



Rules of
Department of Natural Resources
Division 40—Missouri Mining Commission
Chapter 4—Permanent Performance Requirements
for Special Mining Activities

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**Title 10—DEPARTMENT OF
NATURAL RESOURCES
Division 40—Missouri Mining
Commission
Chapter 4—Permanent Performance
Requirements for Special Mining
Activities**

**10 CSR 40-4.010 Coal Exploration Re-
quirements**

*PURPOSE: This rule sets forth the require-
ments for conducting coal exploration activi-
ties pursuant to 444.810 and 444.845, RSMo.*

*Editor's Note: The secretary of state has
determined that the publication of this rule in
its entirety would be unduly cumbersome or
expensive. The entire text of the material ref-
erenced has been filed with the secretary of
state. This material may be found at the
Office of the Secretary of State or at the head-
quarters of the agency and is available to any
interested person at a cost established by
state law.*

(1) General Responsibility of Persons Con-
ducting Coal Exploration. Each person who
conducts coal exploration shall obtain a per-
mit, as required under 10 CSR 40-6.020, and
all operations which substantially disturb the
natural land surface regardless of how much
coal is removed shall comply with section (3)
of this rule.

(2) Required Documents. Each person who
conducts coal exploration which substantially
disturbs the natural land surface, while in the
exploration area, shall have available a copy
of the exploration permit for review by the
authorized representative of the director or
commission upon request.

(3) Performance Standards for Coal Explora-
tion.

(A) Habitats of unique or unusually high
value for fish, wildlife and other related envi-
ronmental values and critical habitats of
threatened or endangered species identified
pursuant to the Endangered Species Act of
1973 (16 U.S.C. 1531-1543) shall not be
disturbed during coal exploration.

(B) All roads or other transportation facil-
ities used for coal exploration shall comply
with the applicable provisions of 10 CSR 40-
3.140(1)-(23).

(C) If excavations, artificially flat areas or
embankments are created during exploration,
these areas shall be returned to the approxi-
mate original contour promptly after these
features are no longer needed for coal explo-
ration.

(D) Topsoil shall be separately removed,
stored and redistributed on areas disturbed by
coal exploration activities as necessary to
assure successful revegetation or as required
by the director or commission.

(E) All areas disturbed by coal exploration
activities shall be revegetated in a manner
that encourages prompt revegetation and
recovery of a diverse, effective and perman-
ent vegetative cover. Revegetation shall be
accomplished in accordance with the follow-
ing:

1. All areas disturbed by coal explo-
ration activities shall be seeded or planted to
the same seasonal variety native to the areas
disturbed. If the land use of the exploration
area is intensive agriculture, planting of the
crops normally grown will meet the require-
ments of this paragraph; and

2. The vegetative cover shall be capable
of stabilizing the soil surface from erosion.

(F) Diversions of overland flows and
ephemeral, perennial or intermittent streams
shall be made in accordance with 10 CSR 40-
3.040(3) and (4).

(G) Each exploration hole, borehole, well
or other exposed underground opening creat-
ed during exploration shall be reclaimed in
accordance with 10 CSR 40-3.020(1)-(3).

(H) All facilities and equipment shall be
promptly removed from the exploration area
when they are no longer needed for explo-
ration, except for those facilities and equip-
ment that the director or commission deter-
mines may remain to—

1. Provide additional environmental
data;

2. Reduce or control the on- and off-site
effects of the exploration activities; or

3. Facilitate future surface mining and
reclamation operations by the person con-
ducting the exploration.

(I) Coal exploration shall be conducted in
a manner which minimizes disturbance of the
prevailing hydrologic balance in accordance
with 10 CSR 40-3.040(1)-(3), (5)-(7) and
(9)-(12). The director or commission may
specify additional measures which shall be
adopted by the person engaged in coal explo-
ration.

(J) Acid- or toxic-forming materials shall
be handled and disposed of in accordance
with 10 CSR 40-3.040(1) and (9) and 10 CSR
40-3.080. The director or commission may
specify additional measures which shall be
adopted by the person engaged in coal explo-
ration.

