

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

10 CSR 50-1.010 Organization

PURPOSE: This rule sets out the organization of the State Oil and Gas Council.

(1) **Chapter 259, RSMo, establishes the State Oil and Gas Council. The council consists of eight (8) members: the state geologist, is composed of the following state agencies members representing:** ~~Division of Geology and Land Survey Division of Commerce and Industrial Development~~ **Department of Economic Development, Missouri Public Service Commission, Clean Water Commission, and Missouri University of Science and Technology, Missouri and Missouri Independent Oil and Gas Association; and** ~~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 Science and Technology Missouri** 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. 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.*

**Original authority: 259.010, RSMo 1965, amended 1972, 2012; 259.020, RSMo 1965, amended 1972, 2012; 259.030, RSMo 1965; and 259.040, RSMo 1965, amended 1972, 2012.*

10 CSR 50-1.020 General Procedures and Purpose

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.

(1) All rules promulgated shall be statewide in application unless otherwise specifically excepted by a written order of the council.

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

(3) ~~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 these rules 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 in which 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 that 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) Any additional notice required by any rule, regulation or statute, which applies to the hearing or which is necessary to provide due process to any person whose property may be affected by the hearing, shall be provided by the council.

(D) If the council is required to publish notice, it shall be proven by state geologist staff that notice has been properly published. Acceptable proof of notice may include an affidavit sworn by the state geologist staff that notice has been perfected. Anyone who initiates the hearing shall provide that notice has been properly published. An affidavit sworn by the person who initiates the hearing certifying that notice has been perfected may be accepted as proof of notice. The affidavit shall be filed with the council on or before the hearing date.

(43) When **the council determines** an emergency requiring immediate action ~~is found to exist~~, the council is authorized to issue an emergency order without notice of hearing, which shall be effective upon promulgation. 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) The state geologist, **any** member of the council, or **an** authorized representative shall have the authority to enter property, with the consent of the owner or person in possession, **operator for active sites or surface owners for abandoned sites**, 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 these rules and Chapter 259, RSMo, shall use Missouri nomenclature.

(7) Confidentiality. Information gathered pursuant to these rules and Chapter 259, RSMo, 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 reconstruction 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-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-year period, the period of confidentiality may be extended for one (1) additional year.

*AUTHORITY: sections 259.070, ~~and 259.140, 259.190, and 259.200, RSMo-1986.~~ * 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.*

**Original authority: 259.070, RSMo 1965, amended 1972, 1983 and 259.140, RSMo 1965.*

10 CSR 50-1.030 Definitions

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

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

(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.

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

~~(B)~~**3.** Area of review, an area surrounding an single applicant injection well 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);

~~(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.

(Reserved)

(C) Terms beginning with the letter C.

1. Casing, the impervious, durable, tubular materials used to line a well bore.

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. Injure the reservoir to the detriment of others;

B. Take an undue proportion of the obtainable oil or gas; or

C. Cause undue drainage between developed leases.

~~(F)~~**11.** 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 accompanying the production of oil or gas or both below ground surface into an injection zone and is not used for enhanced recovery.

(E) Terms beginning with the letter E.

1. Enhanced production, any process used to increase the recovery of oil or gas from a pool through secondary or tertiary production. Enhanced production 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 production 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)(~~XU~~)**1.** of this rule but which has been exempted for operation of an injection well by the director of the Department of Natural Resources because the aquifer or its portion is oil- or gas-producing.

(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 hereinbelow 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 via 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 standard temperature and pressure, but not including oil- or gas-producing wells undergoing approved stimulation projects into which cumulative fluid injection is less than three thousand (3000) reservoir barrels.**

(J) Terms beginning with the letter J.

(Reserved)

(K) Terms beginning with the letter K.

(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 underground source of drinking water through vertical channels adjacent to the well bore.**

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 construction of any well that permits production from two 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 furnishing 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 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.

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

~~(S)~~**5. Operator, a person who drills, maintains, or operates wells associated with oil or gas production, storage or injection projects.**

~~(T)~~**6. Owner, the person who has the right to drill into and produce from a pool and to appropriate the oil or gas that he or she produces therefrom either for him- or herself and/or for others or for him/herself 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. Pipeline, any pipes above or below the ground used or to be used for the transportation of oil or gas in either a liquid or gaseous state.

3. Pit, any constructed, excavated, or naturally-occurring depression upon the surface of the earth.

4. 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.

~~(F)~~**5. 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 chapter—these regulations.**

6. 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.

7. Pre-law well, a well that was drilled prior to the enactment of Chapter 259, RSMo in 1965.

8. Primary production, the process of recovery of oil or gas from a pool in which one well is capable of effectively 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.

9. 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)~~**10. 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, benzenebenzene, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one (+) or more liquid products or by-products derived from oil or gas, and blends or mixtures of two (2) or more liquid products or by-products, derived from oil or gas whether herein enumerated in this rule or not.**

11. 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 production. 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 council, pooled or non-pooled mineral acreage, and all or parts of past and present production units.

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

(Q) Terms beginning with the letter Q.

(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. Reconstruction, the process of reCompleting or reworking a well after its initial well construction.

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 thirty (30) 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. Stimulation project, 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.

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

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 a potentially productive oil or gas zone and is not utilized for generating a seismic signal.

