning with the letter I.

[(K)] Illegal gas means gas which has been produced from any well within this state in excess of the quantity permitted by any rule or order of the council;

(L) Illegal oil means oil which has been produced from any well within the state in excess of the quantity permitted by any rule or order of the council;

(M) Illegal product means any product derived in whole or in part from illegal oil or illegal gas[;]

- 1. Increased well density, the drilling of an additional primary production well in a spacing unit.

- 2. Injection, emplacement of fluids into the subsurface through a well.

[(N)]3. Injection well, a well into which fluids are injected during all or part of the life of the well for disposal or enhanced recovery projects or for underground storage of gas that is liquid at stan-

ard temperature and pressure, but not including oil- or gas-producing wells [into which cumulative fluid injection is less than three thousand (3000) reservoir barrels;] undergoing approved well stimulation treatment.

- 4. Injection zone, a geological stratum, group of strata, or part of a stratum that receives fluids through a well.

(J) Terms beginning with the letter J.

- 1. (Reserved)

(K) Terms beginning with the letter K.

- 1. (Reserved)

(L) Terms beginning with the letter L.

- 1. Location exception, authorization given by the state geologist to drill a well at a location other than that which is prescribed by these regulations.

(M) Terms beginning with the letter M.

[(O)]1. Mechanical integrity, [exists if] a well shall be considered to have mechanical integrity if there is no significant leakage in the casing, tubing, or packer; and there is no significant fluid movement into an[d] underground source of drinking water through vertical channels adjacent to the wellbore[;].

- 2. Missouri nomenclature, Missouri-specific geologic terminology as provided by the state geologist including, but not limited to, names of geologic strata, pools, and geologic features.

- 3. Multiple completion, the completion of any well that permits production from two (2) or more pools that are completely segregated by confining strata.

(N) Terms beginning with the letter N.

[(P)]1. Non-commercial gas well, a gas well drilled for the sole purpose of [furnish] providing gas for private domestic consumption by the owner and not for resale or trade[;].

(O) Terms beginning with the letter O.

[(Q)]1. Oil, crude petroleum oil and other hydrocarbons regardless of gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas, other than gas produced in association with oil and commonly known as casinghead gas[;]. The term shall also include hydrocarbons that do not flow to a wellhead but are produced by other means, including those contained in oil-shale and oil-sand.

[(R)]2. Oil and Gas Remedial Fund, the fund established by section 259.190.5, RSMo into which forfeited bond monies, [penalty monies] and proceeds from the sale of illegal oil, illegal gas, [or] and illegal product are deposited, [the monies in] which [are] is to be used for plugging abandoned wells as provided for in 10 CSR 50-2.060[(10);](3)(E).

3. Oil and Gas Resources Fund, the fund established by section 259.052, RSMo, into which all gifts, donations, transfers, moneys appropriated by the General Assembly, permit application fees, operating fees, closure fees, late fees, severance fees, and bequests are deposited, which is to be used to administer the provisions of Chapter 259, RSMo, and implementing regulations, and to collect, process, manage, interpret, and distribute geologic and hydrologic resource information pertaining to oil and gas potential.

- 4. Open well, a well that has not been plugged including, but not limited to, abandoned, operating, or shut-in wells.

- 5. Operator, a person who drills, maintains, operates, or controls wells associated with oil or gas production, storage, or injection projects.

[(S)]6. Owner, the person who has the right to drill into and produce from a pool and to appropriate the oil or gas [s/he] produce[s/d] therefrom either for him[her]self or others or for him[her]self and others[;].

(P) Terms beginning with the letter P.

- 1. Person, any individual, partnership, co-partnership, firm, company, public or private corporation, association, joint stock company, trust, estate, governmental or political subdivision, or any other legal entity.

2. **Plugged well**, a well that has been filled or partially filled with cement or other materials to prevent the migration of fluids within the well.

*[(T)]*3. **Pool**, an underground reservoir containing a common accumulation of oil or gas or both; each zone of a structure which is completely separated from any other zone in the same structure is a "pool," as that term is used in *[this c]*Chapter *[:]* 259, RSMo, and in these regulations.

4. **Pooling**, the contractual agreement of those holding the rights to mineral interests within a single spacing unit for primary production, whether that agreement is voluntary or by order of the council, to produce oil or gas or both from that unit.

5. **Primary production**, the process of recovery of oil or gas from a pool in which one (1) well is capable of efficiently draining the pool or portion thereof that resides within the confines of the spacing unit and the drainage of oil, gas, or formation water into the well occurs naturally.

6. **Produced water**, formation water that is associated with the production of oil or gas and either requires disposal or is used as part of an enhanced recovery project.

*[(U)]* **Producer**, the owner of a well(s) capable of producing oil or gas or both;

*[(V)]*7. **Product**, any commodity made from oil or gas and includes refined crude oil, crude tops, topped crude, processed crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil, residuum, gas oil, casinghead gasoline, natural gas gasoline, kerosene, *[benzine]* benzene, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one (1) or more liquid products or by-products derived from oil or gas, and blends or mixtures of *o/r/f* two (2) or more liquid products or by-products, derived from oil or gas whether herein enumerated *[in this rule]* or not*[:]*.

8. **Production unit**, an uninterrupted block of acreage of any size and any shape that has a definite outer boundary and in which wells may be drilled for enhanced recovery. The acreage that composes a production unit may include default spacing units, acreage for which spacing units have or have not been explicitly ordered by the state geologist or council, pooled or non-pooled mineral acreage, and all or parts of past and present production units.

9. **Production well**, any well used for recovery of oil or gas or both.

**(Q)** Terms beginning with the letter Q.

1. (Reserved)

**(R)** Terms beginning with the letter R.

*[(W)]*1. **Reasonable market demand**, *[means]* the demand for oil or gas for reasonable current requirements for consumption and use within and without the state, together with such quantities as are reasonably necessary for building up or maintaining reasonable working stocks and reasonable reserves of oil or gas or product*[:]*.

2. **Recompletion**, the process of reworking or repairing a well after its initial well completion.

3. **Reference well**, a well used to collect data to establish a maximum injection pressure as approved by the state geologist.

**(S)** Terms beginning with the letter S.

1. **Seismic shot hole**, a hole drilled for the purpose of generating a seismic signal to be used in the exploration or development of oil or gas or both.

2. **Shut-in well**, any well that has not been operated for ninety (90) calendar days or more.

3. **Spacing Unit**, an arbitrary block of acreage of specified size and shape for a single pool that is based on the U.S. Public Land Survey System in which only one (1) production well may be drilled for primary production that is no closer than a specified minimum distance from the unit boundary.

4. **Special project**, research and development of a new process or technology that increases the amount of oil or gas recoverable from a pool or improves oil or gas operations.

5. **Spill or release**, any threatened or real emission, discharge, spillage, leakage, pumping, pouring, emptying or dumping of a substance into or onto the land, air, or waters of the state, unless done in compliance with the conditions of a federal or state permit, unless the substance is confined and is expected to stay confined to property owned, leased, or otherwise controlled by the person having control over the substance.

6. **Spud date**, the date of first penetration of the earth with a drilling bit.

7. **Storage well**, a well used to inject or extract natural gas or other gaseous hydrocarbons for storage purposes.

8. **Stratum or strata**, a layer or layers of rock composed of substantially the same lithology that is distinctive visually from other layers above and below; often a lithologic unit.

9. **Stratigraphic test well**, a well drilled to obtain information on the thickness, lithology, sequence, porosity, permeability, or any other properties of rock, or to locate the position of a geologic horizon in the evaluation of potentially productive oil or gas strata and is not utilized for generating a seismic signal.

**(T)** Terms beginning with the letter T.

1. (Reserved)

**(U)** Terms beginning with the letter U.

*[(X)]*1. **Underground source of drinking water**, an aquifer or *[its]* any portion*[:]* thereof that—

A. *[which s]*Supplies any private well or public water supply system; or

B. Contains a sufficient quantity of groundwater to supply a private well or public water system; and

(I) Currently supplies drinking water for human consumption; or

(II) *[in which the water c]*Contains less than ten thousand (10,000) mg/l total dissolved solids; and

C. Is not an exempted aquifer.

2. **Unitization**, the contractual agreement of mineral interests owners to form a production unit through a voluntary process or order of the council, to produce oil or gas from that production unit and to designate the operator of the unit.

**(V)** Terms beginning with the letter V.

1. (Reserved)

**(W)** Terms beginning with the letter W.

*[(Y)]*1. **Waste**, *[means and]* includes, but is not limited to:

*[1.]*A. Physical waste, as that term is generally understood in the oil and gas industry, but not including unavoidable or accidental waste;

*[2.]*B. The inefficient, excessive, or improper use of, or the unnecessary dissipation of, reservoir energy;

*[3.]*C. The location, spacing, drilling, equipping, operating, or producing of any oil or gas well*[/s]* or wells in a manner which causes, or tends to cause, reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations, or which causes or tends to cause unnecessary or excessive surface loss or destruction of oil or gas;

*[4.]*D. The inefficient storing of oil or gas;

*[5.]*E. The production of oil or gas in excess of transportation or marketing facilities or in excess of reasonable market demand; and

*[6.]*F. Through negligence, the unnecessary or excessive surface loss or destruction of oil or gas resulting from evaporation, seepage, leakage, or deliberate combustion*[: and]*.

2. **Waters of the state**, shall have the same meaning as defined in the Missouri Clean Water Law, section 644.016, RSMo.

*[(Z)]*3. **Well**, any hole drilled in the earth for, or in connection with, the exploration, discovery, or recovery of oil or gas, or for*[:]* or in connection with the underground storage of gas in natural formation, or for*[:]* or in connection with the disposal of salt water, nonusable gas, or other waste accompanying the production of oil or gas. Wells drilled for the production of water are regulated by the Water Well Drillers' Act, Chapter 256, RSMo, and the implementing Missouri

Well Construction rules, 10 CSR 23. A well includes, but is not limited to, the following:

- (A) Disposal well;
- (B) Enhanced recovery injection well;
- (C) Horizontal well;
- (D) Injection well;
- (E) Production well;
- (F) Seismic shot hole;
- (G) Storage well; or
- (H) Stratigraphic test well.

4. Well stimulation treatment, a treatment of a well designed to enhance oil and gas production or recovery by increasing the secondary permeability of the geologic strata. Well stimulation is a short-term and non-continual process for the purposes of opening and stimulating channels for the flow of oil or gas or both. Examples of well stimulation treatments include hydraulic fracturing, acid fracturing, and acid matrix stimulation. Well stimulation treatment does not include routine well cleanout work; routine well maintenance; routine treatment for the purpose of removal of geologic strata damage due to drilling; bottom hole pressure surveys; routine activities that do not affect the integrity of the well or the geologic strata; the removal of scale or precipitate from the perforations, casing, or tubing; or a treatment that does not penetrate into the geologic strata more than thirty-six (36) inches from the wellbore.

5. Whipstock, a long wedge-shaped steel device or casing that uses an inclined plane to cause the bit to deflect from the original borehole at a slight angle, sometimes used in an oil or gas well to control directional drilling, to straighten crooked boreholes, or to sidetrack to avoid unretrieved items left in a well.

(X) Terms beginning with the letter X.

1. (Reserved)

(Y) Terms beginning with the letter Y.

1. (Reserved)

(Z) Terms beginning with the letter Z.

1. (Reserved)

(2) All other words used in this rule shall be given their usual customary and accepted meaning, and all words of a technical nature, or [*peculiar*] specific to the oil and gas industry, shall be given that meaning which is generally accepted in the oil and gas industry.

*AUTHORITY:* sections 259.050, 259.140, and 259.190, RSMo [1986] 2000, and section 259.070, RSMo Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 22, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed Sept. 15, 2015.

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

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## Title 10—DEPARTMENT OF NATURAL RESOURCES Division 50—Oil and Gas Council Chapter 1—Organization, Purpose, and Definitions

### PROPOSED RULE

#### 10 CSR 50-1.040 Enforcement Action and Appeal Procedures

*PURPOSE:* This rule outlines the procedures the state geologist and council will take when an alleged violation has occurred or when an operator is affected by an adverse action.

(1) The state geologist shall cause investigations to be made upon the request of the council or upon receipt of information concerning alleged violations of Chapter 259, RSMo, and implementing regulations or any standard, limitation, or order pursuant thereto, or any term or condition of any permit, and may cause to be made any other investigations consistent with the purposes of Chapter 259, RSMo.

(2) If, in the opinion of the state geologist, an investigation discloses that a violation of Chapter 259, RSMo, or implementing regulations does exist, the state geologist may issue an order as provided in section 259.070, RSMo, requiring the remediation or abatement of the specified condition(s). The order shall be served by registered mail, return receipt requested. The order shall specify the violations of Chapter 259, RSMo, or implementing regulations or any standard, limitation, or order pursuant thereto, or any term or condition of any permit violated.

(3) Any person adversely affected by an order or denial of a permit, license, or transfer issued by the state geologist may appeal the order or denial of a permit, license, or transfer to the council within thirty (30) calendar days of the date the state geologist issued the order or denial. The appeal must be sent by registered or certified mail to the chairperson of the council. The council shall treat the appeal as a contested case consistent with Chapter 259 and Chapter 536, RSMo. The council may conduct any hearing it requires to decide the appeal, or may appoint a hearing officer to make a recommended decision. If the council elects to appoint a hearing officer, the hearing officer must be a licensed attorney and a member in good standing of the Missouri Bar. The council may sustain, reverse, or modify the state geologist's order or denial of a permit, license, or transfer or may make such other orders as it deems appropriate under the circumstances, subject to rights of judicial review as provided in section 259.170, RSMo. If any order or denial of a permit, license, or transfer issued by the state geologist is not appealed within the time provided in this section, the order or denial of a permit, license, or transfer becomes final and may be enforced as provided in sections 259.200 and/or 259.210, RSMo.

*AUTHORITY:* sections 259.140, 259.150, 259.160, 259.170, and 259.200, RSMo 2000, and section 259.070, RSMo Supp. 2013. Original rule filed Sept. 15, 2015.

*PUBLIC COST:* This proposed rule will cost state agencies or political subdivisions twenty-six thousand three hundred ninety-seven dollars (\$26,397) per year in the aggregate.

*PRIVATE COST:* This proposed rule 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 rule with the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.

FISCAL NOTE

PUBLIC COST

I. RULE NUMBER

<b>Rule Number and Name:</b>	10 CSR 50-1.040 Enforcement Action and Appeal Procedure
<b>Type of Rulemaking:</b>	New Rule

II. SUMMARY OF FISCAL IMPACT

<b>Affected Agency or Political Subdivision</b>	<b>Estimated Cost of Compliance in the Aggregate</b>
Department of Natural Resources	\$26,397 per year per applicable rule (one-seventh of \$184,776 average annual cost for 2 FTE needed)

III. WORKSHEET

<b>Expenditure Scenario F - 2 FTE</b>	<b>FY17 Proj</b>				
	<i>(eff 1/2017)</i>	<b>FY18 Proj</b>	<b>FY19 Proj</b>	<b>FY20 Proj</b>	<b>FY21 Proj</b>
Salaries (PS)					
1 Geologist III, 1 Sr Office Support Assistant	\$ 42,162	\$ 86,854	\$ 89,459	\$ 92,143	\$ 94,907
Fringe Benefits (social security, health ins., retirement, etc.)	\$ 20,196	\$ 41,603	\$ 42,851	\$ 44,137	\$ 45,461
Operating E&E (travel, supplies, training, etc.)	\$ 22,222	\$ 12,257	\$ 12,625	\$ 13,003	\$ 13,394
Contractual Engineering	\$ -	\$ -	\$ -	\$ -	\$ -
*Statewide Central Services, DNR					
Administration, OA ITSD, Leases/Rents	\$ 21,610	\$ 35,952	\$ 37,031	\$ 38,142	\$ 39,286
<b>Total</b>	<b>\$ 106,190</b>	<b>\$176,666</b>	<b>\$181,966</b>	<b>\$187,425</b>	<b>\$193,048</b>
		<b>Average Need (FY18-FY21) \$184,776</b>			

\$184,776 ÷ 7 = \$26,397 per applicable rule

IV. ASSUMPTIONS

- Projection Assumptions:
  - FY17 reflected as one-half year due to earliest potential effective date of fees; actual timing of first expenditures will be determined by revenue receipts/fund balance  
FY17 includes one-time E&E needs; reduced in FY18
  - 3% pay plan/inflation beginning FY18
  - Average need calculated using 4 years since FY17 is only a partial year
  - Fringe benefits estimated using DNR rate of 47.9% (less than the statewide average rate)
  - \*Indirect costs estimated using approved federal indirect cost rate of 25.55%
- Additional staffing level needed to cover activities in new rules and amendments to 10 CSR 50-1.040, 10 CSR 50-1.050, 10 CSR 50-2.010, 10 CSR 50-2.055, 10 CSR 50-2.080, 10 CSR 50-3.020, and

10 CSR 50-5.010. Because implementation of this rule is dependent upon and in conjunction with the other rules, the total FTE expenditure provided was divided evenly among the seven applicable rules.

3. Anticipate duties of the Geologist III include: assist with oil and gas permitting; provide compliance assistance; maintain and account for: mechanical integrity testing (MIT), injection pressure determination testing, and well stimulation treatment projects; oversee and review oil and gas production projects; evaluate enhanced oil recovery projects and technologies; determine appropriate injection pressures and rates; oversee MITs; conduct field inspections; and ensure compliance with regulations.
4. Anticipate duties of the Senior Office Support Assistant include: input data; maintain and account for: operator registration, well bond reporting, well status and shut-in wells, production, resource valuation, recordkeeping, and general information requests; create and edit forms; provide administrative support; generate letters (notifications/reminders); generate reports; and perform financial tracking.

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 1—Organization, Purpose, and Definitions**

**PROPOSED RULE**

**10 CSR 50-1.050 Assessment of Costs**

*PURPOSE:* This rule establishes a fee structure for activities conducted under 10 CSR 50.

(1) Beginning January 1, 2017, the following fees shall be assessed and deposited in the Oil and Gas Resources Fund:

(A) A fee of two hundred fifty dollars (\$250) shall be paid upon the submittal of an application for an operator license; except that an applicant for a license who solely operates a non-commercial gas well shall pay a fee of fifty dollars (\$50);

(B) A fee of two hundred fifty dollars (\$250) shall be paid by each operator upon submittal of an operator license renewal form; except that an operator who solely operates a non-commercial gas well shall pay a fee of fifty dollars (\$50);

(C) A fee of one hundred dollars (\$100) shall be paid upon submittal of an application for a permit to drill, deepen, plug-back, or recomplete as follows:

1. Any new application for permit to drill, deepen, plug-back, or recomplete any well;

2. Any application for modification to the permit to drill, deepen, plug-back, or recomplete; or

3. Blanket requests to drill, deepen, plug-back, or recomplete wells proposed to depths no greater than one thousand five hundred feet (1500');

(D) A fee of one hundred dollars (\$100) shall be paid upon submittal of an application for a permit to inject as follows:

1. Any new application for a permit to inject in any well; or

2. Any application for modification to the initial injection well permit including, but not limited to, an increase in the maximum injection pressure and/or the maximum injection rate;

3. No fee shall be assessed for a notice of permit modification as specified in 10 CSR 50-2.055(5)(B);

(E) A fee of twenty-five dollars (\$25) shall be paid upon submittal of an application for extension of the shut-in status of a well;

(F) A fee of fifty dollars (\$50) shall be paid upon submittal of a plugging record for each well plugged;

(G) A fee of sixty cents (\$.60) on each barrel of oil sold or marketed each month shall be assessed to each operator. The fee and assessment shall apply only to the first purchase of oil from the operator and shall be collected and submitted by the first purchaser of oil;

(H) A fee of seven and one-tenth cents (\$.071) on each one thousand (1,000) cubic feet of gas sold or marketed each month shall be assessed to each operator. The charge and assessment shall apply only to the first purchase of gas from the operator and shall be collected and submitted by the first purchaser of gas;

(I) In the event any required form or report is not submitted per Chapter 259, RSMo, or implementing regulations, a late fee of no more than one hundred dollars (\$100) per month shall be assessed against the responsible party, and shall be assessed each month until the form or report has been submitted. In no case, however, will a late fee exceed one thousand two hundred dollars (\$1,200) per violation for each well.

(2) Fee nonrefundable. Once paid, each fee shall be nonrefundable.

*AUTHORITY:* section 259.052, SS for HB 92, First Regular Session, Ninety-eighth, General Assembly, 2015, and section 259.080, RSMo 2000. Original rule filed Sept. 15, 2015.

