

Notice of Rulemaking Hearing

A hearing will be conducted in the manner prescribed by the Uniform Administrative Procedures Act, Tennessee Code Annotated, Section 4-5-204. For questions and copies of the notice, contact the person listed below.

Agency/Board/Commission: Environment and Conservation
Division: Water Pollution Control
Contact Person: Bruce Ragon
Knoxville Environmental Field Office
3711 Middlebrook Pike
Address: Knoxville, Tennessee 37921-6538
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Fax: (865) 594-6105
Email: Bruce.Ragon@tn.gov

Hearing Location: Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, Tennessee

Hearing Date: February 9, 2012
Hearing Time: 7:00 p.m. EST

Summary of Proposed Changes:

An initial set of draft rules was filed with the Tennessee Secretary of State on November 30, 2011 as official notice for this rulemaking hearing. These draft rules propose changes to regulations that define and implement the "Tennessee Surface Mining Law of 1972", T.C.A. 59-08-201. The mining regulations are contained in Rules of the Department of Environment and Conservation, *Chapter 0400-03-01* through *Chapter 0400-03-12*. The proposed new rules involve administrative and minor technical changes only. These changes include updating and renumbering of rules, updating citations to new or amended rules referenced in the regulations, correcting typographical errors, and removing or updating Agency references.

Additional Hearing Information:

Copies of these initial draft rules are available for review at the Tennessee Department of Environment and Conservation's (TDEC's) Environmental Field Offices listed below:

Chattanooga Environmental Field Office
Suite 550 - State Office Building
540 McCallie Avenue
Chattanooga, TN 37402-2067
(423) 634-5745 or 1-888-891-8332

Columbia Environmental Field Office
1421 Hampshire Pike
Columbia, TN 38401-5611
(931) 380-3371 or 1-888-891-8332

Cookeville Environmental Field Office
1221 South Willow Avenue
Cookeville, TN 38506-4107
(931) 432-4015 or 1-888-891-8332

Jackson Environmental Field Office
1625 Hollywood Drive
Jackson, TN 38305-4316
(731) 512-1300 or 1-888-891-8332

Johnson City Environmental Field Office
2305 Silverdale Road
Johnson City, TN 37601-4322
(423) 854-5400 or 1-888-891-8332

Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921-6538
(865) 594-6035 or 1-888-891-8332

Nashville Environmental Field Office
711 R. S. Gass Boulevard
Nashville, TN 37216-2637
(615) 687-7000 or 1-888-891-8332

Memphis Environmental Field Office
8383 Wolf Lake Drive
Bartlett, TN 38133-4119
(901) 371-3000 or 1-888-891-8332

The "Draft" rules may also be accessed for review using <http://tn.gov/environment/wpc/ppo>.

Draft copies are also available for review at the Nashville Central Office (see address below).

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
6th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1534
(615) 532-0625

The Division's office hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (excluding holidays).

Oral or written comments are invited at the hearing. In addition, written comments may be submitted prior to or after the public hearing to the Agency's contact person at the mailing address, email, or fax number listed on page 1. However, such written comments must be received by the Division by 4:30 p.m. EST, February 20, 2012, in order to assure consideration. For further information, contact Bruce Ragon.

Any Individuals with disabilities who wish to participate in these proceedings (to review these filings) and may require aid to facilitate such participation should contact the following no later than January 30, 2012, to allow time to provide such aid or services: ADA Coordinator, Human Resources Division, 401 Church Street, 12th Floor, L&C Tower Nashville, Tennessee 37243, 1-866-253-5827. Such contact may be made in person, writing, telephone, email to Beverly.Evans@tn.gov, or other means. Hearing impaired callers may use the TN Relay Service at 1-800-848-0298.

Revision Type:

Amendment
 New
 Repeal

Rules:

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0400-03-01-.02	Authority
0400-03-01-.03	Commissioner
0400-03-01-.04	Scope
0400-03-01-.05	Modifications and Exceptions
0400-03-01-.06	Review of Regulations

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0400-03-02-.02	Time of Filing and Amount of Performance Bond
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0400-03-02-.08	Permit Required Before Sale of Coal

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Repeals

Chapters 0400-03-01 General Provisions, 0400-03-02 Requirements for Surface Mining Permits, 0400-03-03 Conclusion and Release Procedures, 0400-03-04 Prospecting Permit, 0400-03-05 Revegetation Plan, 0400-03-06 Blasting, 0400-03-08 Phosphate, 0400-03-09 Sand and Gravel Ballclay, 0400-03-11 Brick, Clay and Shale, and 0400-03-12 Barite are repealed.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

New Rules

0400-42-01
General Provisions

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~~0400-3-1-.04~~ 0400-42-01-.01 Purpose.