*AUTHORITY: section 444.530, RSMo Supp.
1999.* Original rule filed Oct. 12, 1979,
effective Feb. 11, 1980. Rescinded and read-
opted: Filed Aug. 4, 1987, effective Nov. 23,*

*1987. Amended: Filed May 15, 1992, effec-
tive Jan. 15, 1993. Amended: Filed March
21, 2000, effective Oct. 30, 2000.*

**Original authority: 444.530, RSMo 1971, amended 1983,
1990, 1993, 1995.*

**10 CSR 40-4.020 Auger Mining Require-
ments**

*PURPOSE: This rule sets forth the require-
ments for auger mining pursuant to sections
444.810 and 444.855.2(9), RSMo.*

*PUBLISHER'S NOTE: The secretary of state
has determined that the publication of the
entire text of the material which is incorpo-
rated by reference as a portion of this rule
would be unduly cumbersome or expensive.
This material as incorporated by reference in
this rule shall be maintained by the agency at
its headquarters and shall be made available
to the public for inspection and copying at no
more than the actual cost of reproduction.
This note applies only to the reference mate-
rial. The entire text of the rule is printed
here.*

(1) Permanent program performance stan-
dards—auger mining requirements set forth in
30 CFR Part 785.20, as in effect on January
1, 2018, are incorporated by reference in this
rule. Copies may be obtained by contacting the
U.S. Government Publishing Office, PO Box
979050, St. Louis, MO 63197-9000 or online
at <https://www.gpo.gov>. This rule does not
incorporate any subsequent amendments or
additions.

AUTHORITY: section 444.530, RSMo 2016.
Original rule filed Oct. 12, 1979, effective
Feb. 11, 1980. Amended: Filed March 21,
2000, effective Oct. 30, 2000. Amended:
Filed March 26, 2018, effective Nov. 30,
2018.*

**Original authority: 444.530, RSMo 1971, amended 1983,
1990, 1993, 1995.*

**10 CSR 40-4.030 Operations on Prime
Farmland**

*PURPOSE: This rule outlines the procedure
for surface coal mining and reclamation on
prime farmland pursuant to 444.810 and
444.855, RSMo.*

*Editor's Note: The secretary of state has
determined that the publication of this rule in
its entirety would be unduly cumbersome or
expensive. The entire text of the material ref-
erenced has been filed with the secretary of*



state. This material may be found at the Office of the Secretary of State or at the headquarters of the agency and is available to any interested person at a cost established by state law.

(1) Special Requirements. Surface coal mining and reclamation operations conducted on prime farmland shall have a permit for those operations obtained under 10 CSR 40-6.060(4).

(2) Scope and Purpose. This rule sets forth special environmental protection, performance, reclamation and design standards for surface coal mining and reclamation operations on prime farmland.

(3) Responsibilities.

(A) The United States Natural Resources Conservation Service within each state is responsible for establishment of specifications for prime farmland soil removal, storage, replacement and reconstruction.

(B) The Land Reclamation Commission shall use the soil reconstruction specifications of subsection (3)(A) of this rule to carry out its responsibilities under 10 CSR 40-6.060(4) and 10 CSR 40-7.

(4) Applicability. The requirements of this rule shall not apply to—

(A) Coal preparation plants, support facilities, and roads of underground mines that are actively used over extended periods of time and where such uses affect a minimal amount of land. Such uses shall meet the requirements of 10 CSR 40-3.

(B) Disposal areas containing coal mine waste resulting from underground mines that is not technologically and economically feasible to store in underground mines or on non-prime farmland. The operator shall minimize the area of prime farmland used for such purposes.

(C) Prime farmland that has been excluded in accordance with 10 CSR 40-6.060(4)(A).

(5) Soil Removal and Stockpiling.

(A) Prime farmland soils shall be removed from the areas to be disturbed before drilling, blasting or mining.

(B) The minimum depth of soil and soil materials to be removed and stored for use in the reconstruction of prime farmland shall be sufficient to meet the requirements of subsection (6)(B).

(C) Soil removal and stockpiling operations on prime farmland shall be conducted to—

1. Separately remove the topsoil or remove other suitable soil materials where these other soil materials will create a final

soil having a greater productive capacity than that which existed prior to mining. If not utilized immediately, this material shall be placed in stockpiles separate from the spoil and all other excavated materials; and

2. Separately remove the B or C horizon or other suitable soil material to provide the thickness of suitable soil required by subsection (6)(B). If not utilized immediately, each horizon or other material shall be stockpiled separately from the spoil and all other excavated materials. Where combinations of the soil materials created by mixing have been shown to be equally or more favorable for plant growth than the B horizon, separate handling is not necessary.