*PUBLIC COST:* This proposed rule will cost state agencies or political subdivisions twenty-six thousand three hundred ninety-seven dol-

lars (\$26,397) per year in the aggregate.

*PRIVATE COST:* This proposed rule will cost private entities one hundred fifty-seven thousand four hundred fifty-one dollars (\$157,451) per year 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 rule with the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.

## FISCAL NOTE

## PUBLIC COST

## I. RULE NUMBER

Rule Number and Name:	10 CSR 50-1.050 Assessment of Costs
Type of Rulemaking:	New Rule

## II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimated Cost of Compliance in the Aggregate
Department of Natural Resources	\$26,397 per year per applicable rule (one-seventh of \$184,776 average annual cost for 2 FTE needed)

## III. WORKSHEET

Expenditure Scenario F - 2 FTE	FY17 Proj				
	(eff 1/2017)	FY18 Proj	FY19 Proj	FY20 Proj	FY21 Proj
Salaries (PS)					
1 Geologist III, 1 Sr Office Support Assistant	\$ 42,162	\$ 86,854	\$ 89,459	\$ 92,143	\$ 94,907
Fringe Benefits (social security, health ins., retirement, etc.)	\$ 20,196	\$ 41,603	\$ 42,851	\$ 44,137	\$ 45,461
Operating E&E (travel, supplies, training, etc.)	\$ 22,222	\$ 12,257	\$ 12,625	\$ 13,003	\$ 13,394
Contractual Engineering	\$ -	\$ -	\$ -	\$ -	\$ -
*Statewide Central Services, DNR					
Administration, OA ITSD, Leases/Rents	\$ 21,610	\$ 35,952	\$ 37,031	\$ 38,142	\$ 39,286
Total	\$ 106,190	\$ 176,666	\$ 181,966	\$ 187,425	\$ 193,048
					<b>Average Need (FY18-FY21) \$184,776</b>

\$184,776 ÷ 7 = \$26,397 per applicable rule

## IV. ASSUMPTIONS

- Projection Assumptions:
  - FY17 reflected as one-half year due to earliest potential effective date of fees; actual timing of first expenditures will be determined by revenue receipts/fund balance
  - FY17 includes one-time E&E needs; reduced in FY18
  - 3% pay plan/inflation beginning FY18
  - Average need calculated using 4 years since FY17 is only a partial year
  - Fringe benefits estimated using DNR rate of 47.9% (less than the statewide average rate)
  - \*Indirect costs estimated using approved federal indirect cost rate of 25.55%
- Additional staffing level needed to cover activities in new rules and amendments to 10 CSR 50-1.040, 10 CSR 50-1.050, 10 CSR 50-2.010, 10 CSR 50-2.055, 10 CSR 50-2.080, 10 CSR 50-3.020, and

10 CSR 50-5.010. Because implementation of this rule is dependent upon and in conjunction with the other rules, the total FIE expenditure provided was divided evenly among the seven applicable rules.

3. Anticipate duties of the Geologist III include: assist with oil and gas permitting; provide compliance assistance; maintain and account for: mechanical integrity testing (MIT), injection pressure determination testing, and well stimulation treatment projects; oversee and review oil and gas production projects; evaluate enhanced oil recovery projects and technologies; determine appropriate injection pressures and rates; oversee MITs; conduct field inspections; and ensure compliance with regulations.
4. Anticipate duties of the Senior Office Support Assistant include: input data; maintain and account for: operator registration, well bond reporting, well status and shut-in wells, production, resource valuation, recordkeeping, and general information requests; create and edit forms; provide administrative support; generate letters (notifications/reminders); generate reports; and perform financial tracking.

## FISCAL NOTE

## PRIVATE COST

## I. RULE NUMBER

Rule Number and Name	10 CSR 50-1.050 Organization, Purpose and Definitions - Assessment of Costs
Type of Rulemaking	New Rule

## II. SUMMARY OF FISCAL IMPACT

Estimate of the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by types of the business entities which would likely be affected:	Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:
20	Oil or gas operators who drill, maintain, operate, or control wells associated with oil or gas production, storage, or injection projects.	\$154,351 total per year
59	Non-commercial gas well operators who drill, maintain, operate or control wells associated with gas production for the sole purpose of providing gas for private domestic consumption by the owner.	\$3,100 total per year

## III. WORKSHEET

Type of Entity	Type of Revenue	Average Number (per year)	Fee	Total Cost (per year)
Oil or Gas Operator	Operator License Application or Renewal	20	\$250	\$5,000
Non-commercial Gas Well Operator	Non-commercial Gas Well Operator License Application or Renewal	59	\$50	\$2,950
Oil or Gas Operator	Application for Permit to Drill, Deepen, Plug-back or Recomplete a Well	304	\$100	\$30,400
Non-commercial Gas Well Operator	Application for Permit to Drill, Deepen, Plug-back or Recomplete a Non-commercial Gas Well	1	\$100	\$100
Oil or Gas Operator	Application for Permit to Inject	69	\$100	\$6,900
Oil or Gas Operator	Application for Shut-in Status Extension	20	\$25	\$500
Oil or Gas Operator	Well Plugging Record	160	\$50	\$8,000
Non-commercial Gas Well Operator	Non-commercial Gas Well Plugging Record	1	\$50	\$50
Oil or Gas Operator	Oil Production Fee (per barrel oil)	170,000	\$0.60	\$102,000
Oil or Gas Operator	Gas Production Fee (per MCF gas)	21,846	\$0.071	\$1,551
Annual Total:				\$157,451

**IV. ASSUMPTIONS**

1. Based on statistics from the past 5 years, we are assuming an average of 20 new and existing commercial oil and gas operators per year.
2. Based on statistics from the past 5 years, we are assuming an average of 59 new and existing non-commercial gas operators per year.
3. Based on statistics from the past 5 years, we are assuming an average of 304 applications for a permit to drill, deepen, plug-back or recomplete a well per year.
4. Based on statistics from the past 5 years, we are assuming an average of one application for a permit to drill, deepen, plug-back or recomplete a non-commercial gas well per year.
5. Based on statistics from the past 5 years, we are assuming an average of 69 applications for a permit to inject per year.
6. Based on statistics from the past 5 years, we are assuming an average of 20 applications for shut-in status extensions per year.
7. Based on statistics from the past 5 years, we are assuming an average of 160 wells plugged per year.
8. Based on statistics from the past 5 years, we are assuming an average of one non-commercial gas well plugged per year.
9. Based on statistics from the past 5 years and industry feedback, we are assuming an average of 170,000 barrels of oil produced and sold per year.
10. Based on statistics from the past 5 years, we are assuming an average of 21,846 thousand cubic feet (MCF) of gas produced and sold per year.
11. This cost assumes that required forms and reports will be submitted within the regulatory timeframes.
12. This cost assumes that an average of the past 5 years' statistics is representative of the highly volatile nature of oil and gas production and exploration activity in the state.
13. The proposed fee structure within the new rule, if not disapproved by the general assembly, becomes effective January 1, 2017, pursuant to Section 259.080.2.

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.010 [Organization Report] Operator License.** The council is amending the title, purpose, sections (1)–(3), adding new sections (2)–(4), and renumbering as needed.

*PURPOSE: This amendment changes the requirement of an organization report to a requirement for an operator license, adds the procedures and requirements for obtaining and renewing an operator license, references the required fees to be submitted, adds the conditions and procedures for suspending or revoking an operator license, and provides procedures for transferring an open well from one operator to another.*

*PURPOSE: This rule provides for the filing of information that identifies those responsible for oil and gas exploration, [producing] production or related industry activities regulated by the council. The [organization report] operator license is required in order to properly process bonding, well permitting, producing, plugging, and other council regulated activities and to make sure that the person making application is, in fact, authorized to represent a person, firm, or corporation.*

(1) *[Prior to start of operations, each person, firm or corporation engaged in oil or gas drilling, producing or transporting or engaging in projects developed for underground storage of hydrocarbons in natural formation or developed for disposal of water, nonusable gas or other waste accompanying the production of oil or gas, shall properly execute the prescribed organization report (form OGC-1) and submit same] No person shall engage in oil or gas operations pursuant to Chapter 259, RSMo, and implementing regulations without first obtaining or renewing an operator license from the department. Each operator of a well or gas storage facility shall maintain a current operator license even if the well or storage facility is shut in or idle.*

(2) **Application for an operator license.**

(A) An application for an operator license shall be submitted to the state geologist for approval. *[Signatures as required on t/This [form must] application shall be [notarized. The report must be filed before bonding will be approved] submitted on a form provided by the department along with the fee required pursuant to 10 CSR 50-1.050 and shall be completed in full.*

(B) The state geologist shall review the application for operator license and, within fifteen (15) business days, determine if the application is in proper form and if the requirements of Chapter 259, RSMo, and implementing regulations are met. If the application is incomplete or lacking required information, forms, or fees, the state geologist shall notify the applicant and suspend the application process. When the required form, information, or fee is submitted by the applicant and received by the state geologist, the fifteen (15) business day review period will begin anew. If the state geologist has not received the missing or incomplete required application information or fee within thirty (30) days after notification of the applicant, the application shall be considered null and void and the applicant must reapply by submitting a new application for an operator license along with the required fee.

1. If the state geologist finds that the application is in good form, that all requirements of the application have been met, and that Chapter 259, RSMo, and implementing regulations are being met, the state geologist shall issue the operator license.

2. If the state geologist determines either that the application is not in proper form, that the applicant failed to submit the

applicable fees, or that Chapter 259, RSMo, and implementing regulations are not being met, the state geologist shall deny the application.

3. If the state geologist determines that the applicant is in violation of any provision of Chapter 259, RSMo, or implementing regulations, the state geologist may deny the application.

4. If the state geologist has not taken action by the prescribed fifteen (15) business day review period, the application shall be considered denied.

(3) **License Renewal.**

(A) An operator license issued pursuant to this section shall expire on January 1 of the year immediately following issuance of the license. An operator may apply to renew the operator's license by submitting an application to the state geologist for approval. This application shall be submitted on a form provided by the department, along with the fee required pursuant to 10 CSR 50-1.050, on or before January 1 each year and shall be completed in full.

(B) A late fee pursuant to 10 CSR 50-1.050 shall be paid if the renewal is submitted within thirty (30) calendar days following the expiration date. If a license has been expired more than thirty (30) calendar days, the licensee must reapply by submitting a new application for an operator license along with the required fee.

(C) If the state geologist determines that the licensee is in violation of any provision of Chapter 259, RSMo, or implementing regulations, the state geologist may deny the operator license renewal.

(4) **Suspension or revocation of operator license.**

(A) The state geologist may issue an order to suspend or revoke an operator license if the state geologist determines that the licensee has violated any provision of Chapter 259, RSMo, or implementing regulations.

(B) The order of suspension or revocation shall state the reason(s) for suspension or revocation, the effective date of the suspension or revocation, and the conditions under which the suspension or revocation would be rescinded. The order shall be sent registered or certified mail to the licensee's last known address. The licensee may appeal the suspension or revocation as provided in 10 CSR 50-1.040(3).

*[(2)](5) After any change occurs as to facts stated in the [report] application as submitted and filed, except change of ownership, a supplementary [report] application shall be filed with the state geologist with respect to the change within thirty (30) calendar days after the effective date of change.*

*[(3)](6) The operator of any open well shall comply with Chapter 259, RSMo, and implementing regulations. Any open well shall not be transferred from one (1) operator to another operator without approval of the state geologist. An operator (transferor) shall submit to the state geologist a request to transfer any open well(s) to a new operator (transferee). The request shall be submitted on a form provided by the department [Upon change of ownership of any well(s), producing or nonproducing, notice shall be given to the state geologist within ten (10)] no less than thirty (30) calendar days [after] prior to the [change of ownership] planned transfer. Any such request may be denied if the state geologist determines that the operator has not submitted all the required information.*

(A) The state geologist shall review the completed transfer request and, within fifteen (15) business days, approve or deny the request based upon the following conditions:

1. The transfer of the well(s) must be agreed upon by both the transferor and by the transferee;

2. The transferee must have a current operator license issued by the state geologist;

3. The transferee must have bonding as required in 10 CSR 50-2.020 in place prior to transfer;

4. The transferor shall provide a list of American Petroleum Institute (API) numbers for all open wells on the lease, spacing unit, production unit, or gas storage facility with the notice of transfer;

5. Transfers shall not be made to any person who has not complied with the provisions of 10 CSR 50-2.010;

6. The transferor may be required by the state geologist to conduct a mechanical integrity test as a condition of the transfer; and

7. Within ninety (90) days of any transfer, the transferee shall change the tank battery identification sign provided for in 10 CSR 50-2.065(1) to include the new operator information.

(B) If the form is incomplete or lacking required information, the state geologist shall notify the operator and suspend the review process. When the completed form or required information is submitted by the operator and received by the state geologist, the fifteen (15) business day review period will begin anew. If the state geologist has not received the missing or incomplete required information within thirty (30) days after notification of the operator, the request shall be considered null and void and the operator must submit a new transfer request.

(C) If the state geologist has not taken action by the prescribed fifteen (15) business day review period, the transfer shall be considered denied.

*AUTHORITY: section 259.070, RSMo [1986] 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Sept. 10, 1979, effective Feb. 1, 1980. Amended: Filed Sept. 15, 2015.*

*PUBLIC COST: This proposed amendment will cost state agencies or political subdivisions twenty-six thousand three hundred ninety-seven dollars (\$26,397) per year in the aggregate.*

*PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.*

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## FISCAL NOTE

## PUBLIC COST

## I. RULE NUMBER

Rule Number and Name:	10 CSR 50-2.010 Organization Report
Type of Rulemaking:	Amendment

## II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimated Cost of Compliance in the Aggregate
Department of Natural Resources	\$26,397 per year per applicable rule (one-seventh of \$184,776 average annual cost for 2 FTE needed)

## III. WORKSHEET

Expenditure Scenario F - 2 FTE	FY17 Proj				
	(eff 1/2017)	FY18 Proj	FY19 Proj	FY20 Proj	FY21 Proj
Salaries (PS)					
1 Geologist III, 1 Sr Office Support Assistant	\$ 42,162	\$ 86,854	\$ 89,459	\$ 92,143	\$ 94,907
Fringe Benefits (social security, health ins., retirement, etc.)	\$ 20,196	\$ 41,603	\$ 42,851	\$ 44,137	\$ 45,461
Operating E&E (travel, supplies, training, etc.)	\$ 22,222	\$ 12,257	\$ 12,625	\$ 13,003	\$ 13,394
Contractual Engineering	\$ -	\$ -	\$ -	\$ -	\$ -
*Statewide Central Services, DNR Administration, OA ITSD, Leases/Rents	\$ 21,610	\$ 35,952	\$ 37,031	\$ 38,142	\$ 39,286
Total	\$ 106,190	\$ 176,666	\$ 181,966	\$ 187,425	\$ 193,048
		<b>Average Need (FY18-FY21) \$184,776</b>			

$\$184,776 \div 7 = \$26,397$  per applicable rule

## IV. ASSUMPTIONS

1. Projection Assumptions:
  - FY17 reflected as one-half year due to earliest potential effective date of fees; actual timing of first expenditures will be determined by revenue receipts/fund balance
  - FY17 includes one-time E&E needs; reduced in FY18
  - 3% pay plan/inflation beginning FY18
  - Average need calculated using 4 years since FY17 is only a partial year
  - Fringe benefits estimated using DNR rate of 47.9% (less than the statewide average rate)
  - \*Indirect costs estimated using approved federal indirect cost rate of 25.55%
2. Additional staffing level needed to cover activities in new rules and amendments to 10 CSR 50-1.040, 10 CSR 50-1.050, 10 CSR 50-2.010, 10 CSR 50-2.055, 10 CSR 50-2.080, 10 CSR 50-3.020, and

10 CSR 50-5.010. Because implementation of this rule is dependent upon and in conjunction with the other rules, the total FTE expenditure provided was divided evenly among the seven applicable rules.

3. Anticipate duties of the Geologist III include: assist with oil and gas permitting; provide compliance assistance; maintain and account for: mechanical integrity testing (MIT), injection pressure determination testing, and well stimulation treatment projects; oversee and review oil and gas production projects; evaluate enhanced oil recovery projects and technologies; determine appropriate injection pressures and rates; oversee MITs; conduct field inspections; and ensure compliance with regulations.
4. Anticipate duties of the Senior Office Support Assistant include: input data; maintain and account for: operator registration, well bond reporting, well status and shut-in wells, production, resource valuation, recordkeeping, and general information requests; create and edit forms; provide administrative support; generate letters (notifications/reminders); generate reports; and perform financial tracking.

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.020 Bonds.** The council is amending the purpose, sections (1)–(3), and adding new sections (4)–(6).

*PURPOSE: This amendment changes the bond amounts required for oil and gas wells, clarifies bonding requirements for horizontal wells, provide additional detail and requirements for the types of bonds that will be accepted, and adds procedures for replacement, release, or forfeiture of bonds.*

*PURPOSE: Bonding is required of an operator before commencing oil or gas drilling or operations to insure compliance with the provisions of Chapter 259, RSMo, and the rules of the council, specifically with reference to the proper plugging for abandonment of a well(s).*

(1) Prior to commencement of [oil or gas] drilling or other operations, the [person, firm or corporation] operator commencing such drilling or operations shall make, or cause to be made, [and file with the state geologist] a good and sufficient bond for each well [or hole and]. The bond shall be payable to the state of Missouri, conditioned [for] upon the performance of the duty to comply with all [the provisions] of the laws of the state [of Missouri] and the rules and orders of the [Oil and Gas C]ouncil. The bond shall be filed with the state geologist. This bond shall remain in full force and effect until a letter of release is issued by the state geologist or the bond is forfeited as provided in section (6) below. The state geologist shall issue the letter of release after plugging of the well [or hole is approved by the state geologist and is released by the state geologist], or after a new bond is filed by a successor [in interest and is released by] and appropriate well transfer form submitted to the state geologist pursuant to 10 CSR 50-2.010(6). [Application for release of bond shall be made by letter to the state geologist who shall release the bond if the requirements of the law and regulations have been met.]

(2) **Bond Amounts.** [Bond will be r]Required [in] bond amounts shall be determined by the council and shall be no less than the following amounts [during the entire operation of the well]:

**MINIMUM SINGLE WELL BOND**

Depth of Well		Amount
From	To	
0'	500'	\$(1000)1,100
501'	1000'	\$(2000)2,200
1001'	2000'	\$(3000)3,300
2001'	5000'	\$(4000)4,400
5001'	—	\$(5000)5,500
		plus \$(12/
		foot
		beyond
		5001 feet

[Refer to 10 CSR 50-2.070(1)(G) for non-commercial gas well bond amounts.]

Bonds for horizontal wells shall be based on the total measured length of the wellbore from the surface to the depth of the deepest producing horizon.

**MINIMUM BLANKET WELL BOND**

Depth of Well		Amount	Number of [Unplugged] Open Wells/bond
From	To		
0'	800'	\$(20)22,000	[5]40 wells
801'	1/2]500'	\$(30)25,000	[15]10 wells

Wells greater than one thousand five hundred feet (1500') in depth must be bonded individually by a single well bond.

(A) [However, the] A blanket bond amount may be increased by the single well bond amount (which varies depending on the depth of the well—see Minimum Single Well Bond table) for every unplugged well in excess of the maximum allowable unplugged wells per blanket bond as shown in the Minimum Blanket Well Bond table.

(B) Operators of [A]all wells permitted prior to [the effective date of this regulation] March 30, 2016, shall [comply with these bonding requirements no later than January 1, 1990] maintain existing bonding amounts for such wells until they are transferred pursuant to 10 CSR 50-2.010(6), deepened, plugged-back, or recompleted pursuant to 10 CSR 50-2.030, or plugged pursuant to 10 CSR 50-2.060(3).

(C) Operators of [A]all wells permitted or transferred on or after [the effective date of this regulation] March 30, 2016, shall comply with [the previously mentioned] bonding [requirements] amounts stipulated in the Minimum Single Well Bond table or the Minimum Blanket Well Bond table prior to permit issuance or transfer approval.

[(2)](3) Types of bonds. The state geologist may accept surety bonds, personal bonds secured by certificates of deposit, and personal bonds secured by irrevocable letters of credit. The bond [shall be by a corporate surety authorized to do business in the state of Missouri and] shall be submitted on the appropriate form [OGC-2]. [In lieu of a bond with a surety, an applicant may furnish to the council his/her own personal bond, secured by a certificate of deposit in an amount equal to that of the required surety bond. The personal bond shall be submitted on form OGC-2A.] When the bond is filed, the state geologist shall [immediately] review the bond and if the bond is in proper form, the state geologist shall [approve] accept the bond with the conditions which may be required by the council or by rule. If the bond is determined to be insufficient or not in proper form, the state geologist shall notify the operator. No drilling or operation shall commence or continue unless there is a sufficient bond on file [a bond approved by] with the state geologist.