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

(U) Terms beginning with the letter U.

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

A. ~~which~~ 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 ~~e~~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 for enhanced production 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.
(Reserved)

(W) Terms beginning with the letter W.

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

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

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

~~3C.~~ The location, spacing, drilling, equipping, operating, or producing of any oil or gas well(s) in a manner which causes, or tends to cause, reduction in the quantity of oil or gas or both 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 or both;

~~4D.~~ The inefficient storing of oil or gas;

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

~~6F.~~ Through negligence, the unnecessary or excessive surface loss or destruction of oil or gas resulting from negligent evaporation, seepage, leakage, or deliberate combustion; and

~~(Z)~~2. Waters of the state, includes water as defined in the Missouri Clean Water Law, section 644.016, RSMo.

3. Well, any hole drilled in the earth for, or in connection with, the exploration, discovery, or recovery of oil or gas or both, or one drilled for, or in connection with, the underground storage of gas in natural formation, or one drilled 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.

3. Whipstock, a long wedge-shaped steel device with a concave groove along its inclined face, placed in an oil or gas well and used during drilling to deflect and guide the drill bit toward the direction that the inclined grooved surface is facing.

(X) Terms beginning with the letter X.
(Reserved)

(Y) Terms beginning with the letter Y.
(Reserved)

(Z) Terms beginning with the letter Z.

(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, 259.070, 259.140, and 259.190, RSMo-1986. Original rule filed Oct. 11, 1966, effective Oct. 22, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Oct. 14, 1981, effective Feb. 11, 1982. Amended: Filed Sept. 13, 1983, effective Dec. 11, 1983. Amended: Filed May 18, 1987, effective July 24, 1987.*

**Original authority: 259.050, RSMo 1965, amended 1972, 1987; 259.070, RSMo 1965, amended 1972, 1983, 1987; 259.140, RSMo 1965; and 259.190, RSMo 1965, amended 1983.*

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 these rules, Chapter 259, RSMo, 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 the state geologist deems advisable.

(2) If, in the opinion of the state geologist, an investigation discloses that a violation of these rules or Chapter 259, RSMo, 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 these rules, Chapter 259, RSMo, 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 permit denial issued by the state geologist may appeal the order or permit denial to the council within thirty (30) calendar days of the date the state geologist issued the order. The petition 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 permit denial 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 permit denial issued by the state geologist is not appealed within the time provided in this section, the order or permit denial becomes final and may be enforced as provided in sections 259.200 and/or 259.210, RSMo.

AUTHORITY: sections 259.070, 259.140, 259.150, 259.160, and 259.170, RSMo.*

**Original authority: 259.140, 259.150, 259.160, 259.170 and 259.200, RSMo 1965.*

10 CSR 50-1.050 Assessment of Costs

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

AUTHORITY: sections 259.052 and 259.080, RSMo.

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

10 CSR 50-2.010 Organization Report

PURPOSE: This rule provides for the filing of information that identifies those responsible for oil and gas exploration, producing or related industry activities regulated by the council. The organization report 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~~ **Any person engaging in well drilling or operation, 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, or the production of oil or gas or both shall, prior to the start of operations,** properly execute the prescribed organization report (form OGC-1) and submit ~~same~~ **it along with the required fee** to the state geologist. ~~Signatures as required on~~ **This form report must shall** be notarized. ~~The report must~~ **and shall** be filed before bonding will be approved.

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

(3) **Operator responsibility or authority to inject for any open well shall not be transferred without approval of the state geologist. The operator shall notify the state geologist in writing, on a form prescribed by the state geologist, of the intent to** ~~Upon change transfer of ownership~~ **operator responsibility or authority to inject for of any open well(s), producing or nonproducing, notice shall be given to the state geologist within ten** ~~no less than thirty (30)~~ **calendar days prior to** ~~after the~~ **transfer** ~~change of ownership.~~ **This notice shall be completed in full. The state geologist shall review the notice and, within fifteen (15) business days, approve or deny the transfer based upon the following conditions:**

(A) The transfer must be agreed upon by both the transferor indicating the release of the well(s) and by the transferee indicating acceptance of the well(s).

(B) The transferee must have sufficient bonding in place to insure the well(s) prior to transfer.

(C) The transferor shall furnish a list of API numbers for all open wells on the lease, spacing unit, production unit, or gas storage facility with the notice of transfer.

(D) Transfers shall not be made to any person who has not complied with the provisions of this section.

(E) The transferor may be required by the state geologist to conduct a mechanical integrity test as a condition of the transfer.

(F) 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 show the new operator information.

AUTHORITY: section 259.070, RSMo-1986. 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.*

**Original authority: 259.070, RSMo 1965, amended 1972.*

10 CSR 50-2.020 Bonds

PURPOSE: Bonding is required of an operator before commencing oil or gas drilling or operations to insure compliance with the provisions of 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 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. **The bond shall be** ~~and~~ payable to the state of Missouri, conditioned ~~for~~ **upon** the performance of the duty to comply with all ~~of~~ the provisions of the laws of the state of Missouri and the rules and orders of the Oil and Gas Council. **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. ~~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 will be required~~ **bond amounts shall be determined by the council and shall be no less than** in the following amounts during the entire operation of the well:

MINIMUM SINGLE WELL BOND
Depth of Well

<u>From</u>	<u>To</u>	<u>Amount</u>
0'	500'	\$1000 <u>1,100</u>
501'	1000'	\$2000 <u>2,200</u>
1001'	2000'	\$3000 <u>3,300</u>
2001'	5000'	\$4000 <u>4,400</u>
5001'	_____	\$5000 <u>5,500</u>
		plus \$12/ foot beyond 5001 feet

Bonds for horizontal wells shall be based on the length of the well bore from the surface to the depth of the lowest producing horizon.