(D) Stockpiles shall be placed within the permit area where they will not be disturbed or be subject to excessive erosion. If left in place for more than thirty (30) days, stockpiles shall meet the requirements of 10 CSR 40-3.030(3) or 10 CSR 40-3.190(3).

(6) Soil Replacement.

(A) Soil reconstruction specifications established by the United States Natural Resources Conservation Service shall be based upon the standards of the National Cooperative Soil Survey and shall include, as a minimum, physical and chemical characteristics of reconstructed soils and soil descriptions containing soil horizon depths, soil densities, soil pH and other specifications so that reconstructed soils will have the capability of achieving levels of yield equal to, or higher than, those of nonmined prime farmland in the surrounding area.

(B) The minimum depth of soil and substitute soil material to be reconstructed shall be forty-eight inches (48") or a lesser depth equal to the depth to a subsurface horizon in the natural soil that inhibits or prevents root penetration or a greater depth if determined necessary to restore the original soil productive capacity. Soil horizons shall be considered as inhibiting or preventing root penetration if their physical or chemical properties or water-supplying capacities cause them to restrict or prevent penetration by roots of plants common to the vicinity of the permit area and if these properties or capacities have little or no beneficial effect on soil productive capacity.

(C) The operator shall replace and regrade the soil horizons or other root zone material with proper compaction and uniform depth.

(D) The operator shall replace the B horizon, C horizon or other suitable material specified in section (5) to the thickness needed to meet the requirements of subsection (6)(B) of this rule.

(E) The operator shall replace the topsoil

or other suitable soil materials specified in section (5) as the final surface soil layer. This surface soil layer shall equal or exceed the thickness of the original surface soil layer, as determined by the soil survey.

(F) The operator shall assure that nutrients and soil amendments are applied as approved in the permit and plan. The application rates shall be both sufficient to quickly establish vegetative growth prior to proving vegetative productivity and also during the phase III bond release period to insure that desired levels of productivity are attained.

(7) Revegetation and Restoration of Soil Productivity.

(A) Following prime farmland soil replacement, the soil surface shall be established with a vegetative cover or other means that effectively controls soil loss by wind and water erosion.

(B) Prime farmland soil productivity shall be restored in accordance with the following provisions:

1. Measurements of soil productivity shall be initiated in accordance with 10 CSR 40-3.120;

2. Soil productivity shall be measured on a representative sample or on all of the mined and reclaimed prime farmland area using the crops determined under paragraph (7)(B)6. of this rule. A statistically valid sampling technique at a ninety percent (90%) or greater statistical confidence level shall be used as approved by the Land Reclamation Commission in consultation with the United States Natural Resources Conservation Service;

3. The measurement period for determining average annual crop production (yield) shall be a minimum of three (3)-crop years prior to release of the operator's Phase III liability. These three (3) years need not be consecutive but must be within the five (5)-year Phase III liability period;

4. The level of management applied during the measurement period shall be the same as the level of management used on nonmined prime farmland in the surrounding area;

5. Restoration of soil productivity shall be considered achieved when the average yield during the measurement period equals or exceeds the average yield of the crop established for the same period of nonmined soils of the same or similar texture or slope phase of the soil series in the reference area under equivalent management practices;

6. The reference crop on which restoration of soil productivity is proven shall be selected from the crops most commonly produced on the surrounding prime farmland. Where row crops are the dominant crops



grown on prime farmland in the area, the row crop requiring the greatest rooting depth shall be chosen as one (1) of the reference crops for one (1) of the three (3) years. If hay is the most commonly grown crop, then the second most commonly grown crop will be used. In the other two (2) years, other commonly grown crops on prime farmland within the county will be used;

7. Under the procedure in subsection (7)(B) of this rule, the crop yield may be adjusted, with the concurrence of the United States Natural Resources Conservation Service and approval of the director, for—

A. Disease, pest- and weather-induced seasonal variations; or

B. Difference in specific management practices where the overall management practices of the crops being compared are equivalent; and

8. Plans for proving Phase III bond release on prime farmlands, including crops to be grown and location of test plots, must be approved in advance by the director.