(A) Surety bonds shall be subject to the following conditions:

1. Only irrevocable surety bonds shall be accepted. No bond of a surety company shall be cancelled for any reason whatsoever, including, but not limited to, nonpayment of premium, bankruptcy, or insolvency of the operator or issuance of notices of violations or cessation orders and assessment of penalties with respect to the operations covered by the bond, except that surety bond coverage for wells not drilled may be cancelled if the surety provides written notification and the state geologist is in agreement. The state geologist shall advise the surety, within thirty (30) days after receipt of a notice to cancel bond, whether the bond may be cancelled;

2. A surety company's bond shall not be accepted in excess of ten percent (10%) of the surety company's capital surplus account as shown on a balance sheet certified by a certified public accountant;

3. The total amount of the bonds issued by a surety on behalf of any operator shall not exceed thirty percent (30%) of the surety company's capital surplus account as shown on a balance sheet certified by a certified public accountant;

4. The surety shall be licensed to conduct a surety business

in Missouri;

5. Both the surety and the operator shall be primarily liable for completion of any remedial actions, including, but not limited to, well plugging, with the surety's liability being limited to the amount of the bond;

6. The bond shall provide that—

A. The surety will give prompt notice to the operator and the state geologist of any change in corporate ownership or name or address of the surety company, or any notice received or action filed alleging the insolvency or bankruptcy of the surety or alleging any violations of regulatory requirements which could result in suspension or revocation of the surety's license to do business; and

B. In the event the surety becomes unable to fulfill its obligation under the bond for any reason, notice shall be given immediately to the operator and the state geologist; and

7. The bond shall provide a mechanism for a surety company to give prompt notice to the state geologist and the operator of any change in corporate ownership or name or address of the surety company, or any action filed alleging the insolvency or bankruptcy of the surety company, or the operator, or alleging any violations which would result in suspension or revocation of the surety license to do business. Upon the incapacity of a surety by reason of bankruptcy or insolvency, or suspension or revocation of its license, the operator shall be deemed to be without bond coverage in violation of section (1) and shall promptly notify the state geologist. The state geologist, upon notification of the surety's bankruptcy or insolvency, or suspension or revocation of its license, shall issue a notice of violation against any operator who is without bond coverage. The notice shall specify a thirty-(30-) day period to replace bond coverage. If the bond is not replaced in thirty (30) days, an order shall be issued by the state geologist requiring immediate cessation of operations. Operations shall not resume until the state geologist has determined that an acceptable bond had been posted.

[(3)](B) Personal bonds secured by certificates of deposit shall be subject[ed] to the following conditions:

1. The certificate(s) shall be in the amount of the bond or in an amount greater than the bond and shall be made payable to or assigned to the state of Missouri, both in writing and upon the records of the institution issuing the certificates, and shall be automatically renewable at the end of the term of the certificate. If assigned, institutions issuing the certificate(s) waive all rights of set off or liens against the certificate(s);

2. No single certificate of deposit shall exceed the sum of two hundred fifty thousand dollars (\$250,000) nor shall any permittee submit certificates of deposit aggregating more than two hundred fifty thousand dollars (\$250,000) or the maximum insurable amount as determined by the Federal Deposit Insurance Corporation from a single institution.

[(A)] The institution issuing the certificate of deposit must be insured by the Federal Deposit Insurance Corporation (FDIC) [or the Federal Savings and Loan Insurance Corporation (FSLIC)];

[(B)] Only automatically renewable certificates of deposit will be accepted; and]

[(C)]3. Any interest on the certificates of deposit shall be made payable to the [permittee.] operator;

4. The certificate of deposit shall be kept until the bond is released by the state geologist;

5. The institution issuing the certificate(s) of deposit for bonding purposes shall give prompt notice to the state geologist and the operator of any change in corporate ownership, name, or address of the institution, and any insolvency or bankruptcy of the institution; and

6. The bond shall provide a mechanism for an institution to give prompt notice to the state geologist and the operator of any change in corporate ownership, name, or address of the institu-

tion, any action filed alleging the insolvency or bankruptcy of the institution or the operator, or alleging any violations which would result in suspension or revocation of the institution charter or license to do business. Upon the incapacity of any institution by reason of insolvency or bankruptcy, or suspension or revocation of its charter or license, the operator shall be deemed to be without bond coverage in violation of section (1). The state geologist, upon notification of the institution's bankruptcy or insolvency, or suspension or revocation of its charter or license, shall issue a notice of violation against any operator who is without bond coverage. The notice shall specify a thirty- (30-) day period to replace bond coverage. If the bond is not replaced in thirty (30) days, an order shall be issued by the state geologist requiring immediate cessation of operations. Operations shall not resume until the state geologist has determined that an acceptable bond has been posted.

(C) Personal bonds secured by letters of credit shall be subject to the following conditions:

1. The letter of credit shall be no less than the face amount of the bond and shall be irrevocable. A letter of credit used as security shall be forfeited and shall be collected by the state geologist if not replaced by other suitable bond or letter of credit at least thirty (30) days before its expiration date;

2. The beneficiary of the letter of credit shall be the state of Missouri;

3. The letter of credit shall be issued by a bank authorized to do business in the United States. If the issuing bank is located in another state, a bank located in Missouri must confirm the letter of credit. Confirmations shall be irrevocable and on a form provided by the department;

4. The letter of credit shall be governed by Missouri law. The Uniform Customs and Practice for Documentary Credits, fixed by the International Chamber of Commerce, shall not apply;

5. The letter of credit shall provide that the state geologist may draw upon the credit by making a demand for payment, accompanied by his/her statement that the council has declared the operator's bond forfeited;

6. The issuer of a letter of credit or confirmation shall warrant that the issuance will not constitute a violation of any statute or regulation which limits the amount of loans or other credits which can be extended to any single borrower or customer or which limits the aggregate amount of liabilities which the issuer may incur at any one (1) time from issuance of letters of credit and acceptances;

7. The bank issuing the letter(s) of credit for bonding purposes shall give prompt notice to the state geologist and the operator of any change in corporate ownership, name, or address of the institution, or any insolvency or bankruptcy of the bank; and

8. The bond shall provide a mechanism for a bank to give prompt notice to the state geologist and the operator of any change in corporate ownership, name, or address of the institution, any action filed alleging the insolvency or bankruptcy of the bank or the operator, or alleging any violations which would result in suspension or revocation of the bank's charter or license to do business. Upon the incapacity of any bank by reason of insolvency or bankruptcy, or suspension or revocation of its charter or license, the operator shall be deemed to be without bond coverage in violation of section (1). The state geologist, upon notification of the bank's bankruptcy or insolvency, or suspension or revocation of its charter or license, shall issue a notice of violation against any operator who is without bond coverage. The notice shall specify a thirty (30) day period to replace bond coverage. If the bond is not replaced in thirty (30) days, an order shall be issued by the state geologist requiring immediate cessation of operations. Operations shall not resume until the state geologist has determined that an acceptable bond has been posted.

(4) Replacement of bonds. Operators may replace existing surety or personal bonds with other surety or personal bonds. Existing bonds will not be released until the operator has submitted and the state geologist has approved acceptable replacement bonds.

(5) Bond Release. Application for release of a bond shall be made by written notice to the state geologist who shall release the bond if the requirements of Chapter 259, RSMo, and implementing regulations have been met.

(6) Bond Forfeiture.

(A) If an operator fails to comply with an order of the state geologist, the state geologist shall issue an order declaring all applicable bonds to be forfeited.

(B) If a well is abandoned, plugged, or determined to have not been drilled, and the operator does not respond within six (6) months to reasonable attempts by the state geologist to contact that operator via information provided, the state geologist shall issue an order declaring the applicable bond forfeited.

(C) If the state geologist determines that the surety or issuer of a letter of credit or certificate of deposit desires to, and is capable of, completing remedial actions, including, but not limited to, well plugging, the state geologist, under additional terms and conditions as deemed necessary by the state geologist, may enter into an agreement with the surety or issuer of a letter of credit or certificate of deposit on a set schedule of compliance in lieu of collection of the forfeited bond. The remedial actions shall be in accordance with a compliance schedule that meets the conditions of the state geologist. The performer of remedial actions shall also demonstrate that they have the ability to satisfy the conditions. If the surety or issuer of a letter of credit or certificate of deposit fails to complete the remedial actions according to the schedule of compliance, the state geologist shall take action to collect the forfeited bond and any instruments securing the bond.

(D) The entry of an order declaring a bond forfeited shall automatically authorize the state geologist, with the assistance of the attorney general, if necessary, to take whatever actions are necessary to collect the forfeited bond and any instruments securing the bond. The forfeited bond shall be deposited into the Oil and Gas Remedial Fund and utilized according to 10 CSR 50-2.060(3)(E).

*AUTHORITY: section 259.070, RSMo [1986] Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed Sept. 15, 2015.*

*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 cost private entities twenty-four thousand six hundred sixteen dollars (\$24,616) per year 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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO.Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

FISCAL NOTE  
PRIVATE COST

I. RULE NUMBER

<b>Rule Number and Name:</b>	10 CSR 50 - 2.020, Oil and Gas Drilling and Production - Bonds
<b>Type of Rulemaking:</b>	Amendment

II. SUMMARY OF FISCAL IMPACT

Estimate of the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by types of the business entities which would likely be affected:	Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:
20	Oil or gas operators who drill, maintain, operate, or control wells associated with oil or gas production, storage, or injection projects.	\$0 to update bonding for existing wells & \$23,784 per year in <i>increased</i> bonding costs for future wells
59	Non-commercial gas well operators who drill, maintain, operate or control wells associated with gas production for the sole purpose of providing gas for private domestic consumption by the owner.	\$0 to update bonding for existing wells & \$832 per year in <i>increased</i> bonding costs for future wells

III. WORKSHEET

1. Proposed 10 CSR 50-2.020 will result in an estimated 15.75 percent increase in overall commercial well bonding expenditure, and a 60 percent average increase in overall non-commercial gas well bonding expenditure. Cost analysis is below:
  - a. Average cost per year to meet current commercial bond requirements is \$151,008 based on the past 10 years statistics.  $15.75\% \times \$151,008 = \$23,783.76$  cost increase
  - b. Average cost per year to meet current non-commercial gas well bond requirements is \$1,387 based on the past 10 years statistics.  $60\% \times \$1,387 = \$832$  cost increase to non-commercial operators
  
2. Although the proposed bond requirements statistically represent closer to a 25 percent cost increase, they allow for more flexibility in the number and depth of wells they cover. To determine a 15.75 percent overall cost increase to bond requirements, we applied the proposed bond requirements to our current operators and their wells. Then we calculated the percent increase relative to their current bonding.

- Figure 1 is the proposed bonding structure. In Figure 2, this bonding structure is applied to each operator's existing wells to determine a 15.75 percent cost increase. The Future Bonding fields represent the least expensive method of bonding the wells under the proposed structure.

Figure 1

**MINIMUM SINGLE WELL BOND**

**Depth of Well**

From	To	Amount
0'	500'	\$1,100
501'	1000'	\$2,200
1001'	2000'	\$3,300
2001'	5000'	\$4,400
5001'		\$5,500 plus \$2/ foot beyond 5001 feet

Bonds for horizontal wells shall be based on the total measured length of the wellbore from the surface to the depth of the deepest producing horizon.

**MINIMUM BLANKET WELL BOND**

**Depth of Well**

**From To Amount Number of Open Wells/bond**

0'	800'	\$22,000	40 wells
801'	1500'	\$25,000	10 wells

Wells greater than one thousand five hundred feet (1500') in depth must be bonded individually by a single well bond.

Figure 2

**Bonding Comparison**

Operator	# wells >			Current Total Bonding \$	Future	Future	Total Future Bonding \$	Difference \$
	# wells < 800'	800' & < 1500'	> 1500'		Blanket Bonding \$	Individual Bonding \$		(Future Current)
Arrow Oil Services, LLC	92	0	0	\$40,000.00	\$44,000.00	\$13,200.00	\$57,200.00	\$17,200.00
Blue Tip Missouri Energy	32	0	0	\$20,000.00	\$22,000.00	\$0.00	\$22,000.00	\$2,000.00
Colt Energy*	140	4	1	\$100,000.00	\$88,000.00	\$15,400.00	\$103,400.00	\$3,400.00
Encore Energy Partners	13	0	0	\$20,000.00	\$22,000.00	\$0.00	\$22,000.00	\$2,000.00
Investment Equipment	0	12	11	\$83,000.00	\$25,000.00	\$50,600.00	\$75,600.00	-\$7,400.00
JTC Oil	33	0	0	\$20,000.00	\$22,000.00	\$0.00	\$22,000.00	\$2,000.00
KRED*	507	8	0	\$238,000.00	\$311,000.00	\$0.00	\$311,000.00	\$73,000.00
L.T. Oil	87	0	0	\$40,000.00	\$44,000.00	\$7,700.00	\$51,700.00	\$11,700.00
Laclede Gas*	8	13	8	\$70,000.00	\$25,000.00	\$47,300.00	\$77,300.00	\$2,300.00
Laclede Oil Services*	0	3	0	\$12,000.00	\$0.00	\$9,900.00	\$9,900.00	-\$2,100.00
Palo Petroleum*	39	0	0	\$36,000.00	\$22,000.00	\$0.00	\$22,000.00	-\$14,000.00
Petro River Oil*	75	0	0	\$40,000.00	\$44,000.00	\$0.00	\$44,000.00	\$4,000.00
Roaming Foxes Petroleum	175	1	0	\$83,000.00	\$110,000.00	\$0.00	\$110,000.00	\$27,000.00
S&B Operating	44	0	0	\$20,000.00	\$22,000.00	\$8,800.00	\$30,800.00	\$10,800.00
SCZ Resources	14	1	0	\$20,000.00	\$22,000.00	\$3,300.00	\$25,300.00	\$5,300.00
TNT Energy	70	0	0	\$40,000.00	\$44,000.00	\$0.00	\$44,000.00	\$4,000.00
Warrior Operating	14	0	0	\$20,000.00	\$22,000.00	\$0.00	\$22,000.00	\$2,000.00
Zero CO2	14	0	0	\$20,000.00	\$22,000.00	\$0.00	\$22,000.00	\$2,000.00

\*KRED is currently overbonded. They could reduce current bonding to \$238,000. (fixed for statistical purposes)

\*Laclede Oil Services is overbonded for their horizontals per the new rules.

\*Palo is overbonded for their horizontals per the new rules.

\*Petro River has \$80k in bonding currently but they lost a lease that Arrow now owns; they are overbonded. (fixed for statistical purposes)

Total Difference: \$145,200.00  
Total % Difference: 15.7483731

**IV. ASSUMPTIONS**

1. Based on statistics from the past 5 years, we are assuming an average of 20 new and existing commercial oil and gas operators per year.
2. Based on statistics from the past 5 years, we are assuming an average of 59 new and existing non-commercial gas operators per year.
3. Based on statistics from the past 10 years, we are assuming the average cost to meet current commercial bond requirements is \$151,008 per year.
4. Based on statistics from the past 10 years, we are assuming the average cost to meet current non-commercial gas well bond requirements is \$1,387 per year.
5. We are assuming a 15.75 percent is an accurate and realistic representation of the cost increase to operators in any given year.
6. This cost assumes that an average of the past 10 years' statistics is representative of the highly volatile nature of oil and gas production and exploration activity in the state.

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.030 Application for Permit to Drill, Deepen, Plug-Back, or [Inject] Recomplete.** The council is amending the title, purpose, sections (1), (5), (6), (11), (12), and (14), deleting sections (2)-(6), (8), (10), and (13), adding sections (2)-(4), and (10), and renumbering as needed.

*PURPOSE: This amendment separates the application for a permit to drill, deepen, plug-back or recomplete from the application for a permit to inject, which is now a separate permit required under proposed new rule 10 CSR 50.2-055. This amendment also references the required fees to be submitted, clarifies the information to be submitted with the application, adds the ability for an operator to move an approved drilling location up to fifty feet (50'), provides additional detail on the application review process and subsequent approval or denial, specifies the duration of the permit, and requires the well name and number to be permanently assigned to the well.*

*PURPOSE: This rule provides for information needed for the permitting of drilling of new wells or reworking existing wells and establishes procedures for the determination of their locations (distances from [property] unit lines, other producing wells, etc.), according to classifications of the well(s). It also establishes procedures to be followed by the state geologist in issuing or denying permits [and legal recourse available to an applicant in case of denial]. [The rule further provides for the revocation of permits by the council after a hearing in the event that state laws or council rules have been violated, or if fraud, misrepresentation, etc., were used to initially obtain a permit.]*

(1) Prior to commencement of operations, application for a permit *[must be made with]* to drill, deepen, plug-back, or recomplete any well shall be submitted to and approved by the state geologist *[on form OGC-3 or OGC-3-I (for injection wells) as prescribed by the council]. [An organization report (form OGC-1)]* The required operator license and bond *[(form OGC-2)]* must be on file in the office of the state geologist or must accompany the application.

*[(2) An accurate well location survey must accompany the application. The plat shall show the distance from the two (2) nearest section lines to the well. The plat of survey shall show the distance of the well from the nearest lease line and from the nearest producing, drilling or abandoned well on the same lease. The geographic coordinates of the well shall be shown along with the method used to obtain the coordinates and statement of positional accuracy of the coordinates. The plat of survey shall be prepared by a Missouri professional land surveyor and shall meet the current "Minimum Standard Requirements for Property Boundary Surveys" defined in 10 CSR 30-2.010. Form OGC-4 or OGC-4-I, for injection wells, (see section (3)) must accompany the application. A confirmation well and/or additional development wells may be exempted from a minimum standards survey at the discretion of the council. A well location map, as here and after described, may be substituted in lieu of the previously mentioned plat of survey. The applicant shall provide a well location map and well reference sketch or the geographic position of the well prepared according to the specifications in 10 CSR 50-2.030(2)(A). The well location map shall be drawn to a scale of one inch (1") equals one hundred feet (100'), one inch (1") equals two hundred feet (200') or one inch (1") equals four hundred feet (400'). A copy of the cur-*

*rent ownership map maintained by the county tax assessor shall be acceptable. The quarter-quarter section, governmental lot, or United States Survey, along with the governmental section, township and range shall be stated on the well location map. The location map shall show the approximate location of the well within the section or quarter section, the approximate distance to the nearest perceived lease line or perceived boundary line and the names of the owners of the property on which the well is located and all adjoining property owners. The well reference sketch shall show the location of the well and its relationship (bearing and distance preferred), where possible, to four (4) durable objects to provide a permanent location of the well. Durable objects include, but are not restricted to, house corners (fully describe), marks on concrete structures or pavement, marks on ledge or bedrock, trees and set monuments. The reference sketch shall show the approximate distance of the well from existing streets or perceived boundary lines shown on the location map. It shall also show the house number of any houses shown on the sketch along with all street names. Both the location map and the reference sketch shall show a north arrow and a scale. Form OGC-4 or OGC-4-I, for injection wells, (see section (3)) must accompany the application.*

(A) A well location map conforming to the scale and distance requirements specified in 10 CSR 50-2.030(2) along with the geographic position of the well may be used in lieu of a well reference sketch. The geographic coordinates shall be latitude and longitude based on the North American Datum of 1983 (NAD 83) and resolved, at a minimum, to the nearest one-tenth (.10) of a second: i.e., latitude 38° 42' 54.2" North, longitude 90° 37' 15.8" West. The coordinates shall have a minimum positional tolerance of three (3) meters. Any well that a minimum standards survey reveals not to meet the minimum distance requirements shall not be approved for completion or production.

(3) Upon application for an injection well, an accurate location plat (form OGC-4-I) must accompany the application. The plat shall be drawn neatly and to scale and shall show the distance of the well from the nearest lease line and from the two (2) nearest section lines to the well. If the well is drilled on acreage that has been pooled with other land, distance to nearest boundary of the pooled acreage must also be shown. The plat shall also show the area of review for the applicant well and all area of review wells of public record that penetrate the injection interval. Descriptions, of the area of review wells, that penetrate the injection interval shall be included on the back of the form OGC-4-I. These descriptions shall include lease name, well number, location, owner, depth, type (oil, gas, etc.), date spudded, date completed and construction of the wells. Each area of review well shall be uniquely marked or numbered.