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

MINIMUM BLANKET WELL BOND
Depth of Well

<u>From</u>	<u>To</u>	<u>Amount</u>	<u>Number of Unplugged/Open Wells/bond</u>
0'	800'	\$20 <u>2,000</u>	5 <u>30</u> wells
801'	12 <u>500</u> '	\$30 <u>25,000</u>	15 <u>10</u> 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) All **open** wells ~~permitted prior to as of~~ the effective date of this regulation **February 29, 2016**, shall comply with these bonding requirements no later than ~~January 1, 1990~~ **March 1, 2017**. All wells permitted on or after **February 29, 2016**, the effective date of this regulation shall comply with the previously mentioned bonding **10 CSR 50-2.020(1)** requirements prior to permit issuance.

~~(23)~~ **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 has been posted.

(B)(3) Personal bonds secured by certificates of deposit shall be subjected 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~~

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

4. The certificate of deposit shall be kept in the custody of the state of Missouri 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 or name or address of the institution, 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 or name or address of the institution, 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 state geologist;

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 or 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 or 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 the law and 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).

(E) In the event the amount forfeited is insufficient to pay for the full cost of the remedial actions, including but not limited to well plugging, the operator or owner shall be liable for remaining costs. The state geologist may complete or authorize completion of remedial actions of the bonded wells and may recover from the operator or owner all costs of remedial actions in excess of the amount forfeited.

*AUTHORITY: section 259.070, RSMo—1986.*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. 13, 1983, effective Dec. 11, 1983. Amended: Filed May 18, 1987, effective July 24, 1987. Amended: Filed Dec. 20, 1988, effective May 25, 1989.*

**Original authority: 259.070, RSMo 1965, amended 1972, 1983, 1987.*

10 CSR 50-2.030 Application for Permit to Drill, Deepen, Plug-Back, or Reconstruct ~~Injeet~~

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 **to drill, deepen, plug-back, or reconstruct any well shall be submitted to and approved by** must be made with the state geologist on form OGC 3 or OGC 3-1 (for injection wells) as prescribed by the council. ~~As~~ **The required** organization report (form OGC 1) and bond (form OGC 2) must be on file in the office of the state geologist or must accompany the application.

(2) The application for a permit to drill, deepen, plug-back, or reconstruct shall be submitted on a form provided by the department along with the required fee 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 construction may be ordered to be plugged by the state geologist.

(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.

(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 current 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 noncommercial 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.

(7)(5) An owner-operator engaged in drilling development wells to depths no greater than eight hundred feet (800') may request that the state geologist approve prospective well locations on a blanket basis on a single lease. **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 (23) of this rule. In the event the state geologist approves the blanket requests, the approved locations may be drilled in the **operator's owner's** order of preference, provided that a permit application (OGC 3) 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 reconstruct**, 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 are met. **If the application is incomplete or lacking required information or forms, the state geologist shall notify the operator and suspend the application process. 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.** 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 **and rules** are being met, **he or she** shall issue the permit. If **she** or **she** determines ~~that~~ either **that** the application is not in proper form or that the law ~~of~~ the rules are not being met, **she** or **she** shall deny the permit. 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~~ **or she** shall deny the permit. If the state geologist determines that ~~prior wells drilled by the operator have been abandoned and have not been plugged in an approved manner~~ **the operator is in violation of any of these rules or of any provision of Chapter 259, RSMo, s/he shall 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; however, to any other person, firm or corporation or to any other location operator responsibility or 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 reconstruct 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-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 reconstruction along with the required fee shall be submitted to the state geologist for approval. 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 information application. 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. 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.**

(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, 259.070, 259.080 and 259.140, RSMo-2000. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Dec. 12, 1975, effective Dec. 22, 1975. Amended: Filed Sept. 12, 1978, effective Feb. 1, 1979. Amended: Filed Oct. 14, 1981, effective Feb. 11, 1982. Amended: Filed Dec. 15, 1986, effective April 11, 1987. Amended: Filed Sept. 15, 2006, effective April 30, 2007.*

**Original authority: 259.060, RSMo 1965, amended 1972; 259.070, RSMo 1965, amended 1972, 1983, 1987, 1993, 1995; 259.080, RSMo 1965, amended 1972; and 259.140, RSMo 1965.*

10 CSR 50-2.040 Drilling and CompletionConstruction

PURPOSE: One of the important functions of the council is to prevent produced salt water from the contamination of either surface or underground fresh water resources 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 important in should a given 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 **as follows, except as otherwise required or approved by the state geologist as indicated on the approved permit to drill, deepen, plug-back, or reconstruct:** at the depth

(A) Through all unconsolidated material plus twenty (20) feet 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 (50) feet below the base of the lowest known underground source of drinking water penetrated, 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%) CaCl₂, for twelve (12) hours; neat cement with two percent (2%) CaCl₂, for ten (10) hours; neat cement with three percent (3%) CaCl₂, for eight (8) hours; and neat cement with four percent (4%) CaCl₂, 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.