The purpose of these regulations is to provide guidelines for the interpretation and definition of, and to detail the intent of ~~Sections 58-1540-58-1564~~, T.C.A. §§ 59-8-201 et seq. entitled "The Tennessee Surface Mining Law," hereinafter referred to as "the Law," in order that compliance will be uniform, orderly, and prompt.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-1-.02~~ 0400-42-01-.02 Authority.

These regulations are issued under the authority of ~~Section 58-1543~~, T.C.A. §§ 59-8-201 et seq. in which responsibility for the administration and enforcement of the Law, and the promulgation of necessary regulations is delegated to the Commissioner of the Department of Environment and Conservation.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-1-.03~~ 0400-42-01-.03 Commissioner.

The word "Commissioner" means the Commissioner of the Department of Environment and Conservation or his designees, i.e., the Director of the Division of Surface Mining Water Pollution Control or his subordinates.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-1-.04~~ 0400-42-01-.04 Scope.

These regulations establish general and specific rules for the reclamation of areas disturbed by surface mining operations (except limestone, marble, and dimension stone) including mining and reclamation procedures, revegetation of disturbed lands, and other matters pertaining to surface mining. Borrow pits, where the soil removed is to be used as fill material in construction, are not to be construed as surface mining as defined in these regulations.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-1-.05~~ 0400-03-01-.05 Modifications and Exceptions.

In order to provide necessary flexibility in the administration of the Law and these regulations, the Commissioner may approve modifications or exceptions to these regulations consistent with the requirements of ~~Sections 58-~~

~~1540-58-1564~~, T.C.A. §§ 59-8-201 through 59-8-228 where special conditions warrant. All requests for modifications or exceptions shall be submitted to the Commissioner in writing.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-1-.06~~ 0400-42-01-.06 Review of Regulations.

As techniques in mining and reclamation develop, or new information becomes available, the Commissioner has the authority and discretion to incorporate improvements into the mining and reclamation procedures by altering these regulations or issuing new ones. These adjustments will become effective through addenda to these regulations which shall then have the force and effect of law.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

0400-42-02
Requirement for Surface Mining Permits

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~~0400-3-2-.04~~ 0400-42-02-.01 Applications.

Applications for permits shall be completed on forms provided by the Commissioner, giving in full detail the information required by the Law or by these regulations. The completed application should be accompanied by the two hundred fifty dollars (\$250) annual permit fee, plus twenty-five dollars (\$25) for each acre to be disturbed up to a maximum acreage fee of two thousand five hundred dollars (\$2,500). Permits may be amended as provided in ~~Section 58-1544~~, T.C.A. § 59-8-205 by application for such amendments upon forms provided by the Commissioner, and payment of a supplemental basic amendment fee of fifty dollars (\$50), and to the extent the amendment entails an increase or decrease in the acreage covered by the permit, the total acreage fee paid for the year shall be correspondingly increased or decreased by the amount per acre or fraction thereof specified hereinabove. The completed application should be considered filed when received and stamp-dated in any office of the Division.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-2-.02~~ 0400-42-02-.02 Time of Filing and Amount of Performance Bond.

- (1) The bond shall not be filed with the application. The operator shall state on his application the name of his corporate surety. The amount of the bond, surety or cash, shall not be less than six hundred dollars (\$600) for the mining of any mineral other than coal, and not less than one thousand dollars (\$1,000) for the mining of coal, for each estimated acre, or fraction thereof, to be affected by the respective operation.
- (2) However, in those counties requiring a performance bond of two thousand dollars (\$2,000) or more per acre, the operator may at his own option present evidence of such bond to the Commissioner in lieu of filing a bond with the Commissioner. The Commissioner may in his discretion accept such evidence of the existence of such a performance bond in lieu of a bond filed with the Commissioner. However, if the bond is released by county authorities prior to such time as the Commissioner would normally release all or part of it, the Commissioner may require a new performance bond to be filed as required by this section rule.
- (3) No performance bond shall be charged for land upon which overburden is deposited, if, in the opinion of the Commissioner, the deposition of such overburden amounts to reclamation of a previously mined area.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-2-.03~~ 0400-42-02-.03 Mining and Reclamation Plan.