(4) A neat, accurate schematic diagram of the applicant injection well(s) and relevant surface equipment shall be submitted on form OGC-11 before application will be processed. This schematic diagram shall include the following: configuration of well head; total depth and/or plug-back total depth; depth of all injection or disposal intervals and their formation names; lithology of all formations penetrated; depths of the tops and bottoms of all casing and tubing; size and grade of all casing and tubing; type and depth of packer; depth, location and type of all cement; depth of all perforations and squeeze jobs; and geologic name and depth to bottom of all underground sources of drinking water which may be affected by the injection.

(5) The applicant for an injection well(s) shall publish a

notice of application in a newspaper of general circulation in the county in which the proposed injection well(s) will be located. The applicant shall submit a copy of the newspaper notice to the state geologist before the public hearing or administrative approval is granted. The notice shall include the name and address of applicant, location of proposed well(s), geologic name and depth of injection zone, a description of the need for the injection well(s) and the address of the office of the state geologist, where additional information may be obtained. There shall be a fifteen (15)-day written comment period (comments to be sent to the office of the state geologist). If within this period the state geologist determines that a significant degree of public interest is expressed, or other factors indicate the need for a public hearing, the state geologist may order a hearing. Public notice will be provided with a hearing date set for no sooner than thirty (30) days after the date of notice. If no public hearing is ordered, the application will be processed without further delay. A record will be kept of all written comments received and the responses to these comments.

(6) Upon application, the state geologist may waive the initial requirement for a minimum standards survey for non-commercial gas wells (wells drilled for the sole purpose of furnishing gas for private consumption by the owner and not for resale or trade). A permit application (OGC-3) shall include form which enables the state geologist to determine if minimum distance requirements to property or lease boundaries can be met before issuing a permit for drilling. If gas supplies are found to be present in sufficient quantities to be utilized, a minimum standards survey and plat of survey or a location map showing the geographic coordinates as described in 10 CSR 50-2.030(2)(A) and conforming to the scale, distance and format requirements specified in 10 CSR 50-2.030(2) of this rule will then be required to ensure compliance with distance requirements before any production can be initiated. Any well, that a minimum standards survey reveals not to meet minimum distance requirements shall not be approved for completion or production of gas.]

(2) The application for a permit to drill, deepen, plug-back, or recomplete shall be submitted on a form provided by the department along with the fee required pursuant to 10 CSR 50-1.050 and shall be completed in full.

(3) All applications shall be accompanied by a completed well location form and an accurate well location map.

(A) The location map shall show the following:

1. Approximate location of the well within the section or quarter section;
2. Approximate distance to the nearest existing or proposed well;
3. Approximate distance to the nearest perceived spacing unit line or production unit line;
4. Names and addresses of the owners of the property on which the well is located;
5. A north arrow and a scale; and
6. For a horizontal well, the proposed location of the well-bore's path and terminus.

(B) The proposed well location shall be provided using latitude and longitude based on the North American Datum of 1983 (NAD 83) and expressed in the decimal form to the fifth place. Any well that is found to not meet the minimum location requirements upon completion may be ordered to be plugged by the state geologist.

(C) A drilling location may be moved up to fifty feet (50') from the approved location, if the new location does not violate spacing or setback requirements, without filing a revised permit applica-

tion. Such changed location shall be noted on the well completion report.

(4) Seismic shot holes. Seismic operations shall not initiate new fractures or propagate existing fractures in the confining strata of underground sources of drinking water.

[(7)](5) An [owner] operator engaged in drilling [development] wells to depths no greater than [eight] one thousand five hundred feet ([800]/1500') may request that the state geologist approve prospective well locations on a blanket basis [on a single lease]. The fee required pursuant to 10 CSR 50-1.050(1)(C)3. shall be submitted with the request. Blanket requests must be associated with an established production unit. Bonding must be in place for all proposed wells in the blanket request. The request shall be accompanied by a plat of the entire [lease] production unit, indicating the unit boundaries, the location of and identifying by number all wells which have been drilled or are proposed, using appropriate symbols to distinguish between them; the plat shall conform to the scale and distance requirements specified in section [(2)/3] of this rule. In the event the state geologist approves the blanket requests, the approved locations may be drilled in the [owner's] operator's order of preference, provided that a permit application [(OGC-3)] and fee required pursuant to 10 CSR 50-1.050(1)(C)1. for each well commenced shall be sent to the state geologist within twenty-four (24) hours, or the next business day, after the commencement of drilling of each well.

[(8) An owner, company, firm or corporation engaged in drilling small diameter (less than five inch (5")) drill holes and core holes for stratigraphic purposes and which will not be used for the actual recovery of hydrocarbons, upon written request to the state geologist, may be granted permission to file individual well permit applications (OGC-3) and location plats (OGC-4) not later than three (3) days after the well has been drilled, and further may obtain a waiver of spacing requirements in 10 CSR 50-2.070, provided that—

(A) An organization report (OGC-1) has been properly executed and approved according to 10 CSR 50-2.010;

(B) Bonding has been executed and approved according to 10 CSR 50-2.020; and

(C) All other requirements in regard to drilling, plugging and abandonment are met.]

[(9)](6) Upon application for a permit to drill, deepen, plug-back, or recomplete, the state geologist shall review the application and, within fifteen (15) business days, determine if the application is in proper form and if the requirements of [the law and the rules] Chapter 259, RSMo, and implementing regulations are met. If the application is incomplete or lacking required information, forms, or fees, the state geologist shall notify the operator and suspend the application process. When the required form, information, or fee is submitted by the operator and received by the state geologist, the fifteen (15) business day review period will begin anew. If the state geologist has not received the missing or incomplete required application information or fee within thirty (30) days after notification of the operator, the application shall be considered null and void and the operator must reapply by submitting a new application for a permit to drill, deepen, plug-back, or recomplete, along with the required fee.

(A) If the state geologist finds that the application is in good form, that all requirements of the application have been met, and that [the laws] Chapter 259, RSMo, and implementing regulations are being met [s/he], the state geologist shall issue the permit.

(B) If [s/he] the state geologist determines [that] either that the application is not in proper form, that the operator failed to submit the applicable fees, or that [the law of the rules] Chapter 259, RSMo, and implementing regulations are not being met, [s/he]

the state geologist shall deny the permit.

(C) If the state geologist finds that the drilling of a well at the proposed site would be an undue risk to the surface or subsurface environment, [s/he] the state geologist shall deny the permit.

(D) If the state geologist determines that [prior wells drilled by the operator have been abandoned and have not been plugged in an approved manner, s/he shall] the operator is in violation of any provision of Chapter 259, RSMo, or implementing regulations, the state geologist may deny the permit.

[(A) Upon denial of a permit, the applicant may appeal within thirty (30) days of the notice of the denial to the state council and a hearing shall be held as provided by law.

(B) After the hearing the council shall either issue the permit or deny the permit. If the council denies the permit an appeal may be taken to the circuit court as provided by law.

(10) Permits may be revoked by the council upon a finding after a hearing as provided by law that any provision of the law, rules or conditions of the permit have been violated or that any fraud, deceit or misrepresentation was made to obtain the approval of the permit. Appeals of any decision of the council may be taken as provided by law.]

[(11)](7) Permits for drilling wells are not in any way transferable [to any other person, firm or corporation or to any other location]; however, any open well or the authority to inject for existing wells may be transferred to another operator according to 10 CSR 50-2.010(3).

[(12)](8) [Unless operations] Permits to drill, deepen, plug-back, or recomplete a single well are [commenced within one hundred eighty (180) days] valid for one (1) calendar year after date of approval, the approval to drill will become null and void. If the operator opts not to drill the well, a notice to cancel well permit application shall be submitted to the state geologist no later than thirty (30) calendar days following the end of the one- (1-) year permitted period.

[(13) Before commencing drilling operations, a drilling contractor engaged by an owner or operator for the drilling of a well shall confirm that an approved drilling permit has been obtained by the owner or operator. The drilling contractor's confirmation shall consist of the placement of his/her signature and date of signature, in ink, on the owner's approved permit. A drilling contractor shall not commence drilling operations unless an approved permit to drill the well has been obtained by the owner or operator and confirmed by the drilling contractor's signature.]

[(14)](9) Prior to any [substantial] change or modification of [the physical characteristics or method of operation of any well subject to these regulations, or change in the nature of wastes disposed of therein, the owner or operator of the facility shall submit a revised application form to] a permit, or any change in the operation of a well subject to these regulations, the operator shall notify the state geologist, identifying the well name, location, the proposed change, and a full explanation of the nature of the change, [to the state geologist]. An appropriately revised permit application or application for permit for well recompletion along with the fee required pursuant to 10 CSR 50-1.050 shall be submitted to the state geologist for approval, except as provided in subsection (3)(C). No modification or change in operation shall [be commenced] begin until the state geologist has reviewed and approved the [written notification] revised application. The state geologist shall [have a minimum of fifteen (15) days to] review and respond to the notification [and the] within fifteen (15)[-] business days. The review period shall be suspended if additional information is necessary to effectively review the [infor-

mation] application. [The term "substantial change or modification" shall mean any change in operation which may affect an underground source of drinking water, or otherwise alter the operation of the well so that its operation is not consistent with the existing permit.] When the required form or information is submitted by the operator and received by the state geologist, the fifteen (15) business day review period will begin anew.

(10) The well name and number entered on the permit application will be permanently assigned to the well and no changes will be approved to this information in the event of well or mineral interest transfers.

**AUTHORITY:** sections 259.060, 259.080, and 259.140, RSMo 2000, and section 259.070, RSMo Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed Sept. 15, 2015.

**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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.

## Title 10—DEPARTMENT OF NATURAL RESOURCES Division 50—Oil and Gas Council Chapter 2—Oil and Gas Drilling and Production

### PROPOSED AMENDMENT

**10 CSR 50-2.040 Drilling and Completion.** The council is amending the purpose, sections (1)–(4), deleting sections (5)–(12), and adding new sections (5)–(13).

**PURPOSE:** This amendment clarifies the casing and cementing requirements, requires casing materials to be steel, specifies requirements for tubingless or packerless completions, adds requirements for multiple-completed wells, clarifies the requirement for a pressure observation valve at the wellhead of an injection well, adds the requirement to maintain documentation of cementing operations, specifies the timeframe for which a stratigraphic test well must be plugged, and requires permanent signage at each well site.

**PURPOSE:** One of the important functions of the council is to prevent [produced salt water from contaminating either surface or underground fresh water resources] the contamination of the waters of the state. [When an oil or gas well is drilled, the bit usually penetrates fresh water strata at relatively shallow depths.] In Missouri, an underground source of drinking water may occur either above or below an oil and gas reservoir. This groundwater is commonly the only source of water for irrigation [or for] animal and human consumption. This rule provides procedures for protecting all [fresh] waters of the state and [for] to create acceptable safety standards for wells and surface installations [so that the wild and uncontrolled flow of gusher wells or blowouts can

be prevented]. Plugging of wells when they are abandoned is consistent with a statewide effort to prevent contamination of waters of the state [resources] and [would also be] additionally is important [should a given] in areas proven to be productive [as in secondary recovery activity] using enhanced recovery methods.

(1) During the drilling of any well, surface casing [will] shall be set [at the depth indicated on form OGC-3 or form OGC-3-I which has been approved by the state geologist and will be cemented from the setting depth to the surface. Before the bottom plug is drilled or before tests are initiated, the surface casing will stand cemented for the following periods of time: neat cement, for twenty-four (24) hours; neat cement with one percent (1%)  $\text{CaCl}_2$ , for twelve (12) hours; neat cement with two percent (2%)  $\text{CaCl}_2$ , for ten (10) hours; neat cement with three percent (3%)  $\text{CaCl}_2$ , for eight (8) hours; and neat cement with four percent (4%)  $\text{CaCl}_2$ , for six (6) hours. If other additives are to be used in the cement, the operator must contact the staff of the office of the state geologist for setting times appropriate for that particular cement.] as follows, except as otherwise required or approved by the state geologist as indicated on the approved permit to drill, deepen, plug-back, or recomplete:

(A) Through all unconsolidated material plus twenty feet (20') into the underlying competent bedrock; or

(B) In areas where underground sources of drinking water are present above the production or injection zone(s), at a point at least fifty feet (50') below the base of the deepest known underground source of drinking water penetrated.

(2) All casing materials shall be steel or other material of equal or greater strength approved by the state geologist and able to withstand collapse and burst pressures that the well might encounter.

[(2)](3) All wells drilled [for oil, gas or injection] shall be completed with tubing, packer, and a string(s) of casing which shall be properly cemented at sufficient depths to protect all water, oil, or gas bearing strata and shall prevent their contents from passing into other strata. [In the event wells are drilled with cable tools, temporary protective casing strings may be left uncemented. The specific casing and cementing requirements for injection wells shall be based on the depth to the base of the underground source of drinking water, the nature of the injected fluids and the hydraulic relationship between the injection zone and the base of the underground source of drinking water. (3) In certain instances, 10 CSR 50-2.040(3) shall modify 10 CSR 50-2.040(1) as follows: In] For wells drilled to producing [formations] strata at a depth of no greater than [eight] one thousand five hundred feet ([800]/1500'), [the state geologist may approve owner's request to] an operator may set a single casing string [and to cement the string by placing sufficient cement to fill annular space no less than approximately forty feet (40') above the top of the producing horizon.] with no tubing or packer, if the well is cemented from the bottom of the casing to the surface to seal off and protect any underground source of drinking water. The state geologist may approve other methods of cementing casing in a well.

(4) [During drilling and following completion of wells, surface well and producing installations shall conform to accepted safety standards.] Cement shall be used in setting all casing or sealing off producing strata, underground porosity gas storage strata, or underground sources of drinking water. Cement shall be installed from the bottom to the top of the casing in one (1) continuous operation using pressure grouting techniques. The cement must be placed in a minimum one inch (1") annulus between strings of casing or the casing and borehole. The cement

shall be maintained at surface level. Before the bottom plug is drilled or before tests are initiated, the surface casing shall stand cemented and further operations shall not begin until the cement has been in place for at least eight (8) hours and has reached a compressive strength of three hundred (300) pounds per square inch. These requirements may be modified by the state geologist.

[(5) Whenever operations shall cease for a period of ninety (90) days on any well, the owner or operator of the well shall give notice to the council and, if the council shall deem it necessary to prevent the pollution of any fresh water strata or supply, shall cause the well to be temporarily plugged in accordance with the rules of the council and under its direction. If the operations on any well are not recommenced within a period of six (6) months after notice has been given, the well shall be deemed a permanently abandoned well and the owner or operator shall comply with the rules relating to the plugging and abandonment of wells. Provided, that upon application to the council prior to the expiration of the six (6)-month period and for good cause shown, the council may extend the period for an additional six (6) months and in like manner the council may grant additional six (6) month extensions, but the total time of such consecutive extensions shall not exceed two (2) years, unless a mechanical integrity test is performed as outlined in 10 CSR 50-2.040(6) and the well capped at the surface, before the end of the two (2)-year extension period. The council may then permit the well to remain inactive status for a maximum of five (5) years and if not returned to active status within this time the well must be plugged.

(6) All new or newly converted injection wells shall be required to demonstrate mechanical integrity as defined by 10 CSR 50-1.030(1)(O) before operation may begin. All wells not permanently plugged and abandoned must demonstrate mechanical integrity at least every five (5) years for the absence of significant leaks from the outermost casing and the absence of significant fluid movement in vertical channels adjacent to the well bore. Demonstration of the absence of significant leaks shall utilize at least one (1) of the following procedures: A pressure test with liquid or gas, monitoring of annulus pressure in wells injecting at a positive pressure following an initial pressure test or any other test(s) that the state geologist considers effective. Demonstration of the absence of significant fluid movement in vertical channels adjacent to the well bore shall utilize at least two (2) of the following procedures: Cementing records (reviewed only once for the life of the well), tracer surveys, noise logs, temperature surveys or any other test(s) that the state geologist considers effective.

(7) A maximum injection pressure for injection wells shall be established by the state geologist so that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the confining zone. The injection pressure also should not cause the injected fluid to migrate into an underground source of drinking water.

(8) All logs and other test data shall be sent to the state geologist before operation may begin. The state geologist shall inform the operator of a satisfactory or unsatisfactory demonstration of mechanical integrity by mail or telephone without delay.

(9) In order to insure that all existing injection wells are properly tested for mechanical integrity as required by federal regulation, at least one-fifth (1/5) of each operator's injection wells drilled in Missouri prior to the State Underground

*Injection Control Program must demonstrate mechanical integrity as defined in 10 CSR 50-2.040(6) each year for the first five (5) years of the program. All injection wells, including new wells and newly converted wells must demonstrate mechanical integrity every five (5) years.*

(10) *If a well cannot demonstrate mechanical integrity the operator must cease operation of the well and immediately inform the state geologist. If corrective action cannot restore mechanical integrity within thirty (30) days after notification, the operator shall again notify the state geologist, who may grant an additional thirty (30) days before ordering the well to be plugged.*

(11) *The state geologist or an authorized representative shall have the authority to sample injected fluids at any time during injection operations.*

(12) *The operator is required to provide a one-fourth inch (1/4") female fitting, with cut-off valve, to the tubing to all wells drilled and completed as injection wells after the State Underground Injection Control Program is promulgated, so the injection pressure being used can be monitored by an authorized representative(s) of the state geologist. For wells that were injecting prior to promulgation of the State Underground Injection Control Program, the female fitting need not be added until the well is tested for mechanical integrity.]*

(5) **Multiple-completed wells.** Operators may produce from more than one (1) pool through the same wellbore if separation of each pool is maintained and after application to, and approval by, the state geologist. Multiple-completed injection and production wells may be permitted if, in addition to the requirements above, all of the following conditions are met:

- (A) Any offsetting production will not be adversely affected;
- (B) Underground sources of drinking water will not be endangered;
- (C) The well is continuously cemented across the injection and producing intervals; and
- (D) The well demonstrates mechanical integrity.

(6) The state geologist may require specific casing and cementing requirements for injection wells based on the following:

- (A) The depth of the underground source(s) of drinking water;
- (B) The nature of the injected fluids; or
- (C) The hydraulic relationship between the injection zone and the underground source(s) of drinking water.

(7) The following requirements shall apply to permitted injection wells:

(A) Each operator shall equip the wellhead with a pressure observation valve and maintain equipment necessary to obtain injection pressure measurements upon inspection by an authorized representative(s) of the state geologist. For injection wells completed prior to March 30, 2016, the pressure observation valve shall be added prior to testing for mechanical integrity, or upon request of the state geologist;

(B) The following tubing and packer requirements shall apply to permitted injection wells:

1. Each well permitted shall meet one (1) of the following requirements:

A. The well shall be equipped to inject through tubing below a packer;

B. A packer run on the tubing shall be set in casing opposite a cemented interval at a point immediately above the uppermost perforation or openhole interval. The annulus between the tubing and the casing shall be filled with a corrosion-inhibiting

fluid or hydrocarbon liquid; and

C. A packerless or tubingless completion for injection wells drilled to no greater than one thousand five hundred feet (1500') is authorized under the provisions of paragraph (7)(B)2. or 3. of this regulation;

2. Injection through tubing without a packer is authorized if all of the following requirements are met:

A. The tubing shall be run to a depth not shallower than forty feet (40') above the uppermost perforation or open hole of the injection interval;

B. Each wellhead shall be equipped with a pressure observation valve on the tubing and the tubing-casing annulus; and

C. The operator of the tubingless completion shall maintain the well so that the mechanical integrity tests can be performed as specified in 10 CSR 50-2.055(12); and

3. Injection without tubing is authorized if all of the following requirements are continuously met during the life of the well:

A. The casing shall be cemented continuously from setting depth to surface;

B. Surface wellhead injection pressure shall be recorded monthly and kept by the operator for five (5) years;

C. All pressure readings recorded shall be taken during actual injection operations; and

D. The operator of the tubingless completion shall maintain the well so that the mechanical integrity tests can be performed as specified in 10 CSR 50-2.055(12).

(8) In existing wells to be converted to other use, including but not limited to injection, all additional casing or recompletion shall be constructed as specified in sections (1) through (7).

(9) **Documentation.** Legible documentation of the cementing operations across all strata shall be maintained by the operator and provided to the state geologist upon request. The documentation may consist of invoices, job logs, job descriptions, or other similar service company reports.

(10) All points at which a well is in physical contact with a pool shall meet all minimum distance requirements as specified in 10 CSR 50. For horizontal wells, a directional survey must be submitted with a well completion or recompletion report to verify points at which the well is in contact with the pool.