(2) **All casing materials shall be steel and able to withstand all collapse and burst pressures that the well might encounter.**

(3) All wells drilled for oil, gas or injection shall be completed constructed 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 strata formations at ~~to~~ a depth of no-greater than eight hundred feet (800') that do not penetrate any underground source of drinking water, the state geologist may approve owner's ~~an operator's~~ request to set a single casing string with no tubing or packer, 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.

~~(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 500 pounds per square inch. These requirements may be modified by the state geologist.

(5) Multiple-completed wells. Operators may produce from more than one pool through the same well bore 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 constructed prior to the February 29, 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 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 open-hole interval. The annulus between the tubing and the casing shall be filled with a corrosion-inhibiting fluid or hydrocarbon liquid.

C. With the prior approval of the state geologist, packerless or tubingless constructions for wells drilled to no greater than eight hundred feet (800') may be authorized under the provisions of paragraphs (7)(B)2. or 3. of this regulation.

2. Injection through tubing without a packer may be authorized by the state geologist if all of the following requirements are met:

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

B. The well does not penetrate any underground source(s) of drinking water.

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

3. Injection without tubing may be authorized by the state geologist 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. The well does not penetrate any underground source(s) of drinking water.

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

D. All pressure readings recorded shall be taken during actual injection operations.

E. It shall be the sole responsibility of the operator of the tubingless construction to maintain the well so that the mechanical integrity tests can be performed as specified in 10 CSR 50-2.055(11).

(8) In existing wells to be converted to other use, including but not limited to injection, all additional casing or reconstruction 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 these rules. For horizontal wells, a directional survey must be submitted with a well construction or reconstruction 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 thirty (30) 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 construction 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.

(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.

*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. Amended: Filed Oct. 14, 1981, effective Feb. 11, 1982. Amended: Filed Aug. 11, 1986, effective Oct. 27, 1986.*

**Original authority: 259.060, RSMo 1965, amended 1972 and 259.070, RSMo 1965, amended 1972, 1983.*

10 CSR 50-2.050 Samples, Logs, and Completion Construction Reports

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 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 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 responsible for drilling or reconstructing 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 reconstruct returned to the operator by the state geologist. All samples or drill cuttings saved in drilling or reconstruction operations and any cores taken shall be retained by the operator for one hundred eighty (180) days after the spud date of the well.

(B) Sample cuttings shall be taken at ~~ten-five~~ four-five (405') intervals from the surface to total depth in all wells drilled under these regulations, 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.

~~(C2) During the drilling, or immediately following the completion~~**construction**, of any well drilled as provided in section 10 CSR 50-2.050(1) of this rule, the ~~operator~~**owner** 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 forwarded~~**the core** to the state geologist at the ~~operator's~~**owner's** expense. In the event that it is necessary for the ~~operator~~**owner** 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 ~~operator~~**owner** shall furnish 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 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 reconstruction 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 he or she determines additional geologic information is not required. The state geologist will advise the operator on the returned copy of the permit to drill, deepen, plug-back, or reconstruct when samples will not be required.

(3) Well construction or reconstruction report.

~~(A) Within thirty (30) one hundred twenty (120) calendar days of after the spud date completion or commencement of reconstruction~~ of a well drilled ~~under these regulations, for oil or gas, for geologic information, for gas storage, for the development of reservoirs for storage of liquid petroleum gas or for any injection purposes~~ the ~~operator~~**owner** will file with the state geologist properly executed form OGC-5 ~~shall submit a well construction or reconstruction 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 owner 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. 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.*

**Original authority: 259.070, RSMo 1965, amended 1972.*

10 CSR 50-2.055 Injection wells, mechanical integrity testing and stimulation projects

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

(A) Application for a permit to inject along with the required fee has been submitted to the state geologist on forms provided by the department.

(B) The required organization report, bond and approved construction or reconstruction report are on file in the office of the state geologist.

(C) The state geologist has issued a written 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 required fee, 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 geological strata encountered in wells located within a one-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(6); and

(E) Information showing that injection into the proposed zone will be contained within the 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 furnished to the state geologist by the applicant.

(4) 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 injection to be filed along with the required fee, except as specified below:

(A) 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 furnished by the state geologist for one or more of the following purposes:

1. The operator seeks to decrease the maximum injection pressure.

2. The operator seeks to decrease the maximum injection rate.

3. 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.

(5) Applications for an area permit to inject may be filed for more than one (1) enhanced recovery injection well. An area permit must be associated with an established production unit. The applicant shall provide the requested information for each well included in the application.

(6) 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 (6)(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 (6)(A).

(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.

(7) 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 (6) of this regulation.

(8) 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 open-hole zone, except as specified in 10 CSR 50-2.040(7).

(9) 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 the law and the rules are met. If the application is incomplete or lacking required information or forms, the state geologist shall notify the operator and suspend the application process. When the required form or information 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 finds that the application is in good form, that all requirements of the application have been met, and that the laws and rules are being met, the state geologist shall issue the permit. If the state geologist determines either that the application is not in proper form or that the law or the rules are not being met, he or she shall deny the permit. If the state geologist finds that injection at the proposed site would be an undue risk to the surface or subsurface environment, he or she shall deny the permit. If the state geologist determines that the operator is in violation of any of these rules or of any provision of Chapter 259, RSMo, the state geologist may deny the permit.