A mining and reclamation plan shall be submitted, along with the application for the permit, on forms provided by the Commissioner in accordance with ~~Section 58-1547~~, T.C.A. § 59-8-208.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-2-.04~~ 0400-42-02-.04 Maps.

(1) Three (3) copies of a general location map taken from a USGS 7½ minute quadrangle sheet, with the mining locations and haul roads clearly marked thereon, shall be submitted with the permit application. Also, three (3) copies of a detailed, enlarged topographic map of a scale of five hundred (500) feet to the inch, with the site boundaries indicated thereon and prepared by a qualified professional engineer, geologist, surveyor, or other person approved by the Commissioner, shall be submitted with the original permit application, and with each amendment for the mining of coal. Only a portion of the map large enough to show the required information is required, but it shall be no smaller than letter size (8½" X 11").

(a) The title block of both sizes of maps shall show the following information:

1. Name of the operator.
2. Owner of the mineral rights. If more than one tract, attach list and identify by number corresponding to mine operation shown on map.
3. The owner of the surface rights or the name of the representative of the owners. If more than one tract, attach list and identify by number corresponding to mine number shown on map.
4. The county in which the operation is located.
5. The total number of acres to be disturbed under the permit, including access roads.
6. The date the map was prepared, together with a certification as to its accuracy by the person responsible for its preparation.
7. Name and number of enlarged USGS 7½ minute quadrangle sheet used (if applicable).

(b) The enlarged map shall show the following information:

1. The boundaries of the area to be permitted shall be marked in red.
2. The location of the stream or streams or any standing body of water into which the area drains, the location of drainways, and the planned siltation traps and other impoundments shall be marked in blue.
3. The location of haul or other access roads to be prepared or used by the operator in the mining operation shall be shown as a dashed red line.
4. The location of any buildings, cemeteries, public highways, railroad tracks, gas and oil wells, publicly owned land, officially designated scenic areas, utility lines, underground mines, transmission lines or pipe lines within the affected area or within five hundred (500) feet thereof.
5. The approximate location of the cuts or excavations to be made in the surface, the estimated location of fill areas and the location of areas designated where no mining can take place, i.e., areas too steep, too close to a stream, or areas designated as hazard or protected areas.
6. The names of landowners within five hundred (500) feet of the permitted area.
7. Slope measurements every five hundred (500) feet as calculated from the top of map. If

slope is less than 15 degrees, this requirement may be omitted.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-2-.05~~ 0400-42-02-.05 Permit Marker.

- (1) A permit marker or sign shall be placed so as to permanently mark the beginning point of the area under permit. Such markers shall consist of a sign measuring at least one foot by two feet with the company name, mine number, and permit number painted thereon, and shall be affixed to a post located so as to be plainly visible at the access point to the area under permit, and shall be maintained until final release of bond.
- (2) For contour coal mines, a steel post, at least two inches in diameter, extending five feet above the ground, painted red, shall be placed so as to permanently mark the beginning and ending points of the mined area under each permit or amendment.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-2-.06~~ 0400-42-02-.06 Newspaper Notice.

- (1) ~~Section 58-1544~~, T.C.A. § 59-8-205 requires publication of the operator's intent to mine within thirty (30) days prior to the filing of an application in a newspaper of general circulation in the county where the activity is planned. A copy of the notice, clipped from the newspaper, with the dateline showing, shall accompany the application for a permit.
- (2) The notice shall measure at least four (4) column-inches, and the heading shall be in at least 14-point type. Even when the mining is an amendment or a continuation activity under a permit to be renewed, essentially on the same property, and at the same location where the presence of the mine is of general knowledge to the residents of the area, such publication is required by ~~Section 58-1545(j)~~, T.C.A. 59-8-205(a)(8).
- (3) The notice shall be headed "NOTICE OF INTENT TO SURFACE MINE," and shall include the company name, address, and phone number, the county where the proposed mining will take place, the watershed, and name of the stream draining the area, the U. S. Geological Survey Quadrangle name, the proposed acreage to be affected, and, for a proposed coal mine, the latitude and longitude accurate to the nearest 0.1 minute, the elevation, and the name of the ~~seams~~ seams to be mined, using the standard Tennessee Division of Geology nomenclature (local seam names may be added in parentheses).
- (4) For the preparation of the notice, a standard form shall be supplied by the Division and shall be used by the operator.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-2-.07~~ 0400-42-02-.07 Water Quality Control Discharge Permit