(11) Any well not constructed in compliance with requirements of this regulation shall be shut in, according to 10 CSR 50-2.060 until compliance is achieved.

(12) All stratigraphic test wells that are not converted to another type of well must be permanently plugged according to 10 CSR 50-2.060(3) within ninety (90) calendar days of the spud date. A single thirty (30) calendar day extension period may be granted upon written request to the state geologist. If conversion is to take place, permit modification must be submitted to the state geologist as detailed in 10 CSR 50-2.030(9) or 10 CSR 50-2.060(4) prior to conversion. The well will then be subject to all completion and location requirements for the type of well to which it is being converted.

(13) Permanent signage must be posted within ninety (90) calendar days of spud date at each well site indicating the well name, well number, and API number. Stratigraphic test wells and non-commercial gas wells are exempt from signage posting.

*AUTHORITY: section[s] 259.060 and] 259.070, RSMo [2000] RSMo Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed Sept. 16, 2015.*

*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 cost private entities twenty-two thousand three hundred sixty dollars (\$22,360) initially and two thousand four hundred twenty dollars (\$2,420) per year 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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to [summer.young@dnr.mo.gov](mailto:summer.young@dnr.mo.gov). To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, III Fairgrounds Rd., Rolla, MO.*

## FISCAL NOTE

## PRIVATE COST

## I. RULE NUMBER

<b>Rule Number and Name:</b>	10 CSR 50 - 2.040, Oil and Gas Drilling and Production - Drilling and Completion
<b>Type of Rulemaking:</b>	Amendment

## II. SUMMARY OF FISCAL IMPACT

Estimate of the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by types of the business entities which would likely be affected:	Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:
20	Oil or gas operators who drill, maintain, operate, or control wells associated with oil or gas production, storage, or injection projects.	\$22,360 to add signage to existing wells & \$2,420 per year to add signage to future wells

## III. WORKSHEET

1. An estimated 1,118 existing wells will require permanent identification signs as required in proposed 10 CSR 50-2.040(13). Assumed cost is an average of \$20 per sign.  $\$20/\text{sign} \times 1,118 \text{ signs} = \$22,360$
2. An average of 121 new wells drilled each year will require permanent identification signs.  $\$20/\text{sign} \times 121 \text{ signs/year} = \$2,420/\text{year}$

## IV. ASSUMPTIONS

1. Based on statistics from the past 5 years, we are assuming an average of 20 commercial oil and gas operators per year.
2. Based on industry feedback, we are assuming an average of \$20 per permanent identification sign.
3. Based on statistics from the past 5 years, we are assuming an average of 121 new wells will require permanent identification signs per year.
4. Non-commercial gas wells and stratigraphic test wells are exempt from the permanent identification signage requirement.

5. This cost assumes that an average of the past 5 years' statistics is representative of the highly volatile nature of oil and gas production and exploration activity in the state.

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.050 Samples, Logs, and Completion Reports.** The council is amending the purpose, sections (1)–(3), and deleting section (4).

*PURPOSE: This amendment changes the timeframes for sample retention and report submittal to be based on the spud date rather than the completion date, changes the sampling interval for cuttings from ten feet to five feet, changes the sampling responsibility to be that of the operator rather than the owner, specifies identification information necessary for each sample, and provides the ability to request extensions.*

*PURPOSE: The objective of exploration is to locate reserves of oil and gas. To [obtain] achieve this objective, the geologic history and the relationships of petroleum generation, migration, and accumulation must be understood. Analyses of well cuttings and cores provide much information on the composition, age, and original environment of deposition of the sediments and on fluid content and characteristics. Logging tools lowered into boreholes [furnish] provide information concerning the electrical, acoustical, and radioactive properties of rock-fluid systems throughout drilled intervals. This rule provides for filing of these data with the [Oil and Gas Council] state geologist for the future use of industry and government scientists and is of paramount importance in achieving new energy resources and for protection of the environment.*

(1) Each operator drilling or recompleting wells for the purpose of the exploration or production of oil or gas, excluding seismic shot holes, shall preserve and retain samples or drill cuttings, cores, and all other information as required under sections (2) and (3).

(2) Samples.

(A) The operator shall be given notice that samples or cores are required by a notice appended to or on a copy of the permit to drill, deepen, plug-back, or recomplete returned to the operator by the state geologist. All samples or drill cuttings saved in drilling or recompletion operations, and any cores taken, shall be retained by the operator for one hundred eighty (180) days after the spud date of the well.

[(1)](B) Sample cuttings shall be taken at [ten] five foot ([10]5') intervals from the surface to total depth in all wells drilled [for oil or gas, for geological information, for the storage of dry natural gas, or casinghead gas and for the development of reservoirs for the storage of liquid petroleum gas. Each sample shall be carefully identified as to well name and depth of sample and all samples shall be shipped at the owner's expense to the office of the state geologist. Samples shall be remitted to the state geologist at weekly intervals and shall be for his/her study and use and shall be considered confidential for a period of one (1) year when so requested by the owner in writing.] under these regulations.

[(2)](C) During the drilling, [of,] or immediately following the completion, [of,] any well drilled as provided in [section 10 CSR 50-2.050(1) of] this rule, the [owner] operator shall advise the state geologist of all intervals that are to be cored, or have been cored, [and the cores as are taken shall be preserved,] and, if requested, shall [be] forward[ed] the core to the state geologist at the [owner's] operator's expense. In the event that it is necessary for the [owner] operator to utilize all or any portion of the core to the extent that sufficiently large and representative samples are not available for the state, the [owner] operator shall [furnish] provide

the state geologist with the results of identification or testing procedures. [The data shall be considered confidential for a period of one (1) year when so requested by the owner in writing.]

(D) Each sample shall be identified as to well name, location, and depth of sample. Upon request of the state geologist, all cores or core longitudinal sections not required by the operator for well evaluation purposes shall be placed in stratigraphic sequence in adequate boxes, labeled with the well name, location, and footage, and delivered to the state geologist. All samples shall be shipped at the operator's expense to the office of the state geologist and shall be for study and use.

(E) Delivery of the processed samples or cores shall be made within one hundred twenty (120) days of the spud date or date of commencement of recompletion of the well.

(F) If retention of the core is requested by the operator, designated state geologist staff members shall be provided unrestricted access to the core at the operator's facility during the operator's normal business hours. This access shall be subject to any confidentiality requests made under 10 CSR 50-1.020.

(G) Operators in physical possession of cores requested by the state geologist shall not dispose of the cores without permission of the state geologist.

(H) If the state geologist requests samples from portions of the hole that typically are not saved in drilling operations, the operator shall provide these samples.

(I) The state geologist may waive the requirements of sampling if the state geologist determines additional geologic information is not required. The state geologist will advise the operator on the returned copy of the approved permit to drill, deepen, plug-back, or recomplete when samples will not be required.

(3) Well completion or recompletion report.

[(3)](A) Within [thirty (30)] one hundred twenty (120) calendar days [of] after the [completion] spud date or commencement of recompletion of a well drilled [for oil or gas, for geological information, for gas storage, for the development of reservoirs for storage of liquid petroleum gas or for any injection purposes] under these regulations, the [owner will file with the state geologist properly executed form OGC-5] operator shall submit a well completion or recompletion report. [As an integral part of form OGC-5, the owner shall include complete logs or records of the well, including drilling time logs, electric logs, radioactive logs or other logs that may have been obtained during mechanical integrity testing. When more than one (1) type has been made, all shall be required. The data shall be filed with the state geologist for his/her study and use and shall be considered confidential for a period of one (1) year when so requested by the owner in writing.] Stratigraphic test wells that have not been converted are exempt from this requirement.

(B) For good cause shown, an extension of sixty (60) days may be granted by the state geologist. The request for extension shall be submitted in writing and received before the expiration of the one hundred twenty- (120-) day period.

(C) If requested by the state geologist, the operator shall include with the report complete logs or records of the well, including, but not limited to, drilling time logs, electric logs, radioactive logs or other logs that may have been obtained during mechanical integrity testing.

[(4) The state geologist may waive the requirements of sampling as set forth in section (1) of this rule when a well(s) is/are drilled in an established field. The state geologist will advise the owners on the returned copy of the drilling application when samples will not be required.]

*AUTHORITY: section 259.070, RSMo [1986] Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed*

Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Oct. 14, 1981, effective Feb. 11, 1982. Amended: Filed Sept. 15, 2015.

**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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, III Fairgrounds Rd., Rolla, MO.

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED RULE**

**10 CSR 50-2.055 Injection Wells, Mechanical Integrity Testing, and Well Stimulation Treatment**

**PURPOSE:** This rule provides for information needed for the permitting of injection activities and establishes procedures to be followed by the state geologist in issuing or denying permits. It also establishes procedures for determining injection pressures, demonstrating mechanical integrity, and taking corrective action at deficient wells. The rule further provides for notification of well stimulation treatment projects and submittal of documentation related to such treatment.

(1) Prior to commencement of injection operations, the following conditions shall be met:

(A) Application for a permit to inject along with the fee required pursuant to 10 CSR 50-1.050 has been submitted to the state geologist on forms provided by the department;

(B) The required operator license, bond, and approved completion or recompletion report are on file in the office of the state geologist; and

(C) The state geologist has approved and issued a permit to inject granting the application.

(2) Each injection well found to be operating without a permit issued by the state geologist shall be shut in, according to 10 CSR 50-2.060 until compliance is achieved.

(3) Each application for permit to inject shall be submitted on a form provided by the department, along with the fee required pursuant to 10 CSR 50-1.050, shall be completed in full, and be accompanied by—

(A) A map that shows the area of review for the proposed injection well and all area of review wells of public record, within a one-half- (½-) mile radius of the injection well, that penetrate the injection interval. Descriptions of all wells that penetrate the injection interval in the area of review shall be included on a form provided by the department. Each well in the area of review shall be uniquely marked or numbered;

(B) An electric log run to the surface or a log showing lithology or porosity of geologic strata encountered in the injection well, including an elevation reference. If such a log is unavailable, an electric log to surface or a log showing lithology or porosity of geologi-

cal strata encountered in wells located within a one- (1-) mile radius of the subject well;

(C) A description of the fluid to be injected, the source of injected fluid, and compatibility of injected fluid with that of the receiving stratum, including total dissolved solid comparisons;

(D) An affidavit that notice has been provided in accordance with 10 CSR 50-2.055(4); and

(E) Information showing that injection into the proposed injection zone will be contained within the injection zone and will not initiate fractures through the overlying or underlying strata that could enable the fluid or formation fluid to enter underground sources of drinking water. This information may include the name, description, and depth of overlying and underlying confining strata for the injection zone. Fracture gradients shall be computed and provided to the state geologist by the applicant.

(4) Notice. The injection permit applicant shall provide notice utilizing the following procedure:

(A) The applicant shall notify each of the following parties whose acreage lies partially or fully within a one-half- (½-) mile radius of the project boundaries, by mailing or delivering a copy of the application and notice of intent on or before the date of publication described in subsection (4)(B):

1. Each operator or lessee of record;

2. Each owner of record of the mineral rights of unleased acreage; and

3. Each landowner within the project boundaries;

(B) The applicant shall publish at least one (1) notice of intent to operate an injection well in a newspaper of general circulation in the county in which the proposed injection well(s) is located. The notice shall include the following:

1. Name and address of applicant;

2. Location of well(s);

3. Geologic name of proposed injection strata and approximate depth of injection zone;

4. Proposed maximum injection rate and pressure;

5. Description of the need for the injection well(s);

6. Approximate maximum number of injection wells that ultimately will be utilized in the project; and

7. Address of the office of the state geologist, where comments may be sent or additional information may be obtained;

(C) The applicant shall provide an affidavit of notice to include a copy of the newspaper publication and a list of parties notified according to subsection (4)(A); and

(D) A fifteen (15) calendar day written comment period shall begin on the date of publication. A record shall be kept by the state geologist of all written comments received and the responses to these comments. If within this comment period the state geologist determines that a significant degree of public interest is expressed, or other factors indicate the need for a public hearing, the state geologist may order a hearing. Public notice of the hearing will be provided in a newspaper of general circulation in the county where the proposed injection well is located with a hearing date set for no sooner than thirty (30) calendar days after the date of notice. If no public hearing is ordered, the state geologist will process the application after the end of the fifteen (15) calendar day comment period and upon receipt of an affidavit of newspaper publication.

(5) Modifications.

(A) Modifications to the type or construction of the injection well including, but not limited to, an increase in injection rate or pressure or an additional perforation or injection zone, neither of which is expressly authorized by the existing permit, shall require an application for a permit to inject to be filed along with the fee required pursuant to 10 CSR 50-1.050, except as specified in subsection (5)(B) below.

(B) An operator shall not be required to file an application to modify any injection well permit but shall file with the state geologist a

notice of permit modification on a form provided by the department when the operator seeks to add or delete additional sources of the fluid disposed into the well but will not exceed the maximum authorized injection rate and pressure.

(C) Each application for any modifications to the injection permit, including increasing pressure or rate and changing or adding injection strata, shall require the notice specified in section (4) of this regulation.

(6) Upon application for a permit to inject, the state geologist shall review the application and, within fifteen (15) business days, determine if the application is in proper form and if the requirements of Chapter 259, RSMo, and implementing regulations are met. If the application is incomplete or lacking required information, forms, or fees, the state geologist shall notify the operator and suspend the application process. When the required form, information, or fee is submitted by the operator and received by the state geologist, the fifteen (15) business day permit period will begin anew. If the state geologist has not received the missing or incomplete required application information or fee within thirty (30) days after notification of the operator, the application shall be considered null and void and the operator must reapply by submitting a new application for a permit to inject, along with the required fee.

(A) If the state geologist finds that the application is in good form, that all requirements of the application have been met, and that Chapter 259, RSMo, and implementing regulations are being met, the state geologist shall issue the permit.

(B) If the state geologist determines either that the application is not in proper form, that the operator failed to submit the applicable fees, or that Chapter 259, RSMo, and implementing regulations are not being met, the state geologist shall deny the permit.

(C) If the state geologist finds that injection at the proposed site would be an undue risk to the surface or subsurface environment, the state geologist shall deny the permit.

(D) If the state geologist determines that the operator is in violation of any provision of Chapter 259, RSMo, or implementing regulations, the state geologist may deny the permit.

(7) The state geologist may grant emergency authority to inject or dispose of fluids at an alternate location, if a facility is shut in for maintenance, testing, repairs, or by order of the state geologist or the council.

(8) A permit to inject shall not be transferred from one operator to another operator without approval of the state geologist. The operator (transferor) may submit to the state geologist a request to transfer any permit to inject to a new operator (transferee). The request shall be submitted on a form provided by the department no less than thirty (30) calendar days prior to the planned transfer. Any such request may be denied if the state geologist determines that the operator has not submitted all the required information. The transfer of a permit to inject shall follow the transfer procedures prescribed in 10 CSR 50-2.010(6)(A) through (C).

(9) For all injection well applications that require wellhead pressure to inject fluids, the operator shall inject the fluids through tubing under a packer set immediately above the uppermost perforation or openhole zone, except as specified in 10 CSR 50-2.040(7).

(10) Injection pressures. A maximum injection pressure for injection wells shall be established by the state geologist so that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the confining strata. The injection pressure also should not cause the injected fluid to migrate into an underground source of drinking water.

(A) The injection pressure determinations should be based on one (1) of the following methods:

1. For injection of liquids, the state geologist shall approve

injection pressures at 0.75 psig/foot based upon the depth to the midpoint of the perforations in the injection zone; or

2. For injection of steam or other gases, the state geologist shall approve injection pressures at 3.0 psig/foot based upon the depth to the midpoint of the perforations in the injection zone; or

3. The operator may submit pump pressure data that details the ability of the injection zone to tolerate the requested pressure; or

4. The operator may submit step-rate test data that details the ability of the injection zone to tolerate the requested pressure; or

5. The operator may submit historical injection pressures and/or other data deemed appropriate by the state geologist to demonstrate an appropriate injection pressure for approval by the state geologist.

(B) At least one (1) test must be performed within one thousand three hundred twenty feet (1320') of the proposed injection well, or as otherwise deemed appropriate by the state geologist. The data must be submitted in the format required by state geologist.

(C) Following approval by the state geologist of an initial maximum injection pressure, the well used to obtain the data in paragraph (10)(A)3. or 4. above may be used as a reference well. Additional injection wells within one thousand three hundred twenty feet (1320') of the reference well may be approved at the same maximum injection pressure.

(D) The established maximum injection pressure shall not be exceeded. Exceedance of the maximum injection pressure may result in additional compliance monitoring as required by the state geologist. Modifications to increase a maximum injection pressure for injection wells shall be made according to section (5) above.

(11) Following receipt of an approved permit to inject, the operator shall notify the state geologist regarding injection operations as follows:

(A) Immediately upon the commencement of injection operations, the applicant shall notify the state geologist of the date of commencement; and

(B) After permanent discontinuance of injection operations, the operator shall follow the provisions of 10 CSR 50-2.060 and shall notify the state geologist, within ninety (90) calendar days, of the date of the discontinuance and the reasons for discontinuance.

(12) Mechanical integrity. All new or newly converted injection wells shall be required to demonstrate mechanical integrity and meet the requirements of 10 CSR 50-2.090 and 10 CSR 50-2.100 before operation may begin. All injection wells not permanently plugged must demonstrate mechanical integrity at least once every five (5) years.

(A) Demonstration of mechanical integrity shall utilize at least one (1) of the following procedures:

1. Pressure test. The annulus above the packer, or the injection casing in wells not equipped with a packer, shall be pressure tested. The date for this test shall be mutually agreed upon by the operator's representative and a representative of the state geologist, with a minimum of five (5) business days' notice prior to the test. Test results shall be verified by the operator's representative. The test shall be conducted in the following manner:

A. For newly completed or newly converted wells, the casing may be tested before perforating. A fluid pressure of one hundred ten percent (110%) of the approved pressure shall be applied, but shall be no less than 300 psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes;

B. Wells constructed with tubing and a packer shall be pressure tested with the packer in place. A fluid pressure of one hundred ten percent (110%) of the approved pressure shall be applied, but shall be no less than three hundred (300) psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes;

C. For wells constructed with tubing and no packer, a retrievable plug or packer shall be set immediately above the uppermost

perforation or openhole zone. A fluid pressure of one hundred ten percent (110%) of the approved pressure shall be applied, but shall be no less than three hundred (300) psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes; and

D. For wells constructed with tubing and no packer, a method of pressure testing known as fluid depression may be conducted with prior approval and under guidelines established by the state geologist. The fluid in the well shall be depressed with gas pressure to a point in the wellbore immediately above the perforations or openhole interval. The minimum calculated pressure required to depress the fluid in the wellbore shall be no less than fifty (50) psig. A well demonstrates mechanical integrity if, when pressurized, it does not lose more than ten percent (10%) of the tested pressure over a period of thirty (30) minutes;

2. Alternative tests. Alternative test methods approved by the state geologist including, but not limited to, temperature surveys, tracer surveys, or noise logs, may be used to demonstrate mechanical integrity if conditions are appropriate. The date for this test shall be mutually agreed upon by the operator's representative and a representative of the state geologist, with notice provided a minimum of five (5) business days prior to the test. Test results shall be verified by the operator's representative and shall be interpreted as specified in state geologist-approved procedures;

(B) Monitoring. Following an initial test in accordance with subsection (12)(A) above, once a month, the operator shall monitor and record, during actual injection, the pressure or fluid level in the annulus and any other information deemed necessary by the state geologist. An annual report of information logged shall be submitted to the state geologist in accordance with 10 CSR 50-2.080.

(C) The operator shall notify the office of the state geologist at least five (5) business days prior to commencing a mechanical integrity test. Results of this test must be reported on the appropriate form to the state geologist within thirty (30) calendar days of completion of the test. The state geologist shall inform the operator of a satisfactory or unsatisfactory demonstration of mechanical integrity within fifteen (15) business days.

(13) If a well cannot demonstrate mechanical integrity, or if other conditions develop that threaten or could threaten the quality of surface or groundwater, the operator shall cease operation of the well, shall notify the state geologist within twenty-four (24) hours with details as to the nature of the problem, and shall propose a corrective action plan in writing within five (5) business days. The operator shall have no more than sixty (60) calendar days from the date of initial failure in which to perform one (1) of the following:

(A) Repair and retest the well to demonstrate mechanical integrity; or

(B) Plug the well.

(14) Following corrective action required by section (13), the state geologist may require additional testing or monitoring. If the state geologist has approved the use of any chemical sealant or other mechanical device to isolate the leak before use, then the following requirements apply:

(A) Injection pressure into the well shall not exceed the maximum mechanical integrity test pressure; and

(B) The well shall demonstrate mechanical integrity on an annual basis for the duration the well is completed in this manner.