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

(11) 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 zones. 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 six hundred sixty feet (660') 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 paragraphs (A)3. or 4. above may be used as a reference well. Additional injection wells within six hundred sixty feet (660') 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 sections (4) and (7) above.

(12) 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.

(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.

(13) 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 constructed 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 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 open-hole 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.

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 open-hole interval. The minimum calculated pressure required to depress the fluid in the wellbore shall be no less than 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 a minimum of five (5) business days' notice 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 (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.

(14) 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 of the following:

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

(B) Plug the well.

(15) Following corrective action, 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 constructed in this manner.

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

(17) Stimulation projects. At least five (5) business days prior to commencement of a stimulation 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 project, the operator shall submit documentation of the materials injected.

(18) All injection wells in operation prior to February 29, 2016, shall comply with these injection permitting requirements no later than March 1, 2017. All wells permitted on or after February 29, 2016, shall comply with requirements in this rule prior to permit issuance.

10 CSR 50-2.060 Shut-in Wells, Plugging, and Conversion to Water Well Abandonment

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 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) Shut-in wells.

(A) Shut-in status. A well shall be considered shut in whenever it has not been operated for thirty (30) calendar days or more. The shut-in status shall not exceed one hundred eighty (180) calendar days. Prior to the expiration of the one hundred eighty (180) calendar days, the operator of that well shall perform one 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 (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 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-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 (B)3. of this section. Additional one-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 shut-in status must be bonded individually by a single well bond prior to any additional one-year extensions of shut-in status of a well. If the well is returned to service or properly plugged, the bonding provisions of 10 CSR 50-2.020 will apply.

3. 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 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 or owner 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 person legally responsible for the proper care and control 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 these rules or Chapter 259, RSMo, 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 declare the well to be a public nuisance, to effectuate the abandonment of any property interests in the well, and to request appropriate injunctive relief and civil penalties, as provided in sections 259.200 and 259.210, RSMo, as well as for reasonable attorney's fees and for the recovery of any and all costs incurred by the department in enforcing the provisions of this section, including but not limited to costs associated with plugging the well as provided in paragraph 4.

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. Proceeds from the collection, removal, salvage and disposition of abandoned operating structures or other equipment may be used to offset costs related to those activities. The cost of the plugging or remediation shall be paid by the Oil and Gas Remedial Fund, as provided in section 259.190, RSMo. The department may recover any such costs associated with plugging or remediation of abandoned wells as provided in paragraph 3. of this subsection, but any such recovered costs shall be paid into the Oil and Gas Remedial Fund.

(B) Notice.

1. Before beginning abandonment ~~plugging~~ 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, the operator shall file a notice of intention to abandon ~~plug form~~ the well shall be filed with the state geologist on approved form OGC-6. The notice shall include the details of the proposed abandonment ~~plugging~~ procedure and ~~whether~~ description of any logging tool containing a radioactive source is being abandoned (see subsection (8E) of this rule 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 ~~abandon~~plug dry holes may be obtained by informing the state geologist of proposed abandonment ~~plugging~~ procedures, in which case a notice of intent to plug form must be submitted within three (3) business days of plugging.

B.(2) In lieu of prior notice and approval by the state geologist (form OGC-6) as detailed in section (43)(B)1. of this rule, the operator may elect to plug the hole a well from total depth to within ~~plow~~ depth of the surface with cement slurry, being no less than sixteen (16) ~~fifteen~~ (15) pounds per gallon density. In such event, form OGC-7 shall be forwarded to the state geologist within forty eight (48) hours after completion.

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

(3C) Plugging methods.

1. Before any well is abandoned ~~considered plugged~~, it shall be plugged in a manner which will confine permanently all oil, gas, and water shall be permanently confined 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.

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

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

~~(6)~~**3. Casing in plugged wells, including horizontal wells, shall be cut off below plow depth at least three feet (3') below ground surface** 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.

4. Horizontal wells. Each horizontal well shall be filled with a cement plug from total depth of the lowest 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 (3) feet 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.

~~(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)~~**(D) Reporting. The operator shall submit a plugging record along with the required fee to the state geologist within thirty (30) calendar days after completion of plugging activities. The report shall be made on the form furnished by the state geologist and shall be completed in full.**

(E) Radioactive source.

~~1. Before~~ **1. If** a radioactive source may be abandoned ~~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 ~~should~~ **shall** be mechanically equipped so as to prevent the accidental or intentional mechanical disintegration of the radioactive source.

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

~~(B)~~**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-color-red-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)~~**C.** ~~If~~ 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)~~ **subparagraphs (3)(E)1.A. or B.** of this rule, ~~she~~ **or she** shall seek the state geologist's approval to cease efforts in this direction and obtain approval for an alternate abandonment procedure.

~~(9)~~**2.** Upon permanent abandonment ~~plugging~~ of any well in which a radioactive source is ~~left in the hole~~ **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.

~~(10)~~**(F)** Monies deposited in the Oil and Gas Remedial Fund may be used by the ~~council~~ **department** 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)~~**1.** Wells covered by a forfeited bond shall receive first priority; and

~~(B)~~**2.** 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.