AUTHORITY: section 444.810, RSMo Supp. 1999. Original rule filed Oct. 12, 1979, effective Feb. 11, 1980. Amended: Filed Aug. 1, 1980, effective Dec. 11, 1980. Amended: Filed Dec. 10, 1980, effective April 11, 1981. Amended: Filed Dec. 9, 1982, effective April 11, 1983. Rescinded and readopted: Filed Aug. 4, 1987, effective Nov. 23, 1987. Amended: Filed June 2, 1988, effective Aug. 25, 1988. Amended: Filed July 3, 1990, effective Nov. 30, 1990. Amended: Filed March 21, 2000, effective Oct. 30, 2000.*

**Original authority: 444.810, RSMo 1979, amended 1983, 1993, 1995.*

10 CSR 40-4.040 Operations on Steep Slopes

PURPOSE: This rule sets forth the requirements for operation on steep slopes pursuant to sections 444.810 and 444.855.4, RSMo.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Permanent program performance standards—steep slope mining requirements set forth in 30 CFR Part 785.15 as in effect on January 1, 2018, are incorporated by reference in this rule. Copies may be obtained by contacting the U.S. Government Publishing Office, PO Box 979050, St. Louis, MO 63197-9000 or online at <https://www.gpo.gov>. This rule does not incorporate any subsequent amendments or additions.

AUTHORITY: section 444.530, RSMo 2016. Original rule filed Oct. 12, 1979, effective Feb. 11, 1980. Amended: Filed Aug. 1, 1980, effective Dec. 11, 1980. Amended: Filed March 26, 2018, effective Nov. 30, 2018.*

**Original authority: 444.530, RSMo 1971, amended 1983, 1990, 1993, 1995.*

10 CSR 40-4.050 Requirements for Coal Processing Plants and Support Facilities Not Located at or Near the Mine Site or Not Within the Permit Area for a Mine

PURPOSE: This rule sets forth requirements for coal processing plants and support facilities not located at or near the mine site or not within the permit area for a mine, pursuant to section 444.810, RSMo.

(1) Applicability. Each person who conducts surface coal mining and reclamation operations, which includes the operation of a coal processing plant or support facility which is not located within the permit area for a specific mine, shall obtain a permit to conduct those operations and comply with this rule.

(2) Signs and markers for the coal processing plant, coal processing waste disposal area and water treatment facilities shall comply with 10 CSR 40-3.010.

(3) Roads, transport and associated structures shall be constructed, maintained and reclaimed in accordance with 10 CSR 40-3.140(1)–(22).

(4) Any stream or channel realignment shall comply with 10 CSR 40-3.040(4).

(5) If required in the permit and plan, any disturbed area related to the coal processing plant or associated facilities shall have sediment control structures, in compliance with 10 CSR 40-3.040(5) and (6), and all discharges from these areas shall meet the requirements of 10 CSR 40-3.040(1) and (2) and any other applicable state or federal law.

(6) Permanent impoundments associated with coal processing plants shall meet the require-

ments of 10 CSR 40-3.040(9) and (16). Dams constructed of or impounding coal processing waste shall comply with 10 CSR 40-3.080(9)–(11).

(7) Use of water wells shall comply with 10 CSR 40-3.040(13) and water rights shall be protected in accordance with 10 CSR 40-3.040(14).

(8) Disposal of coal processing waste, solid waste and any excavated materials shall comply with 10 CSR 40-3.080(1), (7) and (8) and 10 CSR 40-3.060(1)–(4), respectively.

(9) Discharge structures for diversions and sediment control structures shall comply with 10 CSR 40-3.040(7).

(10) Air pollution control measures associated with fugitive dust emissions shall comply with 10 CSR 40-3.090.

(11) Fish, wildlife and related environmental values shall be protected in accordance with 10 CSR 40-3.100(1)–(7).

(12) Slide areas and other surface areas shall comply with 10 CSR 40-3.100(8).

(13) Adverse effects upon or resulting from nearby underground coal mining activities shall be minimized by appropriate measures including, but not limited to, compliance with 10 CSR 40-3.040(15) and 10 CSR 40-3.070.