- (1) ~~The Tennessee Water Quality Control Act of 1971, Section 70-330, Tennessee Code Annotated, T.C.A. §§ 69-3-101 et seq.~~ requires a permit for any activity which results in a liquid discharge to the waters of the State OR which alters, or may alter, the physical, chemical, biological, radiological, or bacteriological quality or characteristics of any waters of the State.
- (2) ~~Section 58-1544 (a) (7)~~, T.C.A. 59-8-205(a)(1)(G) requires that an operator obtain a discharge permit from the Division of Water Quality Pollution Control, Tennessee Department of Public Health Environment and Conservation, before applying for a surface mining permit. The application for a surface mining permit must include a copy of the operator's discharge permit or a letter from the Division of Water Quality Pollution Control stating that no discharge will take place, and, therefore, no permit is required.

~~0400-3-2-.08~~ 0400-42-02-.08 Permit Required Before Sale of Coal

- (1) No dealer, broker, or other purchaser may purchase coal from an operator without first being shown that operator's valid surface mining permit.
- (2) Each such dealer, broker, or other purchaser must maintain a record of each purchase of coal, including

date of purchase, number of tons purchased, name of operator, and the operator's permit number. Said records shall be retained for a period of two (2) years from date of purchase, and shall be open to inspection by the Commissioner or his designated representative.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-03
Conclusion and Release Procedures

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~~0400-3-3-.01~~ 0400-42-03-.01 Operator's Obligation.

The operator's obligation under the provisions of ~~Sections 58-1540-58-1564~~, T.C.A. §§ 59-8-201 through 59-8-228 shall not be deemed discharged until all applicable requirements of the Law and these regulations have been met and the final reclamation has been approved by the Commissioner. For clarity, details for accomplishment of approval of' reclamation and release of bond are contained in ~~that section of these regulations~~ the Chapters pertaining to each mineral.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-3-.02~~ 0400-42-03-.02 Annual Report

- (1) All operators shall file with the Commissioner, not later than sixty (60) days after the anniversary date of each permit, an annual report under each permit stating the number of acres of land affected by the operations, the extent of reclamation accomplished, and such other information as the Commissioner may reasonably require.
- (2) The report shall include three maps at a scale of 1 500', or reasonable alternate, showing the progress of the reclamation work accomplished as of the anniversary date. Planted areas shall be shown in green, areas re-graded but not planted shall be shown in brown, and areas on which no reclamation work has been done shall be shown in red.
- (3) If the report and the Commissioner's inspection of the area affected show that the operator has complied fully with the provisions of the Law and these regulations, the Commissioner will approve the report and shall release the operator's bond on the acreage which has been reclaimed according to the Law and these regulations, or the remainder thereof if any portion has already been released under other provisions of this Law. If the Commissioner does not approve the report, the bond shall not be released until the operator corrects the deficiencies found by the Commissioner. However, if the Commissioner finds that the operator has fully complied with the provisions of the Law and these regulations with respect to a portion of the affected area and has not so complied with respect to other portions for reasons beyond his control, the Commissioner shall release so much of the bond as is applicable to the area with respect to which there has been such compliance.
- (4) An annual report must be filed under each permit number until all reclamation has been accomplished and the bond released. A supplemental report may be submitted as appropriate to reflect status change for the accomplishment of bond release.

~~0400-3-3-.03~~ 0400-42-03-.03 Waiver.