(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, 259.070 and 259.190, RSMo-1986.~~ * Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Dec. 12, 1975, effective Dec. 22, 1975. Amended: Filed Sept. 10, 1979, effective Feb. 11, 1980. Amended: Filed Oct. 14, 1981, effective Feb. 1, 1982. Amended: Filed Sept. 13, 1983, effective Dec. 11, 1983.*

**Original authority: 259.060, RSMo 1965, amended 1972; 259.070, RSMo 1965, amended 1972, 1983; and 259.190, RSMo 1965, amended 1983.*

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 and contact information of the operator;**
- (B) Name of the lease being served by the tank; and**
- (C) 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) Bv-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 and 259.070, RSMo.)

10 CSR 50 2.070 Well Spacing

PURPOSE: In the early history of oil drilling and production, a landowner or lessee could drill as many wells on his/her land as s/he desired and as close to the lease boundaries as possible. S/he could also produce oil as rapidly as possible from each well to prevent loss of the oil to his/her neighbors. This resulted in many unnecessary wells being drilled and premature depletion of oil pools. As more knowledge of reservoir behavior and the mobility of reservoir fluids increased, spacing of wells on a wider, uniform pattern became a standard practice. Optimum spacing is considered to be the maximum number of reservoir acres that can be economically and effectively drained by one well within a reasonable time. Stated differently, if one well can be drilled economically on forty acres and this is the area that can be drained effectively, then the spacing or acreage attributable to the well should not be less than forty acres. The word effective implies that a well so spaced will ultimately recover as much oil for the forty acres as would be recovered by more than one well. This rule provides requirements for, and limitations on, the spacing of wells and for certain exceptions and exemptions thereto.

(1) In the absence of an order by the council setting spacing units for a pool, the following regulations shall apply:

(A) For the purpose of interpreting distance requirements of this rule, any hole drilled on a lease shall be considered a well until properly abandoned;

(B) Oil Wells-

1. Not more than one (1) well drilled for oil shall be drilled upon any tract of land other than a governmental quarter section or governmental lot corresponding thereto, or, in areas not covered by United States Public Land Surveys, an arbitrarily designated forty (40) acre tract. The well shall not be located closer than approximately five hundred feet (500') to any boundary line of a governmental quarter quarter section, governmental lot corresponding thereto, or arbitrarily designated forty (40) acre tract, nor closer than approximately one thousand feet (1000') to the nearest well drilling to or capable of producing from the same pool on the same lease or unit. Should the governmental quarter quarter section, governmental lot, or arbitrarily designated tract contain less than thirty six (36) acres, no well shall be drilled thereon except by special order of the council; and

2. Wells whose oil producing formations may be reasonably expected to be less than one thousand two hundred feet (1200') in depth may be excepted from the forty (40) acre spacing requirement at the discretion of the council. Any well so excepted shall not be drilled closer than approximately one hundred sixty five feet (165') to lease, boundary or property line;

(C) Gas Wells-

1. Not more than one (1) well shall be drilled for gas upon any tract of land other than a governmental section or, in areas not covered by United States Public Land Surveys an arbitrarily designated six hundred forty (640) acre tract. The wells shall not

be located closer than the approximately two thousand two hundred feet (2200') to any boundary line of a governmental section or arbitrarily designated six hundred forty (640) acre tract, nor closer than approximately four thousand five hundred feet (4500') to the nearest well drilling to or capable of producing from the same pool on the same lease or unit. Should the governmental section or arbitrarily designated tract contain less than six hundred (600) acres, no well shall be drilled thereon except by special order of the council; and

2. Wells whose gas producing formations may be reasonably expected to be less than one thousand five hundred feet (1500') in depth may be excepted from the six hundred forty (640) acre spacing requirement at the discretion of the council. No well shall be drilled closer than approximately two hundred thirty four feet (234') from lease, boundary or property line;

(D) Spacing and lease line requirements may be waived, upon application to the state geologist, to protect against offset drainage in the event offset wells were drilled prior to the enactment of chapter 259, RSMo;

(E) Project Development. Spacing requirements may be waived, at the discretion of the council, for all wells required in research or

development projects leading to initiation or improvement of methods for the economic recovery of oil or gas by primary, secondary or tertiary processes (see 10 CSR 50 2.110 for procedure);

(F) Wells drilled expressly for operation of underground gas storage projects are exempt from spacing requirements. No well shall be drilled closer than approximately three hundred thirty feet (330') to a lease line without written authorization of the state geologist; and

(G) Noncommercial gas wells may be exempted from the spacing requirements of paragraph (1)(C)1. of this rule, after approval by the state geologist, where the following procedures and conditions are met:

1. In areas where no previous spacing patterns have been established, an owner having acquired drilling rights may apply for the establishment of a drilling unit containing no less than three (3) acres, consisting of one (1) or more contiguous separately owned tracts, on which a well no deeper than eight hundred feet (800') in depth may be drilled without regard to section lines or property lines; provided that any well so permitted shall not be drilled closer than one hundred sixty five feet (165') from the boundary of the drilling unit or a closer distance as is allowed under subsection (1)(D) of this rule;

2. An applicant for an exemption and establishment of a drilling unit under this subsection shall file a plat or well location map (see 10 CSR 50 2.030(2)) outlining the area which will be affected by the proposed well, and showing the location of the separate tracts along with the names and addresses of the mineral and surface owners of record, as well as names and addresses of lessees of any tracts leased for oil and gas. All wells, including dry, abandoned, producing or drilling wells on the proposed unit, and any well location for which drilling permits have been approved, shall be accurately located and designated on the plat. The applicant shall also file proof that s/he has the right to take gas from beneath all land in the proposed unit; and

3. Spacing exemptions may be granted for good cause upon application to the council; and

4. A well drilled under the terms of this provision shall be subject to all other applicable provisions of the rules of the Oil and Gas Council, except that the bonding amount shall be the greater of one dollar and fifty cents (\$1.50) per well foot or three hundred dollars (\$300).