(14) Reclamation shall include proper topsoil handling procedures, revegetation and abandonment in accordance with 10 CSR 40-3.060(16), 10 CSR 40-3.110(1)–(6), 10 CSR 40-3.120(1)–(7), 10 CSR 40-3.130 and 10 CSR 40-3.150(2)–(4).

(15) Conveyors, buildings, storage bins or stockpiles, water treatment facilities, water storage facilities and any structures or system related to the coal processing plant shall comply with 10 CSR 40-3.

(16) Any coal processing plant or associated structures located on prime farmland shall meet the requirements of 10 CSR 40-4.030.

AUTHORITY: section 444.530, RSMo Supp. 1999. Original rule filed Oct. 12, 1979, effective Feb. 11, 1980. Amended: Filed March 21, 2000, effective Oct. 30, 2000.*

**Original authority: 444.530, RSMo 1971, amended 1983, 1990, 1993, 1995.*



10 CSR 40-4.060 Concurrent Surface and Underground Mining

PURPOSE: This rule sets forth the requirements for concurrent surface and underground mining pursuant to sections 444.810 and 444.855.2(12) and .2(16), RSMo.

PUBLISHER’S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Permanent program performance standards—concurrent surface and underground mining requirements set forth in 30 CFR Part 785.18 as in effect on January 1, 2018, are incorporated by reference in this rule. Copies may be obtained by contacting the U.S. Government Publishing Office, PO Box 979050, St. Louis, MO 63197-9000 or online at <https://www.gpo.gov>. This rule does not incorporate any subsequent amendments or additions.

AUTHORITY: section 444.810, RSMo 2016. Original rule filed May 12, 1980, effective Sept. 11, 1980. Amended: Filed March 26, 2018, effective Nov. 30, 2018.*

**Original authority: 444.810, RSMo 1979, amended 1983, 1993, 1995.*

10 CSR 40-4.070 In Situ Processing

PURPOSE: This rule sets forth the requirements for in situ processing pursuant to section 444.810, RSMo.

PUBLISHER’S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Permanent program performance stan-

dards—*in situ* processing requirements set forth in 30 CFR Part 785.22 as in effect on January 1, 2018, are incorporated by reference in this rule. Copies may be obtained by contacting the U.S. Government Publishing Office, PO Box 979050, St. Louis, MO 63197-9000 or online at <https://www.gpo.gov>. This rule does not incorporate any subsequent amendments or additions.

AUTHORITY: section 444.810, RSMo 2016. Original rule filed May 12, 1980, effective Sept. 11, 1980. Amended: Filed March 26, 2018, effective Nov. 30, 2018.*

**Original authority: 444.810, RSMo 1979, amended 1983, 1993, 1995.*

10 CSR 40-4.080 Previously Mined Areas

PURPOSE: This rule brings Missouri’s regulations into line with the federal language.

(1) Remining operations on previously mined areas that contain a preexisting highwall shall comply with the requirements of 10 CSR 40-3.110 or 10 CSR 40-4.040, except as provided in this rule.

(2) The requirements of 10 CSR 40-3.110(1)(B) and (2)(A) requiring the elimination of highwalls shall not apply to remining operations where the volume of all reasonably available spoil is demonstrated in writing to the regulatory authority to be insufficient to completely back fill the reaffected or enlarged highwall. The highwall shall be eliminated to the maximum extent technically practical in accordance with the following criteria:

(A) All spoil generated by the remining operation and any other reasonably available spoil shall be used to backfill the area. Reasonably available spoil in the immediate vicinity of the remining operation shall be included within the permit area;

(B) The backfill shall be graded to a slope which is compatible with the approved post-mining land use and which provides adequate drainage and longterm stability;

(C) Any highwall remnant shall be stable and not pose a hazard to the public health and safety or to the environment. The operator shall demonstrate, to the satisfaction of the regulatory authority, that the highwall remnant is stable; and

(D) Spoil placed on the outslope during previous mining operations shall not be disturbed if the disturbances will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.

AUTHORITY: section 444.530, RSMo 1986. Original rule filed May 2, 1989, effective Aug. 1, 1989.*

**Original authority 1971, amended 1983, 1990.*