(15) The state geologist or an authorized representative shall have the authority to sample injected fluids at any time during injection operations.

(16) Well stimulation treatment projects. At least five (5) business days prior to commencement of a well stimulation treatment project, the operator is required to notify the state geologist in writing the

nature of the project. Within thirty (30) calendar days after completion of a well stimulation treatment project, the operator shall submit copies of the well stimulation treatment tickets from the company performing such treatment, including documentation of the materials injected.

(17) All injection wells in operation prior to March 30, 2016, shall comply with these injection permitting requirements no later than April 1, 2017. All wells permitted on or after March 30, 2016, shall comply with requirements in this rule prior to permit issuance.

*AUTHORITY: sections 259.060, 259.080, and 259.140, RSMo 2000, and section 259.070, RSMo Supp. 2013. Original rule filed Sept. 15, 2015.*

*PUBLIC COST: This proposed rule will cost state agencies or political subdivisions twenty-six thousand three hundred ninety-seven dollars (\$26,397) per year in the aggregate.*

*PRIVATE COST: This proposed rule 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 rule with the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

**FISCAL NOTE**

**PUBLIC COST**

**I. RULE NUMBER**

<b>Rule Number and Name:</b>	10 CSR 50-2.055 Injection Wells, Mechanical Integrity Testing and Well Stimulation Treatment
<b>Type of Rulemaking:</b>	New Rule

**II. SUMMARY OF FISCAL IMPACT**

<b>Affected Agency or Political Subdivision</b>	<b>Estimated Cost of Compliance in the Aggregate</b>
Department of Natural Resources	\$26,397 per year per applicable rule (one-seventh of \$184,776 average annual cost for 2 FTE needed)

**III. WORKSHEET**

	<b>FY17 Proj</b>	<b>FY18 Proj</b>	<b>FY19 Proj</b>	<b>FY20 Proj</b>	<b>FY21 Proj</b>
<b>Expenditure Scenario F - 2 FTE (eff 1/2017)</b>					
Salaries (PS)					
1 Geologist III, 1 Sr Office Support Assistant	\$ 42,162	\$ 86,854	\$ 89,459	\$ 92,143	\$ 94,907
Fringe Benefits (social security, health ins., retirement, etc.)	\$ 20,196	\$ 41,603	\$ 42,851	\$ 44,137	\$ 45,461
Operating E&E (travel, supplies, training, etc.)	\$ 22,222	\$ 12,257	\$ 12,625	\$ 13,003	\$ 13,394
Contractual Engineering	\$ -	\$ -	\$ -	\$ -	\$ -
*Statewide Central Services, DNR Administration, OA ITSD, Leases/Rents	\$ 21,610	\$ 35,952	\$ 37,031	\$ 38,142	\$ 39,286
<b>Total</b>	<b>\$ 106,190</b>	<b>\$ 176,666</b>	<b>\$ 181,966</b>	<b>\$ 187,425</b>	<b>\$ 193,048</b>
		<b>Average Need FY18-FY21: \$184,776</b>			

\$184,776 : 7 = \$26,397 per applicable rule

**IV. ASSUMPTIONS**

1. Projection Assumptions:
  - FY17 reflected as one-half year due to earliest potential effective date of fees; actual timing of first expenditures will be determined by revenue receipts/fund balance
  - FY17 includes one-time E&E needs; reduced in FY18
  - 3% pay plan/inflation beginning FY18
  - Average need calculated using 4 years since FY17 is only a partial year
  - Fringe benefits estimated using DNR rate of 47.9% (less than the statewide average rate)
  - \*Indirect costs estimated using approved federal indirect cost rate of 25.55%
2. Additional staffing level needed to cover activities in new rules and amendments to 10 CSR 50-1.040, 10 CSR 50-1.050, 10 CSR 50-2.010, 10 CSR 50-2.055, 10 CSR 50-2.080, 10 CSR 50-3.020, and

10 CSR 50-5.010. Because implementation of this rule is dependent upon and in conjunction with the other rules, the total FTE expenditure provided was divided evenly among the seven applicable rules.

3. Anticipate duties of the Geologist III include: assist with oil and gas permitting; provide compliance assistance; maintain and account for: mechanical integrity testing (MIT), injection pressure determination testing, and well stimulation treatment projects; oversee and review oil and gas production projects; evaluate enhanced oil recovery projects and technologies; determine appropriate injection pressures and rates; oversee MITs; conduct field inspections; and ensure compliance with regulations.
4. Anticipate duties of the Senior Office Support Assistant include: input data; maintain and account for: operator registration, well bond reporting, well status and shut-in wells, production, resource valuation, recordkeeping, and general information requests; create and edit forms; provide administrative support; generate letters (notifications/reminders); generate reports; and perform financial tracking.

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.060 Shut-in Wells, Plugging, and [Abandonment] Conversion to Water Well.** The council is amending the title, purpose, deleting sections (1)–(10), and adding new sections (1)–(4).

**PURPOSE:** This amendment incorporates requirements for shut-in wells including timeframes for returning the well to operation, plugging the well, or requesting an extension. This amendment also clarifies requirements and procedures for plugging abandoned wells, clarifies actions the state geologist may take to cause the plugging of an abandoned well, specifies plugging requirements for horizontal wells, stratigraphic test wells, and seismic shot holes, references required fees to be submitted, and clarifies the procedures for converting a well to a domestic water supply well.

**PURPOSE:** This rule provides for the protection of both surface water and groundwater. Drilling muds, oil, and water recovered from drilling or testing operations must be disposed of so that pollution of surface soil, ponds, and streams is avoided. [Fresh] Underground sources of drinking water strata are protected by casing set below the deepest [zone] strata penetrated that might contain [fresh] underground sources of drinking water. Dry holes must be plugged [and abandoned] in a manner that subsurface salt water or mineralized water will be confined to the stratum in which it occurs. Similarly, each oil or gas stratum penetrated by a well must be permanently sealed when abandoned to prevent contamination of [fresh] underground sources of drinking water [supplies] and also to prevent damage by water of any oil or gas stratum capable of producing in paying quantities. In certain logging procedures, a radioactive source (in a probe or sonde) is lowered into the borehole to provide certain subsurface data useful in exploration for oil and gas. Should this radioactive source contained in a logging tool be lost in the hole, certain procedures are prescribed to prevent the accidental or intentional mechanical disintegration of the radioactive source. Further, there are provisions for marking the well site permanently as a warning that a radioactive source has been abandoned in the well.

(1) Before beginning abandonment work on any well whether it is a drilling well, or a well drilled for oil or gas, for geologic information, or for gas storage, or for any other purpose, notice of intention to abandon the well shall be filed with the state geologist on approved form OGC-6. The notice shall include the details of the proposed abandonment procedure and whether any logging tool containing a radioactive source is being abandoned (see section (8) of this rule for radioactive source abandonment procedure). If necessary to avoid rig downtime, oral permission to abandon dry holes may be obtained by informing the state geologist of proposed abandonment procedures.

(2) In lieu of prior notice and approval by the state geologist (form OGC-6) the operator may elect to plug the hole from total depth to within plow depth of the surface with cement slurry, being no less than sixteen (16) pounds per gallon density. In such event, form OGC-7 shall be forwarded to the state geologist within forty-eight (48) hours after completion.

(3) Before any well is abandoned, it shall be plugged in a manner which will confine permanently all oil, gas and water in the separate strata originally containing them. The plugging operation shall be accomplished by the proper use of

mud-laden fluid, cement and plugs, used singly or in combination as may be approved by the state geologist.

(4) Drill holes in formations which contain oil or gas or from which oil or gas have been produced, or that have been used for injection, shall be plugged by placing cement from the base of the formation to a point no less than twenty-five feet (25') above the top of the formation.

(5) Appropriate means shall be taken to eliminate movement of surface water into a plugged well and to prevent pollution of subsurface strata.

(6) Casing shall be cut off below plow depth except as may be approved by the state geologist to allow for the conversion of a well to a water supply well for use by a landowner. A well conversion agreement (form OGC-8) is available for use by the operator and land-owner in these instances.

(7) Within thirty (30) days after the completion of abandonment, the prescribed plugging record, form OGC-7, shall be executed and submitted to the state geologist.

(8) Before a radioactive source may be abandoned, the person, firm or corporation proposing the abandonment shall notify the state geologist. Wells in which radioactive sources are being abandoned should be mechanically equipped so as to prevent the accidental or intentional mechanical disintegration of the radioactive source.

(A) Sources being abandoned in a well should be covered with no less than a fifty feet (50') standard-color-dyed cement plug on top of which a whipstock should be set. The dye is to alert the re-entry operator prior to encountering the source.

(B) In wells where a logging source has been cemented in place behind a casing string and above total depth, upon abandonment a standard-color-dyed cement plug should be placed opposite the abandoned source and to extend fifty feet (50') above and fifty feet (50') below with a whipstock placed on top of the plug.

(C) In the event the operator finds that after expending a reasonable effort, because of hole conditions, it is not possible to abandon the source as prescribed in subsections (8)(A) or (B) of this rule, s/he shall seek the state geologist's approval to cease efforts in this direction and obtain approval for an alternate abandonment procedure.

(9) Upon permanent abandonment of any well in which a radioactive source is left in the hole, and after removal of the wellhead, a permanent plaque is to be attached to the top of the casing left in the hole in a manner that re-entry cannot be accomplished without disturbing the plaque. This plaque would serve as a visual warning to any person re-entering the hole that a radioactive source has been abandoned in place in the well. The plaque should contain the trefoil radiation symbol with a radioactive warning and should be constructed of a long-lasting material such as monel, stainless steel or brass.

(10) Monies deposited in the Oil and Gas Remedial Fund may be used by the council to plug those oil, gas and injection wells that have been abandoned and have not been plugged according to the council's rules, subject to the following guidelines:

(A) Wells covered by a forfeited bond shall receive first priority; and

(B) Other wells shall receive secondary priority on the basis of their potential for groundwater contamination or other

*damage in the order recommended to the council by the state geologist.]*

**(1) Shut-in wells.**

**(A) Shut-in status.** A well shall be considered shut in whenever it has not been operated for ninety (90) calendar days or more. The shut-in status shall not exceed ninety (90) calendar days. Prior to the expiration of the ninety (90) calendar days shut-in status, the operator of that well shall perform one (1) of the following:

1. Return the well to operation and notify the state geologist on the monthly well status report per 10 CSR 50-2.080(2); or
2. Plug the well; or
3. Petition the state geologist for an extension and propose an end date for the shut-in status.

**(B) Approval of shut-in status extensions.**

1. No well shall have its shut-in status extended as described in subsection (1)(A) unless first approved by the state geologist. Extension to the shut-in status shall not exceed one (1) year. If the operation of any shut-in well is not resumed within one (1) year after the extension has been approved, the well shall be deemed an abandoned well, and the operator shall plug the well per these rules. Upon application to the state geologist before the expiration of the one (1) year period, and for good cause shown, the period may be extended by the state geologist for one (1) year upon compliance with the provisions of paragraph (1)(B)2. of this section. Additional one- (1-) year extensions may be granted by the state geologist. The total time of such consecutive extensions shall not exceed ten (10) years.

2. Any well in continuous shut-in status must demonstrate mechanical integrity at least once every five (5) years pursuant to procedures in 10 CSR 50-2.055.

**(C) Right of denial.** Any shut-in well shall be subject to inspection by the state geologist to determine whether its shut-in status could cause contamination of underground sources of drinking water. If necessary, extensions of shut-in status for a well may be denied by the state geologist, and the well may be required to be plugged, repaired, or demonstrate mechanical integrity according to the direction of the state geologist and in accordance with these regulations.

**(D) Plugging of shut-in wells.** If the well is not returned to service or properly plugged pursuant to these rules before the end of the shut-in status, the well will be considered abandoned and shall be plugged within thirty (30) calendar days. After the thirty- (30-) day period, if the well has not been plugged pursuant to these rules, the bond in place for the well shall be forfeited and deposited into the Oil and Gas Remedial Fund according to 10 CSR 50-2.020(6) and utilized according to 10 CSR 50-2.060(3)(F).

**(2) Shut-off test.** Whenever it appears to the state geologist that any water from any well is migrating or infiltrating into oil-bearing or gas-bearing strata or that any detrimental substances are infiltrating any underground sources of drinking water, the state geologist may require a shut-off test, to be conducted at the expense of the operator of that well. The time and procedure for the taking of the test shall be fixed by the state geologist. Reasonable notice of the test shall be given to the owner or operator. The owner or operator of any abandoned oil or gas well from which water is migrating or infiltrating into any oil-bearing or gas-bearing strata, or from which any detrimental substances are infiltrating any underground sources of drinking water, shall immediately plug or repair the well in accordance with section (3) below and shall prevent the infiltration of oil, gas, produced water, or other detrimental substances into underground sources of drinking water strata.

**(3) Plugging Requirements.**

**(A) Abandoned Wells.**

1. An abandoned well shall be plugged or addressed as

directed by the state geologist as provided in these rules. Plugging an abandoned well shall include the removal of any rig, derrick, or other operating structure, and all abutments and appurtenances used in the operation of such well, from the land upon which the well was operated, and shall include grading the surface of the soil in such manner as to leave the land, as nearly as practicable, in the same condition after the removal of such structures, equipment, and appurtenances as it was before such structures and abutments were placed thereon, unless the owner of the land and the plugging party have entered into an agreement providing otherwise.

2. When the state geologist investigates and determines that a well has been abandoned, as provided in these rules, the state geologist may issue an order directing the operator, owner, or any person who without authorization tampers with or removes surface equipment or downhole equipment from the abandoned well to plug the well as directed by the state geologist. If the person to whom the order is issued fails to comply with any such order that has become final under 10 CSR 50-1.040, the person to whom the order is issued shall be deemed to have abandoned any and all property interests in the well and any rig, derrick, or other operating structure, and all abutments and appurtenances.

3. In addition to any other remedy provided in Chapter 259, RSMo, or implementing regulations, if the state geologist determines that a well has been abandoned, the department or the council may request that the attorney general institute a civil proceeding to request appropriate injunctive relief, civil penalties, or other appropriate remedy, as provided in sections 259.200 and 259.210, RSMo.

4. If the state geologist determines that a well has been abandoned, the department in accordance with section 259.070.5(7), RSMo, may plug such well, or cause it to be plugged as to prevent contamination or danger of contamination of any waters of the state or loss of underground sources of drinking water, and may remediate contamination from the well. Plugging or remediation may include the collection, removal, salvage, and disposition of abandoned operating structures or other equipment. The cost of the plugging or remediation shall be paid by the Oil and Gas Remedial Fund, as provided in section 259.190, RSMo.

**(B) Notice.**

1. Before plugging any well the operator shall file with the state geologist a notice of intent to plug on a form provided by the department. The notice shall include the details of the proposed plugging procedure and description of any logging tool containing a radioactive source being abandoned (see subsection (E) of this section for radioactive source abandonment procedure). The proposed plugging procedure shall be approved by the state geologist prior to commencement of plugging activities.

2. The operator shall notify the state geologist no later than five (5) business days before the plugging.

**3. Exceptions.**

A. If necessary to avoid rig downtime, oral permission to plug dry holes may be obtained by informing the state geologist of proposed plugging procedures, in which case a notice of intent to plug form must be submitted within three (3) business days of plugging.

B. In lieu of prior notice and approval by the state geologist as detailed in paragraph (3)(B)1. of this rule, the operator may elect to plug a well from total depth to the surface with cement slurry, being no less than fifteen (15) pounds per gallon density.

C. If an emergency situation exists, the operator shall orally notify and present the plugging proposal to the state geologist for approval.

**(C) Plugging methods.**

1. Before any well is considered plugged, all oil, gas, and water shall be permanently confined in the separate strata originally containing them.

2. Wells shall be plugged by emplacing cement from twenty-five feet (25') below the bottom of the stratum to a point no less than twenty-five feet (25') above the top of the stratum that contains oil or gas, or from which oil or gas has been produced, or that has been used for injection.

3. Casing in plugged wells, including horizontal wells, shall be cut off at least three feet (3') below ground surface at the well-head.

4. Horizontal wells. Each horizontal well shall be filled with a cement plug from total depth of the deepest producing horizon to the surface.

5. Stratigraphic test wells. Each stratigraphic test well shall be filled with a cement plug from total depth to within three feet (3') of the surface. All stratigraphic test wells shall be plugged after being used as soon as is reasonably practicable. However, such wells shall not remain unplugged for a period of more than thirty (30) calendar days after the drilling of the well.

6. Seismic shot holes. All seismic shot holes shall be plugged upon completion of the shooting. Such holes shall not remain unplugged for a period of more than thirty (30) calendar days after the drilling of the hole.

7. If circulation is lost in the drilling of any hole and circulation cannot be regained, a cement plug shall be placed above the zone of lost circulation to the surface.

8. Alternative plugging methods may be authorized by the state geologist when geologic conditions or conditions in the casing or wellbore warrant.

(D) Reporting. The operator shall submit a plugging record along with the fee required pursuant to 10 CSR 50-1.050 to the state geologist within thirty (30) calendar days after completion of plugging activities. The report shall be made on the form provided by the department and shall be completed in full.

(E) Radioactive source.

1. If a radioactive source has been lost and cannot be retrieved from a hole, the person, firm, or corporation proposing the abandonment shall notify the state geologist. Wells in which radioactive sources are being abandoned shall be mechanically equipped so as to prevent the accidental or intentional mechanical disintegration of the radioactive source.

A. Sources being abandoned in a well shall be covered with no less than a fifty feet (50') standard-red-dyed cement plug on top of which a whipstock shall be set. The dye is to alert the re-entry operator prior to encountering the source.

B. In wells where a radioactive logging source has been cemented in place behind a casing string and above total depth, upon abandonment a standard-red-dyed cement plug should be placed opposite the abandoned source and extend fifty feet (50') above and fifty feet (50') below with a whipstock placed on top of the plug.

C. If the operator finds after expending a reasonable effort it is not possible to abandon the source as prescribed in subparagraph (3)(E)1.A. or B. of this rule, the operator shall seek the state geologist's approval to cease efforts in this direction and obtain approval for an alternate abandonment procedure.

2. Upon permanent plugging of any well in which a radioactive source is abandoned, and after removal of the wellhead, a permanent plaque is to be attached to the top of the casing left in the hole in a manner that re-entry cannot be accomplished without disturbing the plaque. This plaque would serve as a visual warning to any person re-entering the hole that a radioactive source has been abandoned in place in the well. The plaque should contain the trefoil radiation symbol with a radioactive warning and should be constructed of a long-lasting material such as monel, stainless steel, or brass.

(F) Monies deposited in the Oil and Gas Remedial Fund may be used by the department to plug those oil, gas, and injection wells that have been abandoned and have not been plugged according to these rules, subject to the following guidelines:

1. Wells covered by a forfeited bond shall receive first priority; and

2. Other wells shall receive secondary priority on the basis of their potential for groundwater contamination or other damage in the order recommended by the state geologist.

(4) Conversion to domestic water supply well. A well conversion agreement form must be submitted for conversion of a well under these regulations to a domestic water supply well and must be submitted within thirty (30) calendar days after conversion of the well. The well must have been reconstructed, or, for a stratigraphic test well, must have been constructed, as a water well by a Missouri permitted water well installation contractor and must meet minimum water well construction standards as set forth in the Water Well Drillers' Act, Chapter 256, RSMo, and the implementing Missouri Well Construction rules 10 CSR 23. A well registration or certification, as appropriate, per those rules shall be approved before the state geologist will approve the conversion agreement and release the applicable bond.

*AUTHORITY: section [259.060,] 259.190, RSMo [1986] 2000, and section 259.070, RSMo Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed Sept. 15, 2015.*

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, III Fairgrounds Rd., Rolla, MO.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED RULE**

**10 CSR 50-2.065 Operations**

*PURPOSE: This rule provides for procedures or requirements for activities as part of oil and gas production operations. General operations include hydrocarbon storage, metering of produced gas, and spill response.*

(1) Tank identification. All oil tanks, tank batteries, tanks used for produced water collection or disposal, and tanks used for oil-sediment treatment or storage shall be identified by a sign posted on, or not more than fifty feet (50') from, the tank or tank battery. The sign shall be of durable construction and shall be large enough to be legible under normal conditions at a distance of fifty feet (50'). The sign shall identify—

(A) Name, license number, and contact information of the operator;

(B) Name of the lease or unit being served by the tank;

(C) Location of the tank, including section, township, range, and county; and

(D) Contents of the tank.