AUTHORITY: sections 259.060, 259.070 and 259.100, RSMo 1986. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973. Amended: Filed Sept. 12, 1978, effective Feb. 1, 1979. Amended: Filed Dec. 15, 1986, effective April 11, 1987. Amended: Filed May 18, 1987, effective July 24, 1987.*

**Original authority: 259.060, RSMo 1965, amended 1972; 259.070, RSMo 1965 amended 1972, 1983, 1987; and 259.1000, RSMo 1965, amended 1987.*

10 CSR 50-2.080 Record Retention and Monthly Reportings

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.

(A) Monthly wWell status and production shall be reported 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 forty-five (45) calendar ~~thirty (30)~~ days after the end of each calendar month. The status of each open well on-in a lease unit is requested shall be reported on a monthly basis. Production ~~data~~ may be presented by for each lease unit unless requested otherwise by the state geologist or the council.

(2B) 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~~

forty-five (3045) 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 **underground gas storage reservoirs**—enhanced recovery operations must be clearly stated. Water produced from underground gas storage reservoirs that is disposed of by injection is included.

(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.

(C) 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.

(4D) ~~M~~The required monthly gas well status and production reports may be waived by the state geologist upon application **by the operator of the well when** in the event that gas production **from the well** by an owner 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 along with the required fees 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 these rules. 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.

(74) 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: 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. Amended: Filed Dec. 12, 1975, effective Dec. 22, 1975. Amended: Filed Oct. 14, 1981, effective Feb. 11, 1982.*

**Original authority: 259.060, RSMo 1965, amended 1972 and 259.070, RSMo 1965, amended 1972.*

10 CSR 50-2.090 Disposal of Fluids by Injection

*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 ~~strataformations~~ 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 ~~insure 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 I, OGC 4 I 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 spacing unit boundary.

*AUTHORITY: section 259.070, RSMo-1986. * 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.*

**Original authority: 259.070, RSMo 1965, amended 1972.*

10 CSR 50-2.100 Fluid Injection Projects

*PURPOSE: ~~Water flooding, a type of secondary~~ **Enhanced** recovery ~~projects,~~ utilizes **water fluids**, including **but not limited to** produced ~~salt water~~ **or steam**, by ~~injecting this water into an~~ **injection** ~~depleted or nearly depleted~~ oil reservoir to flush out ~~a secondary~~ **additional** oil. ~~In many cases, w~~ **Where** the oil is difficult to flush with water **or steam**, certain chemicals are often added to increase the efficiency of water as an oil-recovery agent. This practice helps maintain reservoir pressure and increases the ultimate amount of oil that can be obtained from a particular reservoir, 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 **injection** project ~~and the submittal of monthly reports to the state geologist. Also~~ **In addition, this rule protects the** ~~correlation~~ **rights of the 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 projects, not otherwise classified as research or development projects by the council,~~ **designed for the enhanced production of oil or gas** may be approved as **part of a proposed production** units within themselves. ~~U~~ **Production unit** approval may be requested by submitting to the state geologist a project report specifying all pertinent details of the proposed project **as detailed in CSR 50-3.020.**

(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: 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.*

**Original authority: 259.060, RSMo 1965, amended 1972 and 259.070, RSMo 1965, amended 1972.*

10 CSR 50-2.110 Special Projects and Research Projects

PURPOSE: ~~The oil reserves of the state or nation at any one time consist of that fraction of discovered oil 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 reserves as well as an improvement in oil conservation practices. By carefully matching recovery processes to individual reservoirs, it should be possible to greatly extend the potential that exists in the so-called heavy oil deposits of western Missouri. This rule permits the council to give special consideration to development of potential resources such as these.~~

(1) ~~It is the purpose of the council 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 so-called heavy oil reserves by primary, secondary and tertiary recovery methods. Research or special projects whose object is to devise and develop methods may be approved as units complete within themselves. Unit approval may be obtained, at the discretion of the council, by submitting to the state geologist a project report specifying all pertinent details of the proposed project. It is the stated policy of the council to permit to the owner a great measure of latitude in the spacing of producing wells, injection wells, observation wells or other wells required for the orderly development and evaluation of the projects. Blanket project approval for drilling the 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 for the purpose of producing oil or gas shall be drilled closer than approximately one hundred sixty-five feet (165') to a lease line.~~

(3) Reports of the pertinent details of overall project operation shall be submitted quarterly to the state geologist for his/her study and use and shall be considered as confidential for no less than two (2) years, upon written request by the operator.