- (1) As it pertains to coal: If the land is restored to a state which will, in the opinion of the Commissioner, permit cultivating with normal farm machinery under contract with the owner of such land, the operator will be relieved of all further rehabilitation, except initial re-vegetation with grasses or legumes to prevent soil erosion, by a written release from the Commissioner.
- (2) As it pertains to minerals other than coal: If the land is restored to permit cultivating with normal farm machinery, the operator is relieved of all further rehabilitation except seeding with grass or legumes

during the next growing season for quick erosion control.

- (3) The requirement as to re-vegetation may be waived by the Commissioner with respect to any affected area if it is his determination that further efforts toward re-vegetation are impractical.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-3-.04~~ 0400-42-03-.04 Revocation and Forfeiture.

If the requirements of these regulations or the orders of the Commissioner have not been complied with within the time limits set by the Commissioner, the Commissioner shall cause a notice of noncompliance (or, where found necessary, the Commissioner shall order suspension of a permit) to be served upon the operator by certified mail addressed to the permanent address shown on the application for the permit, or by hand-delivery by an authorized representative of the Division of Surface Mining. The notice shall specify in what respects the operator has failed to comply with the provision of the Law, these regulations, or the orders of the Commissioner. If the operator has not reached an agreement with the Commissioner or has not complied with the requirements set forth in the notice of noncompliance within the time limit stated in the notice, the Commissioner may suspend or revoke the permit. If a permit is suspended, the operator shall cease all mining immediately, but shall continue to pursue the reclamation plan and be responsible for maintaining the site to prevent damage. If the permit is revoked by the Commissioner, the performance bond shall then be forfeited to the Commissioner. When a bond is forfeited pursuant to the provisions of this Law, the Commissioner shall give notice to the Attorney General who shall collect the forfeiture.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-04
Prospecting Permit

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~~0400-3-4-.04~~ 0400-42-04-.01 Application and Map Requirements.

- (1) When an operator proposes to remove overburden from an area not covered by a mining permit for the purpose of prospecting for ~~or any~~ mineral covered by the Law, application must be made to the Division of ~~Surface Mining~~ Water Pollution Control and three topographic maps or equivalent maps or aerial photographs showing the area to be disturbed must be submitted.
- (2) The prospecting map must show the tract boundaries, the contour on which the activity will take place, and the intervals at which there will be surface disturbance.
- (3) After receipt of the application, a representative of the Division will contact the operator and arrange a meeting at a mutually convenient time and place in order to travel to the proposed prospecting site for an on-the-ground inspection.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-4-.02~~ 0400-42-04-.02 Reclamation Performance Bond.

- (1) The operator will sign an agreement to regrade and revegetate the disturbed area in accordance with the reclamation provisions of ~~Sections 58-1540-58-1564,~~ T.C.A. §§ 59-8-201 through 59-8-228 and post a five hundred dollars (\$500) cash or surety bond prior to the initiation of any disturbance.
- (2) The disturbed area will include not only those tract portions being prospected for the mineral, but also that disturbance created by equipment in providing access to the area being disturbed to ascertain the quantity and quality of a mineral.
- (3) There shall be no activity prior to the receipt by the operator of the prospecting permit, which shall be for

a period of not more than one (1) year from the date of issuance. The operator shall apply for release of the bond when the prospecting is completed and the disturbed area has been reclaimed. If an inspection shows that reclamation is satisfactory, the Commissioner shall release the bond.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-4-.03~~ 0400-42-04-.03 Mining to Follow Immediately.

If a mining permit is approved for the area disturbed by prospecting within six (6) months from the date of the prospecting permit, reclamation of the area disturbed by prospecting will not be required before mining.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-4-.04~~ 0400-42-04-.04 Penalties for Violation.

- (1) There are no fees for prospecting, but any person or operator who violates this provision will be subject to civil penalties of not less than one hundred dollars (\$100) nor more than five thousand dollars (\$5,000) for each day during which a violation occurs as specified in ~~Sections 58-1540-58-1564,~~ T.C.A. §§ 59-8-201 through 59-8-228.
- (2) Also, if a disturbed area is not reclaimed, the prospecting permit may be revoked. If this is done, the operator whose prospecting permit was revoked shall not be eligible for any future prospecting or mining permits until the ~~disturbe4~~ disturbed area has been reclaimed at no cost to the State of Tennessee.
- (3) The Commissioner shall deny such permits for areas which cannot be granted a general permit under the provisions of ~~Sections 58-1540-58-1564,~~ T.C.A. §§ 59-8-201 through 59-8-228.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-05
Revegetation Plan

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0400-42-05-.01 Revegetation Plan Required

0400-42-05-.02 Information Required

~~0400-3-5-.04~~ 0400-42-05-.01 Revegetation Plan Required.