(2) Gas to be metered. All gas, when produced or sold, shall be metered with a meter of sufficient capacity. Meters shall not be required for gas produced and used on site for development purposes, production unit operations, primary dwellings, or non-commercial gas wells.

(A) Each party who owns, maintains, or operates the metering device used to record gas sales from each well or production unit in a gas field shall, at a minimum, test and calibrate the metering device on an annual basis and retain the record of the testing and calibration for at least two (2) years. Each party shall also retain, for at least two (2) years, the original field record consisting of meter charts, electronic records, records of gas purchases, or other approved method. All information retained shall be made available to the state geologist upon request.

(B) By-passes shall not be connected around meters in a manner that will permit the improper taking of gas.

(3) Spill Notification. Each operator, immediately upon discovery or knowledge of any spill or release, shall take immediate action in accordance with the Spill Bill, section 260.500 to 260.550, RSMo, and the implementing regulations in 10 CSR 24. This does not alter responsible parties' obligations under any other applicable law.

*AUTHORITY: section 259.060, RSMo 2000, and section 259.070, RSMo Supp. 2013. Original rule filed Sept. 15, 2015.*

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

*PRIVATE COST: This proposed rule will cost private entities approximately six thousand dollars (\$6,000) per year 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 rule with the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to [summer.young@dnr.mo.gov](mailto:summer.young@dnr.mo.gov). To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

## FISCAL NOTE

## PRIVATE COST

## I. RULE NUMBER

<b>Rule Number and Name:</b>	10 CSR 50 - 2.065, Oil and Gas Drilling and Production - Operations
<b>Type of Rulemaking:</b>	New Rule

## II. SUMMARY OF FISCAL IMPACT

<b>Estimate of the number of entities by class which would likely be affected by the adoption of the proposed rule:</b>	<b>Classification by types of the business entities which would likely be affected:</b>	<b>Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:</b>
20	Oil or gas operators who drill, maintain, operate, or control wells associated with oil or gas production, storage, or injection projects.	\$0 to add metering equipment to existing gas wells & less than \$6,000 per year to add metering equipment to future wells; however, it is generally industry standard practice to add this metering equipment to gas wells, even without the regulatory requirement

## III. WORKSHEET

1. All existing active commercial gas wells already have metering equipment attached, as required in proposed 10 CSR 50-2.065(2), even though current regulations do not require them.
2. An average of less than 1 well drilled each year will require a gas flow meter. Assumed cost per gas flow meter is an average of \$6,000.  $\$6,000/\text{flowmeter} \times <1 \text{ flowmeter/year} = <\$6,000$

## IV. ASSUMPTIONS

1. Based on statistics from the past 5 years, we are assuming an average of 20 commercial gas operators per year.
2. Based on industry feedback, we are assuming an average of \$6,000 per well gas flow meter.
3. Based on statistics from the past 5 years, we are assuming an average of less than 1 new well per year will require a gas flow meter.

4. Gas flow meters shall not be required for gas produced and used on site for development purposes, production unit operations, primary dwellings or non-commercial gas wells.
5. This cost assumes that an average of the past 5 years' statistics is representative of the highly volatile nature of oil and gas production and exploration activity in the state.

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED RESCISSION**

**10 CSR 50-2.070 Well Spacing.** This rule provided requirements for, and limitations on, the spacing of wells and for certain exceptions and exemptions thereto.

*PURPOSE:* This rule is being rescinded as the substantive requirements for well spacing are being consolidated into 10 CSR 50-3 for ease of use and compliance.

*AUTHORITY:* sections 259.060, 259.070 and 259.100, RSMo 1986. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Rescinded: Filed Sept. 15, 2015.

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

*PRIVATE COST:* This proposed rescission 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 rescission with the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.080 [Monthly Reports] Record Retention and Reporting.** The council is amending the title, purpose, sections (1)-(2) and (7), deleting sections (3)-(6), and adding new section (3).

*PURPOSE:* This amendment adds a requirement for operators to retain fluid injection records for five (5) years, changes the monthly report submittal timeframes to allow additional time for submittal, requires monthly volume reports for metered gas, and adds reporting requirements for operators to annually submit a well inventory and an accounting of bonding for all open wells.

*PURPOSE:* A history of the production of an oil or gas well is important in the evaluation of a particular well[, lease] or pool. Reservoir characteristics, fluid behavior, and production can be used for studies and estimates of production on future pools. Use of production data and reservoir analyses included on monthly reports can be correlated with recovery techniques to promote conservation and to prevent waste in the oil industry. This rule provides for the filing of monthly status, production, and water disposal reports, with certain waivers.

(1) **Record Retention.** Each operator of an injection well shall keep current, accurate records of the amount and kind of fluid injected into the injection well and shall preserve these records for five (5) years.

(2) **Monthly Reporting.**

[(1)](A) [Monthly w/Well status [and production] of each open well in a unit shall be reported by each operator monthly on a form provided by the department. The report[, approved form OGC-9,] shall be prepared in full and submitted to the state geologist no later than [thirty (30)] forty-five (45) calendar days after the end of each calendar month. [The status of each well on a lease is requested on a monthly basis. Production data may be presented by each lease unless requested otherwise by the council.]

(B) Well production shall be reported by the first purchaser of the oil or gas monthly on a form provided by the department. The report shall be prepared in full and submitted to the state geologist no later than forty-five (45) calendar days after the end of each calendar month. Production may be presented for each unit unless requested otherwise by the state geologist or the council.

[(2)](C) [Monthly report of injected fluids, approved form OGC-10,] Disposal of produced water shall be reported monthly on a form provided by the department. The report shall be prepared in full and submitted to the state geologist no later than [thirty (30)] forty-five (45) calendar days after the end of each calendar month. The report must include the amount, type, and method of disposal of all fluids produced from oil wells, gas wells, or [enhanced recovery operations must be clearly stated. Water produced from underground gas storage reservoirs that is disposed of by injection is included] underground gas storage reservoirs.

[(3) In the event monthly data requested by form OGC-9 are available on another format as a result of machine printout, the form may be accepted in lieu of form OGC-9, provided a written request, accompanied by a sample printout, has been submitted to the state geologist for his/her approval.]

(D) Each party who owns, maintains, or operates the metering device used to record gas produced from each unit or well in any gas field shall file a monthly volume report showing the amount of gas actually metered on each unit, and may be directed by the state geologist to file a volume report showing the amount of gas actually metered for each well for a specified time period. The monthly volume report shall be prepared in full and submitted to the state geologist no later than forty-five (45) calendar days after the end of each calendar month.

[(4)](E) The required [M]monthly gas well status and production reports may be waived by the state geologist upon application [in the event that gas] by the operator of the well when production [by an owner] from the well is for [his/her] the owner's sole and [private] non-commercial use.

[(5) If mechanical failure of an injection well should occur or if other conditions should develop that threaten or could threaten to contaminate an aquifer, the operator or an authorized representative shall notify the state geologist as soon as possible by telephone and letter. The letter shall be complete and accurate and shall contain the operator's estimate of the nature of the problem(s).]

(6) The operator shall be required to monitor the injection pressure and injection rate on each injection well at least on a monthly basis, with the results reported annually on form OGC-12, to the state geologist. ]

(3) **Annual reporting.**

(A) Each operator of an injection well shall submit an annual injection well monitoring report on a form provided by the department. The report for the previous calendar year shall be submitted to the state geologist on or before March 1 of the following year.

(B) Each operator shall submit annually a complete inventory report of all open wells as of December 31. The report shall be submitted to the state geologist on or before January 31.

(C) Each operator shall submit an annual bonding report, on a form provided by the department, providing documentation of sufficient bonding for all open wells, as required by Chapter 259, RSMo, and implementing regulations. The report shall be submitted to the state geologist on or before January 31 of each year and shall include a signed and notarized statement from any applicable surety or issuer of a letter of credit or certificate of deposit documenting that the referenced bonds are valid and in full force.

~~[(7)]~~(4) All ~~[monitoring]~~ monthly and annual reports will be on file at the office of the state geologist and will be retained and available for at least five (5) years.

*AUTHORITY: section[s 259.060 and] 259.070, RSMo [1986] Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. For intervening history, please consult the Code of State Regulations. Amended: Filed Sept. 15, 2015.*

*PUBLIC COST: This proposed amendment will cost state agencies or political subdivisions twenty-six thousand three hundred ninety-seven dollars (\$26,397) per year 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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

**FISCAL NOTE**

**PUBLIC COST**

**I. RULE NUMBER**

<b>Rule Number and Name:</b>	10 CSR 50-2.080 Monthly Reports
<b>Type of Rulemaking:</b>	Amendment

**II. SUMMARY OF FISCAL IMPACT**

<b>Affected Agency or Political Subdivision</b>	<b>Estimated Cost of Compliance in the Aggregate</b>
Department of Natural Resources	\$26,397 per year per applicable rule  (one-seventh of \$184,776 average annual cost for 2 FTE needed)

**III. WORKSHEET**

<b>Expenditure Scenario F - 2 FTE</b>	<b>FY17 Proj</b>				
	<b>(eff 1/2017)</b>	<b>FY18 Proj</b>	<b>FY19 Proj</b>	<b>FY20 Proj</b>	<b>FY21 Proj</b>
Salaries (PS)					
1 Geologist III, 1 Sr Office Support Assistant	\$ 42,162	\$ 86,854	\$ 89,459	\$ 92,143	\$ 94,907
Fringe Benefits (social security, health ins., retirement, etc.)	\$ 20,196	\$ 41,603	\$ 42,851	\$ 44,137	\$ 45,461
Operating E&E (travel, supplies, training, etc.)	\$ 22,222	\$ 12,257	\$ 12,625	\$ 13,003	\$ 13,394
Contractual Engineering	\$ -	\$ -	\$ -	\$ -	\$ -
*Statewide Central Services, DNR Administration, OA ITSD, Leases/Rents	\$ 21,610	\$ 35,952	\$ 37,031	\$ 38,142	\$ 39,286
<b>Total</b>	<b>\$ 106,190</b>	<b>\$ 176,666</b>	<b>\$ 181,966</b>	<b>\$ 187,425</b>	<b>\$ 193,048</b>
				<b>Average Need (FY18-FY21)</b>	<b>\$184,776</b>

\$184,776 ÷ 7 = \$26,397 per applicable rule

**IV. ASSUMPTIONS**

1. Projection Assumptions:
  - FY17 reflected as one-half year due to earliest potential effective date of fees; actual timing of first expenditures will be determined by revenue receipts/fund balance
  - FY17 includes one-time E&E needs; reduced in FY18
  - 3% pay plan/inflation beginning FY18
  - Average need calculated using 4 years since FY17 is only a partial year
  - Fringe benefits estimated using DNR rate of 47.9% (less than the statewide average rate)
  - \*Indirect costs estimated using approved federal indirect cost rate of 25.55%
  
2. Additional staffing level needed to cover activities in new rules and amendments to 10 CSR 50-1.040, 10 CSR 50-1.050, 10 CSR 50-2.010, 10 CSR 50-2.055, 10 CSR 50-2.080, 10 CSR 50-3.020, and

10 CSR 50-5.010. Because implementation of this rule is dependent upon and in conjunction with the other rules, the total FTE expenditure provided was divided evenly among the seven applicable rules.

3. Anticipate duties of the Geologist III include: assist with oil and gas permitting; provide compliance assistance; maintain and account for: mechanical integrity testing (MIT), injection pressure determination testing, and well stimulation treatment projects; oversee and review oil and gas production projects; evaluate enhanced oil recovery projects and technologies; determine appropriate injection pressures and rates; oversee MITs; conduct field inspections; and ensure compliance with regulations.
4. Anticipate duties of the Senior Office Support Assistant include: input data; maintain and account for: operator registration, well bond reporting, well status and shut-in wells, production, resource valuation, recordkeeping, and general information requests; create and edit forms; provide administrative support; generate letters (notifications/reminders); generate reports; and perform financial tracking.

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.090 Disposal of Fluids by Injection.** The council is amending the purpose, numbering and amending section (1), and adding sections (2) and (3).

*PURPOSE:* This amendment incorporates the requirement of a permit to inject as specified in proposed new rule 10 CSR 50-2.055, specifies criteria for where disposal of produced fluid through injection is prohibited, and clarifies the required setback distance.

*PURPOSE:* In some phases of the producing life of some reservoirs, large quantities of [salt] formation water may be produced along with the oil and gas. Adequate protection of [fresh water supplies] underground sources of drinking water lies in the proper disposal of this [salt] produced water. Rather than allowing the [salt] produced water to flow onto the land surface and into streams and rivers, a more satisfactory method of disposal is [the] to injection [of] this water into permeable subsurface [formations] strata that do not contain [fresh] underground sources of drinking water. This rule provides [that] details such as quality and quantity of the water and well construction that are to be submitted to the state geologist for approval prior to such injection to [i]ensure that [potable water supplies] underground sources of drinking water are adequately protected.

(1) [Before produced] Prior to the disposal of fluids [may be disposed of] by injection, [into subsurface strata, pertinent data concerning details of the proposed operation, forms OGC-3-1, OGC-4-1 and OGC-11 and any other information required shall be submitted to and] an application for permit to inject must be approved by the state geologist [before injection may begin] as provided in 10 CSR 50-2.055.

(2) Other than within the original production strata, disposal of produced fluid from an oil or gas operation is prohibited into an oil or gas reservoir, a potential oil or gas reservoir, or an underground source of drinking water unless that drinking water source has been exempted, or unless otherwise approved by the state geologist.

(3) Disposal wells must be located a minimum of one hundred sixty-five feet (165') from a unit boundary.

*AUTHORITY:* section 259.070, RSMo [1986] Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Oct. 14, 1981, effective Feb. 11, 1982. Amended: Filed Sept. 15, 2015.

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.100 [Fluid Injection] Enhanced Recovery Projects.** The council is amending the title, purpose, and section (1), and deleting sections (2) and (3).

*PURPOSE:* This amendment clarifies the process for enhanced recovery project application and removes sections that are repetitive from other rules.

*PURPOSE:* [Water flooding, a type of secondary] Enhanced recovery[,] projects utilize[s water] fluids, including but not limited to, produced [salt] water, steam, or natural gas, by [injecting this water] injection into an [depleted or nearly depleted] oil reservoir to [flush out a secondary crop of] recover additional oil. [In many cases, w]Where the oil is difficult to [flush] recover with water or steam, certain chemicals are often added to increase the efficiency of water as an oil-recovery agent. [This practice] These enhanced recovery methods help[s] maintain reservoir pressure and increase[s] the ultimate amount of oil that can be obtained from a particular [reservoir] pool, thereby preventing the waste of natural resources. This rule provides for the protection of groundwater by requiring approval [of] by the state geologist [concerning pertinent] of certain details of the enhanced recovery project [and the submittal of monthly reports to the state geologist]. [Also] In addition, this rule protects the [correlation] correlative rights of the offset property owners [are protected] by [the prior] requiring the state geologist's approval of well spacing and [lease] production unit line requirements [by the state geologist] prior to the commencement of operations.

[(1) Fluid injection] Enhanced recovery projects[, not otherwise classified as research or development projects by the council,] designed for the secondary or tertiary recovery of oil or gas may be approved as part of a proposed production unit[s within themselves]. Production [U]unit approval may be requested by submitting to the state geologist an [project report] application specifying all pertinent details of the proposed project as detailed in 10 CSR 50-3.020(2).

[(2) Fluid injection projects shall be governed by well-spacing and lease-line requirements under 10 CSR 50-2.070.

[(3) Monthly reports shall be submitted in accordance with 10 CSR 50-2.080. Additional monthly operating reports may be requested in the future by written order of the council.]

*AUTHORITY:* section[s 259.060 and] 259.070, RSMo [1986] Supp. 2013. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Sept. 15, 2015.

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to

*summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED RESCISSION**

**10 CSR 50-2.110 Special Projects and Research Projects.** This rule permitted the council to give special consideration to development of potential resources such as these.

*PURPOSE: This rule is being rescinded as the substantive requirements are included in the proposed amendment to 10 CSR 50-5.010 to clarify the language and make the rules easier to read.*

*AUTHORITY: sections 259.060 and 259.070, RSMo 1986. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Rescinded: Filed Sept. 15, 2015.*

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

*PRIVATE COST: This proposed rescission 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 rescission with the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 2—Oil and Gas Drilling and Production**

**PROPOSED AMENDMENT**

**10 CSR 50-2.120 Gas Storage Operations.** The council is amending the purpose and section (1).

*PURPOSE: This amendment clarifies the setback requirements for gas storage injection wells.*

*PURPOSE: The development of gas storage operations requires that they be addressed by the state. This rule will ensure protection of [the state's] underground sources of drinking water.*

(1) Gas storage operations that inject gas that is liquid at standard temperature and pressure to be recovered at a later date for use shall comply [to] with all rules pertaining to injection wells, except that such wells may not be drilled closer than approximately three hundred thirty feet (330') from the boundary of the gas storage operation.

*AUTHORITY: [Chapter 259] section 259.070, RSMo [1986] Supp. 2013. Original rule filed Oct. 14, 1981, effective Feb. 11, 1982. Amended: Filed Sept. 15, 2015.*

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 3—Well Spacing [Units] for Oil and Gas Pools**

**PROPOSED AMENDMENT**

**10 CSR 50-3.010 [Establishing] Spacing Units for Primary Production.** The council is amending the title, purpose, chapter, text of the rule, and making new sections (1)–(3).

*PURPOSE: This amendment, which includes language previously found in 10 CSR 50-2.070, incorporates all requirements for spacing of wells used for primary oil or gas production changes the size of standard spacing units for oil and gas production wells to meet current industry practice, clarifies the authorities of the state geologist and the council, and specifies the types of wells that are exempt from spacing requirements.*

*PURPOSE: Spacing patterns for wells in a pool or reservoir are established by this rule to prevent waste, to avoid the drilling of unnecessary wells, to contribute to orderly development, and to protect [property] correlative rights [are established by this rule]. [It is common practice in establishing spacing units to insure that there will be sufficient distance between wells so that other wells and property will not be endangered if a blowout or fire occurs.] Wells should be located in a relatively uniform spacing pattern even under diversified ownership conditions to [prevent crowding of wells] protect correlative rights along property lines. [Preferably, spacing patterns should be such that the area allotted to each well will not be less than the approximate area that can be economically and efficiently drained by that well.] Optimum spacing is considered to be the maximum number of reservoir acres that can be economically and efficiently drained by one (1) well within a reasonable time. For example, if one (1) well can be drilled economically on ten (10) acres and this is the area that can be drained efficiently, then the spacing or acreage attributable to the well should not be less than ten (10) acres. A well so spaced will ultimately recover as much oil for the ten (10) acres as would be recovered by more than one (1) well, thereby avoiding the drilling of unnecessary wells. This rule provides requirements for, and limitations on, the spacing of wells and for certain exceptions and exemptions thereto.*

(1) All wells for the primary production of oil and gas drilled into the same pool, except as explicitly exempted by this rule, shall be subject to spacing units as follows:

(A) Oil wells. Not more than one (1) oil well shall be drilled upon any tract of land into the same pool as specified in the following:

1. A standard spacing unit shall be ten (10) acres. The well

shall not be located closer than three hundred thirty feet (330') to any unit line, nor closer than six hundred sixty feet (660') to the nearest oil well completed in or capable of producing from the same pool. Except as provided in paragraph (1)(A)2., no oil well shall be drilled on less than ten (10) acres except by order of the state geologist; or

2. Due to the low natural reservoir pressure at shallow depths, oil may be drained economically and efficiently through primary production only by using smaller spacing units. A standard spacing unit for an oil well drilled to a total depth of less than one thousand five hundred feet (1500') shall be two and one-half (2.5) acres or three hundred thirty feet (330') from an oil well completed in or producing from the same pool and shall not be drilled nearer than one hundred sixty-five feet (165') from any unit line. No oil well shall be drilled on less than two and one-half (2.5) acres except by order of the state geologist; and

(B) Gas wells. Not more than one (1) gas well shall be drilled upon any tract of land into the same pool as specified in the following:

1. A standard spacing unit shall be a forty (40) acres. The gas well shall not be located closer than six hundred sixty feet (660') to any unit line, nor closer than one thousand three hundred twenty feet (1320') to the nearest gas well completed in or producing from the same pool. Except as provided in paragraph (1)(B)2., no gas well shall be drilled on less than forty (40) acres except by order of the state geologist; or

2. Due to the low natural reservoir pressure at shallow depths, gas may be drained economically and efficiently through primary production only by using smaller spacing units. A standard spacing unit for a gas well drilled to a total depth of less than one thousand five hundred feet (1500') shall be ten (10) acres or six hundred sixty feet (660') from a gas well completed in or producing from the same pool and shall not be drilled nearer than three hundred thirty feet (330') from any unit line. No gas well shall be drilled on less than ten (10) acres except by order of the state geologist.