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.*

**Original authority: 259.060, RSMo 1965, amended 1972 and 259.070, RSMo 1965, amended 1972.*

10 CSR 50-2.120 Gas Storage Operations

*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 259.070, RSMo-1986. Original rule filed Oct. 14, 1981, effective Feb. 11, 1982.*

**Original authority: Chapter 259, see Missouri Revised Statutes.*

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

10 CSR 50-3.010 Establishing Spacing Units for Primary Production

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, and to protect the public interest ~~are established by this rule~~. It is common practice in establishing spacing units to ~~ensure 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 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 effectively drained by one well within a reasonable time. Stated differently, if one well can be drilled economically on forty (40) acres and this is the area that can be drained effectively, then the spacing or acreage attributable to the well should not be less than forty (40) acres. The word effective implies that a well so spaced will ultimately recover as much oil for the forty (40) acres as would be recovered by more than one well. 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, except as explicitly exempted by this rule, shall be subject to spacing units as follows:

(A) For oil, not more than one (1) well shall be drilled upon any tract of land as specified in the following:

1. A standard spacing unit shall be a governmental quarter (1/4), quarter (1/4) section or governmental lot corresponding thereto, or, in areas not covered by United States Public Land Surveys, an arbitrarily designated forty (40)-acre tract. The well shall not be located closer than three hundred thirty feet (330') to any boundary line of a governmental quarter (1/4), quarter (1/4) section, governmental lot corresponding thereto, or arbitrarily designated forty (40)-acre tract, nor closer than six hundred sixty feet (660') to the nearest well drilling to or capable of producing from the same pool. Should the governmental quarter (1/4), quarter (1/4) section, governmental lot, or arbitrarily designated tract contain less than thirty-six (36) acres, no well shall be drilled thereon except by order of the council; or

2. In areas determined by the state geologist to have some natural reservoir pressure that oil may be drained economically and effectively through primary production only by using smaller spacing units, a standard spacing unit for a 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 a well producing or capable of producing from the same strata or pool and shall not be drilled nearer than one hundred sixty-five feet (165') from any unit boundary line. Should the designated tract contain less than 2.5 acres, no well shall be drilled thereon except by order of the council; and

(B) For gas, not more than one (1) well shall be drilled upon a standard spacing unit. A standard spacing unit shall be a governmental section or governmental lot corresponding thereto, or, in areas not covered by United States Public Land Surveys, an arbitrarily designated six hundred forty (640)-acre tract. The well shall not be located closer than one thousand three hundred twenty feet (1320') to any boundary line of a governmental section or arbitrarily designated six hundred forty (640)-acre tract, nor closer than two thousand six hundred forty feet (2640') to the nearest well drilling to or capable of producing from the same pool. Should the governmental section or arbitrarily designated tract contain less than five hundred seventy-five (575) acres, no well shall be drilled thereon except by order of the council.

(C) The council may, upon its own motion or upon the request~~motion~~ of any interested party and after notice and hearing, establish spacing units of a specified and approximate uniform size and shape for each pool within this state. The council acting on similar motions may alter the size and shape of one or more existing spacing units for the purpose of preventing waste, avoiding the drilling of unnecessary wells, increasing ultimate recovery, protecting correlative rights, and protecting the public interest.

(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 effectively 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 by the council at the time it established the spacing units. 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, and the drainage of oil, gas, and formation water into the well must be allowed to occur naturally. All injection projects or other enhanced production must be done in accordance with 10 CSR 50-3.020; and

(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 production 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 allowed 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: section 259.100, 259.120, RSMo-1986. * Original rule filed Sept. 12, 1973, effective Sept. 22, 1973.*

**Original authority: 259.100, RSMo 1965.*

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

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 production. Enhanced production 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 (165) feet 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 production 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.

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

10 CSR 50-4.010 Application for Authorization of a Pooling Unit for Primary Production

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 farm out, 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 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: section 259.110, 259.120, RSMo-1986. * Original rule filed Sept. 12, 1973, effective Sept. 22, 1973.*

**Original authority: 259.110, RSMo 1965.*

10 CSR 50-4.020 Application for Authorization of Unitization for Enhanced Production

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 production projects within production units. Similar to the pooling process for primary production, unitization of production units for enhanced production 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 production 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: section 259.110, 259.120, RSMo-1986. * Original rule filed Sept. 12, 1973, effective Sept. 22, 1973.*

**Original authority: 259.110, RSMo 1965.*

DRAFT

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

10 CSR 50-5.010 Application for Authorization for Voluntary and Statutory Unitization

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.

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.

AUTHORITY: section 259.120, RSMo 1986. Original rule filed Sept. 12, 1973, effective Sept. 22, 1973.*

**Original authority: 259.120, RSMo 1965, amended 1972.*

10 CSR 50-5.010 Special Projects and Research Projects

PURPOSE: The oil reserves of the state at any one time consist of that fraction of discovered oil 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 reserves as well as an improvement in oil 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 council to give special consideration to development of potential resources such as these.

(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 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 for the purpose of producing 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: sections 259.060 and 259.070, RSMo. Original rule filed Oct. 11, 1966, effective Oct. 21, 1966. Amended: Filed Sept. 12, 1973, effective Sept. 22, 1973.*

**Original authority: 259.060, RSMo 1965, amended 1972 and 259.070, RSMo 1965, amended 1972.*