(C) An operator may petition the state geologist to issue an order to *[The council may upon its own motion or upon the motion of any interested party and after notice and hearing]* establish spacing units of a specified and approximate uniform size and shape for *[each]* a pool *[within this state]* for the purpose of preventing waste, avoiding the drilling of unnecessary wells, or protecting correlative rights. The state geologist may modify an order establishing spacing units to alter the size and shape of one (1) or more existing spacing units for the purpose of preventing waste, avoiding the drilling of unnecessary wells, or protecting correlative rights.

(2) Only one (1) well that is in physical contact with the pool and capable of producing oil or gas or both is allowed in any given spacing unit.

(A) The state geologist, on an individual basis, may grant the drilling and production of one (1) or more increased density wells within a spacing unit, provided that the operator submits convincing technical evidence that the existing well(s) is not capable of efficiently draining the pool or portion thereof that resides within the confines of the spacing unit.

(B) The surface locations of all wells and all the points at which the wells are in physical contact with the pool shall occur no closer than a specified distance from the vertical boundary of a spacing unit, and this minimum distance is set in section (1) or in any order issued pursuant to subsection (1)(C). The state geologist, on an individual basis, subsequently may issue an order granting a location exception where the surface location of a well, or its contacts with the pool, or both, may be located closer than the specified minimum distance from the boundary of the spacing unit.

(C) Any injection well and any surface or subsurface device

that redirects the natural movement of oil, gas, or formation water in a pool is prohibited at any location within spacing units under primary production, and the drainage of oil, gas, and formation water into the well must be allowed to occur naturally. All injection projects or other enhanced recovery of oil or gas must be done in accordance with 10 CSR 50-3.020.

(D) Compressors that lower pressure inside wells for the purpose of increasing the ultimate recovery of gas may be used in spacing units. Compressors shall not induce a vacuum inside wells unless approved by the state geologist.

(3) The following are exempt from the requirements of spacing units:

(A) Offset wells that were drilled prior to the enactment of Chapter 259, RSMo, upon application to the state geologist and to protect against offset drainage;

(B) Any well that is drilled for enhanced recovery as part of the operation of a production unit, in accordance with 10 CSR 50-3.020;

(C) Wells whose purpose is for the disposal of produced water, non-usable gas, or other liquid or gaseous waste resulting from the production of oil, gas, or both;

(D) Stratigraphic test wells;

(E) Wells drilled expressly for operation of underground gas storage projects; and

(F) Non-commercial gas wells, if approved by the state geologist under the following conditions:

1. An operator may apply for the establishment of a spacing unit, consisting of one (1) or more contiguous separately owned tracts, on which a well no deeper than eight hundred feet (800') may be drilled without regard to section lines or property lines, provided that any well so allowed shall not be drilled closer than one hundred sixty-five feet (165') from the boundary of the spacing unit, unless approved by the state geologist;

2. An applicant for an exemption and establishment of a spacing unit under this subsection shall submit a well location map, as described in 10 CSR 50-2.030(3), outlining the area that will be affected by the proposed well and showing the location of the separate tracts, the names and addresses of landowners of the separate tracts, and the names and addresses of lessees of any tracts leased for oil, gas, or both. All wells, including but not limited to, dry, abandoned, producing, or shut-in wells on the proposed unit, and any well location for which drilling permits have been approved, shall be located accurately and designated on the map; and

3. Spacing exemptions may be granted upon application to the state geologist.

*AUTHORITY: sections 259.100[,] and 259.120, RSMo [1986] 2000. Original rule filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Sept. 15, 2015.*

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 3—Well Spacing for Oil and Gas Pools**

**PROPOSED RULE**

**10 CSR 50-3.020 Production Units and Well Spacing for Enhanced Recovery**

*PURPOSE: Production units are small- to large-scale projects designed to maximize ultimate recovery of oil and gas from the entirety of a single pool or particular portion thereof through enhanced recovery. Enhanced recovery typically involves the use of injection wells.*

(1) No well, including, but not limited to, those used for production or injection, drilled within a production unit shall be drilled nearer than one hundred sixty-five feet (165') from the production unit boundary. Stratigraphic test wells are exempt from this requirement.

(2) An operator may submit to the state geologist an application for the implementation of a production unit of a specified size and shape, with a well configuration of a certain nature of operation, for the purpose of an enhanced recovery project designed to maximize the ultimate recovery of oil or gas or both from the entirety of a single pool or particular portion thereof. The state geologist may approve the application if the proposed production unit is operated by a single operator or owner. If the proposed production unit includes more than one operator or owner, application shall be made to the council, according to procedures in 10 CSR 50-4.020. Any applicant for a production unit shall provide a description of the proposed production unit area, including the following information:

(A) Maps that show the unit boundary, cultural and natural surface features, areal extent of the pool, depth and thickness of the pool, location of any and all prior wells regardless of kind in the proposed unit area and those that occur within a one-half (1/2) mile-wide buffer area around the proposed unit;

(B) Location of all owner tracts;

(C) Location and pattern of all proposed production, injection, water supply and disposal wells that are to be drilled and operated for purpose of the proposed production unit; and

(D) Location of all surface facilities associated with the proposed production unit.

*AUTHORITY: sections 259.100 and 259.120, RSMo 2000. Original rule filed Sept. 15, 2015.*

*PUBLIC COST: This proposed rule will cost state agencies or political subdivisions twenty-six thousand three hundred ninety-seven dollars (\$26,397) per year in the aggregate.*

*PRIVATE COST: This proposed rule 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 rule with the Department of Natural Resources' Geological Survey Program attention to Summer Young at P. Box 250, 111 Fairgrounds Rd., Rolla, MO 65402 or via email to [summer.young@dnr.mo.gov](mailto:summer.young@dnr.mo.gov). To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, 111 Fairgrounds Rd., Rolla, MO.*

## FISCAL NOTE

## PUBLIC COST

## I. RULE NUMBER

<b>Rule Number and Name:</b>	10 CSR 50-3.020 Production Units and Well Spacing for Enhanced Recovery
<b>Type of Rulemaking:</b>	New Rule

## II. SUMMARY OF FISCAL IMPACT

<b>Affected Agency or Political Subdivision</b>	<b>Estimated Cost of Compliance in the Aggregate</b>
Department of Natural Resources	\$26,397 per year per applicable rule (one-seventh of \$184,776 average annual cost for 2 FTE needed)

## III. WORKSHEET

<b>Expenditure Scenario F - 2 FTE</b>	<b>FY17 Proj</b>				
	<b>(eff 1/2017)</b>	<b>FY18 Proj</b>	<b>FY19 Proj</b>	<b>FY20 Proj</b>	<b>FY21 Proj</b>
Salaries (PS)					
1 Geologist III, 1 Sr Office Support Assistant	\$ 42,162	\$ 86,854	\$ 89,459	\$ 92,143	\$ 94,907
Fringe Benefits (social security, health ins., retirement, etc.)	\$ 20,196	\$ 41,603	\$ 42,851	\$ 44,137	\$ 45,461
Operating E&E (travel, supplies, training, etc.)	\$ 22,222	\$ 12,257	\$ 12,625	\$ 13,003	\$ 13,394
Contractual Engineering	\$ -	\$ -	\$ -	\$ -	\$ -
*Statewide Central Services, DNR					
Administration, OA ITSD, Leases/Rents	\$ 21,610	\$ 35,952	\$ 37,031	\$ 38,142	\$ 39,286
Total	\$ 106,190	\$ 176,666	\$ 181,966	\$ 187,425	\$ 193,048
			<b>Average Need (FY18-FY21)</b>	<b>\$ 184,776</b>	

$\$184,776 \div 7 = \$26,397$  per applicable rule

## IV. ASSUMPTIONS

## 1. Projection Assumptions:

- FY17 reflected as one-half year due to earliest potential effective date of fees; actual timing of first expenditures will be determined by revenue receipts/fund balance
- FY17 includes one-time E&E needs; reduced in FY18
- 3% pay plan/inflation beginning FY18
- Average need calculated using 4 years since FY17 is only a partial year
- Fringe benefits estimated using DNR rate of 47.9% (less than the statewide average rate)
- \*Indirect costs estimated using approved federal indirect cost rate of 25.55%

## 2. Additional staffing level needed to cover activities in new rules and amendments to 10 CSR 50-1.040, 10 CSR 50-1.050, 10 CSR 50-2.010, 10 CSR 50-2.055, 10 CSR 50-2.080, 10 CSR 50-3.020, and

10 CSR 50-5.010. Because implementation of this rule is dependent upon and in conjunction with the other rules, the total FTE expenditure provided was divided evenly among the seven applicable rules.

3. Anticipate duties of the Geologist III include: assist with oil and gas permitting; provide compliance assistance; maintain and account for: mechanical integrity testing (MIT), injection pressure determination testing, and well stimulation treatment projects; oversee and review oil and gas production projects; evaluate enhanced oil recovery projects and technologies; determine appropriate injection pressures and rates; oversee MITs; conduct field inspections; and ensure compliance with regulations.
4. Anticipate duties of the Senior Office Support Assistant include: input data; maintain and account for: operator registration, well bond reporting, well status and shut-in wells, production, resource valuation, recordkeeping, and general information requests; create and edit forms; provide administrative support; generate letters (notifications/reminders); generate reports; and perform financial tracking.

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 4—Authorization of Pooling Units and**  
**Unitization Agreements for Oil and Gas Pools**

**PROPOSED AMENDMENT**

**10 CSR 50-4.010 Application for Authorization of a Pooling Unit for Primary Production.** The council is amending the chapter, title, purpose, deleting and rewriting the text of the rule.

*PURPOSE: This amendment clarifies the process for pooling mineral interests within a single spacing unit, either by voluntary or involuntary pooling.*

*PURPOSE: [In many instances tracts may be so small or shaped so that gas wells cannot be drilled on the tract in compliance with the general spacing rule. Pooling is closely related to spacing and refers to the integration of separately owned tracts, portions of tracts or interests to form a drilling unit. Voluntary or statutory pooling allows each owner to obtain a share of the oil and gas produced by the well on the pooled unit. This rule establishes the procedures for applying for an order for authorization of production pooling.] This rule sets forth the procedure for pooling mineral interests of separately-owned tracts, portions of tracts, or interests within a single spacing unit for primary production, to allow for the development and operations of the spacing unit.*

*[An application for an order by the council for authorization of production pooling shall follow the procedure as stated in section 259.110, RSMo.]*

(1) Before the commencement of drilling a well in a spacing unit, all owners, whether ownership is by deed or lease or farmout, shall enter into a contractual agreement whereby every owner pays his or her mutually agreed fair share of the drilling and operating costs and receives his or her fair share of the oil or gas or the profits produced therefrom. Contractual agreement is achieved by way of the pooling process pursuant to section 259.110, RSMo. The pooling process may be either voluntary or involuntary, as defined as follows:

(A) A voluntary pooling occurs when all owners of mineral interests enter into a private contractual agreement willingly and of their own accord. Voluntary poolings are executed privately with no involvement by the council; and

(B) An involuntary pooling occurs when one (1) or more owners of mineral interests are not able to enter into a private contractual agreement willingly and of their own accord, and the council, upon application by any interested owner and after notice and hearing, issues a pooling order that serves as the binding contractual agreement.

*AUTHORITY: sections 259.110[,] and 259.120, RSMo [1986] 2000. Original rule filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Sept. 15, 2015.*

*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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to

*summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, III Fairgrounds Rd., Rolla, MO.*

**Title 10—DEPARTMENT OF NATURAL RESOURCES**  
**Division 50—Oil and Gas Council**  
**Chapter 4—Authorization of Pooling Units and**  
**Unitization Agreements for Oil and Gas Pools**

**PROPOSED RULE**

**10 CSR 50-4.020 Application for Authorization of Unitization for Enhanced Recovery**

*PURPOSE: This rule sets forth a procedure for small- to large-scale cooperative development and operation projects that are designed to maximize ultimate recovery of oil and gas from the entirety of a single pool or particular portion thereof through the use of enhanced recovery projects within production units. Similar to the pooling process for primary production, unitization of production units for enhanced recovery involves contractual agreements between different owners and/or operators of existing producing wells, and a decision as to which one (1) of the operators will operate the production unit as a whole.*

(1) The council, upon the written request of an applicant and upon receipt of the information specified in section (2) of this rule and after notice and hearing, may approve the implementation of a production unit of a specified size and shape, and a well configuration of a certain nature of operation, for the purpose of a cooperative development and operation project designed to maximize the ultimate recovery of oil or gas or both from the entirety of a single pool or particular portion thereof. All operators and owners in the proposed production unit shall enter into contractual agreement such that one (1) party is designated the operator of the production unit as a whole, and every owner pays his or her mutually agreed fair share of the drilling and operating costs and receives his or her fair share of the oil, gas, or both produced from the unit, or the profits derived from such production. Contractual agreement is achieved by way of the unitization process, which is either voluntary or involuntary as defined as follows:

(A) A voluntary unitization occurs when all operators and owners in the proposed production unit area are able to enter into a private contractual agreement willingly and of their own accord; and

(B) An involuntary unitization occurs when one (1) or more operators or owners are not able to enter into a private contractual agreement willingly and of their own accord, and the council, upon application by any person or party representing the voluntarily agreed production unit proponents that collectively hold at least seventy-five percent (75%) of the right to drill into and to produce oil and gas from the pool and at least seventy-five percent (75%) of all mineral interest and after notice and hearing, may approve the implementation of the production unit and issue a unitization order that serves as a binding contractual agreement for all parties and that, if necessary, designates the operator of the production unit as a whole.

(2) Any applicant for a production unit for the purpose of a cooperative development and operation project for enhanced recovery shall provide the following information to the council thirty (30) calendar days prior to the date of hearing:

(A) A description of the proposed production unit area, as specified in 10 CSR 50-3.020(3);

(B) A detailed description of the exact nature of the proposed unit operations; and

(C) Conformed copies of the applicable agreements, which may be composites of the executed counterparts.

**AUTHORITY:** sections 259.110 and 259.120, RSMo 2000. Original rule filed Sept. 15, 2015.

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

**PRIVATE COST:** This proposed rule 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 rule with the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, III Fairgrounds Rd., Rolla, MO.

**Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 50—Oil and Gas Council  
Chapter 5—[Unitization of Oil and Gas Fields or Pools]  
Special Projects and Research Projects**

**PROPOSED AMENDMENT**

**10 CSR 50-5.010** [Application for Authorization for Voluntary and Statutory Unitization] Special Projects and Research Projects. The council is amending the chapter, title, purpose, deleting the text of the rule, and making new sections (1)–(3).

**PURPOSE:** This amendment deletes language that is included in the proposed new rule 10 CSR 50-4.020 in order to make the rules easier to read, incorporates requirements for special projects previously in proposed rescission 10 CSR 50-2.110, clarifies the role and authority of the state geologist to approve applications for special projects and research projects, and changes the confidentiality period to be consistent throughout 10 CSR 50.

**PURPOSE:** [The oil and gas in a subsurface reservoir constitute a common source of supply to any and all wells drilled into that reservoir. One well can drain a large area and is not limited by the surface survey lines that define separate tracts. While the petroleum is divided, the right to a share of the petroleum is divided. Thus, the petroleum in place in a reservoir must be divided and shared among the separate owners who exercise their rights by drilling into that reservoir. Pooling for well spacing eliminates property lines within the spacing unit, thereby eliminating the drilling of unnecessary wells. Maximum conservation can be obtained if this principle is extended to consolidate all the separately owned tracts within a reservoir into one unit. This is referred to as unitization. This rule establishes procedures for voluntary unitization of a field or pool or for statutory unitization of a pool or field through an order of the council.] The oil and gas reserves of the state at any one (1) time consist of that fraction of discovered oil and gas that can be economically recovered using existing technology. Since optimum recovery is dependent upon engineering and scientific achievements as well as economics, any development of new processes represents an increase in oil and gas reserves as well as an improvement in oil and gas conservation practices. By carefully matching recovery processes to individual reservoirs, it should be possible to greatly extend the potential that exists in unconventional oil and gas deposits of Missouri. This rule permits the state geologist and the council to give special consideration to development of potential resources such as these.

[An application for an order by the council for the authorization of a unit or cooperative development and operation of a field or pool shall be in compliance with the statute as stated in section 259.120, RSMo.]

(1) To encourage development of economic recovery of oil and gas reserves in the state, in particular the research and development leading to economic recovery of unconventional oil and gas reserves, research or special projects whose objective is to devise and develop methods may be approved by the state geologist as units complete within themselves. Unit approval may be obtained by submitting to the state geologist a project report specifying all pertinent details of the proposed research or development project. Blanket approval for an application for a permit to drill wells may be granted at the discretion of the state geologist, provided the location and numbers of the wells are anticipated with a reasonable degree of accuracy.

(2) No well drilled as an oil or gas shall be drilled closer than approximately one hundred sixty-five feet (165') to a unit boundary.

(3) Reports of the pertinent details of overall project operation shall be submitted quarterly to the state geologist for his or her study and use. Confidentiality may be granted upon written request as required in 10 CSR 50-1.020.

**AUTHORITY:** section [259.120,] 259.060, RSMo [1986] 2000, and section 259.070, RSMo Supp. 2013. Original rule filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Sept. 15, 2015.

**PUBLIC COST:** This proposed amendment will cost state agencies or political subdivisions twenty-six thousand three hundred ninety-seven dollars (\$26,397) per year 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 the Department of Natural Resources' Geological Survey Program attention to Summer Young at PO Box 250, III Fairgrounds Rd., Rolla, MO 65402 or via email to summer.young@dnr.mo.gov. To be considered, comments must be received by November 18, 2015. A public hearing is scheduled for 10:00 a.m., November 16, 2015, at the Missouri Geological Survey, Mozarkite Conference Room, III Fairgrounds Rd., Rolla, MO.

FISCAL NOTE

PUBLIC COST

I. RULE NUMBER

<b>Rule Number and Name:</b>	10 CSR 50-5.010 Application for Authorization for Voluntary and Statutory Unitization
<b>Type of Rulemaking:</b>	Amendment

II. SUMMARY OF FISCAL IMPACT

<b>Affected Agency or Political Subdivision</b>	<b>Estimated Cost of Compliance in the Aggregate</b>
Department of Natural Resources	\$26,397 per year per applicable rule (one-seventh of \$184,776 average annual cost for 2 FTE needed)

III. WORKSHEET

Expenditure Scenario F - 2 FTE	FY17 Proj				
	(eff 1/2017)	FY18 Proj	FY19 Proj	FY20 Proj	FY21 Proj
Salaries (PS)					
1 Geologist III, 1 Sr Office Support Assistant	\$ 42,162	\$ 86,854	\$ 89,459	\$ 92,143	\$ 94,907
Fringe Benefits (social security, health ins., retirement, etc.)	\$ 20,196	\$ 41,603	\$ 42,851	\$ 44,137	\$ 45,461
Operating E&E (travel, supplies, training, etc.)	\$ 22,222	\$ 12,257	\$ 12,625	\$ 13,003	\$ 13,394
Contractual Engineering	\$ -	\$ -	\$ -	\$ -	\$ -
*Statewide Central Services, DNR					
Administration, OA ITSD, Leases/Rents	\$ 21,610	\$ 35,952	\$ 37,031	\$ 38,142	\$ 39,286
Total	\$ 106,190	\$ 176,666	\$ 181,966	\$ 187,425	\$ 193,048
				Average Need (FY18-FY21) \$184,776	

\$184,776 ÷ 7 = \$26,397 per applicable rule

IV. ASSUMPTIONS

- Projection Assumptions:
  - FY17 reflected as one-half year due to earliest potential effective date of fees; actual timing of first expenditures will be determined by revenue receipts/fund balance
  - FY17 includes one-time E&E needs; reduced in FY18
  - 3% pay plan/inflation beginning FY18
  - Average need calculated using 4 years since FY17 is only a partial year
  - Fringe benefits estimated using DNR rate of 47.9% (less than the statewide average rate)
  - \*Indirect costs estimated using approved federal indirect cost rate of 25.55%
- Additional staffing level needed to cover activities in new rules and amendments to 10 CSR 50-1.040, 10 CSR 50-1.050, 10 CSR 50-2.010, 10 CSR 50-2.055, 10 CSR 50-2.080, 10 CSR 50-3.020, and