A revegetation plan reasonably adapted to achieve permanent revegetation which will minimize soil erosion, conceal the effects of surface mining, and place the land in a condition whereby it can serve some purpose at least as useful as that in existence before mining, shall be prepared by each mining operator and submitted to the Commissioner for his approval with the permit application.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-5-.02~~ 0400-42-05-.02 Information Required.

- (1) The plans shall be submitted on forms supplied by the Commissioner and shall outline the schedule for the proposed revegetation, including the species of grasses and/or trees to be planted, the fertilizer analysis and the amount to be applied per acre, the rate of seeding (pounds per acre), the spacing of tree or shrub seedlings, the month of the year in which planting or seeding is to be done, the manner in which the topsoil is to be conserved or, if conditions do not permit the conservation of all parts of the topsoil, the reasons why, a full explanation of soil conditions, and the alternate procedures proposed for providing soil suitable for revegetation.
- (2) Upon request, representatives of the Commissioner will give aid and recommendations in the preparation of revegetation plans and maps.
- (3) In selecting the type of vegetation, consideration shall be given to the landowner's desires, the expected future use of the land, and the physical and chemical properties of the soil.

Chapter 0400-42-06
Blasting

Table of Contents

0400-42-06-.01 Relevant Publication and Public Laws
0400-42-06-.02 Blasting Regulations
0400-42-06-.03 Records

~~0400-3-6-.01~~ 0400-42-06-.01 Relevant Publications and Public Laws.

The use of blasting agents relevant in the production of certain minerals regulated by the Tennessee Surface Mining Law, ~~Sections 58-1540 through 59-1564~~ T.C.A. ~~§§ 59-8-201 through 59-8-228~~ shall be in accordance with the specifications set forth ~~in~~ by the U.S. Department of the ~~Interior Labor, Mining Enforcement and Safety Administration Mine Safety and Health Administration Health and Safety Standards and Regulations, paragraph 57-6 Explosives in 30 CFR, Subpart E – Explosives, §§ 57.6000 et seq.~~ Further, Surface Mine Operators shall comply with ~~the Tennessee Blasting Standards Act of 1975, Chapter 93, Public Acts of 1975 T.C.A. §§ 68-105-101 et seq.~~, administered by the Commissioner of Commerce and Insurance. Blasting definitions shall be in accordance with the above references.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-6-.02~~ 0400-42-06-.02 Blasting Regulations.

- (1) Blasting Time. Blasting shall be limited to the hours between sunrise and sunset. Blasting on Sunday is prohibited.
- (2) Blasting Warning. When blasting is to occur within 1000 feet of an occupied dwelling or outbuildings, the operator or his authorized representative shall notify all persons involved that a blast is to be detonated, stating the approximate time. A ~~of~~ one hour notification must be given prior to and immediately after blasting.
- (3) Approaches to Blast Area. All approaches to the blast area shall be guarded against unauthorized entry prior to and after blasting.
- (4) Blasting Prohibited.
 - (a) Blasting may be prohibited where conditions in spoil slopes, due to wetting of the mass, are such that landslides may be initiated by blasting.
 - (b) The Director of Surface Mining Water Pollution Control or his authorized representative may prohibit blasting in specific areas where it is deemed necessary for public safety.
- (5) Control of Blasting. The amount of charge, length of stemming and number of delays shall be so as to prevent damage to adjoining properties, to minimize contamination of the atmosphere, to minimize effects to the quality of water of streams, and to minimize disturbance of wildlife within the area.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-6-.03~~ 0400-42-06-.03 Records.

- (1) A record of each blast shall be kept.
- (2) All records, reports, shall be retained at least two years and shall be available for inspection and shall contain the following minimum data:
 - (a) Name of Company or Contractor.
 - (b) Location, date, and time of blast.

- (c) Name, signature of blaster in charge.
- (d) Number of holes, burden, spacing, and length of stemming.
- (e) Diameter and depth of holes.
- (f) Types of explosives used (trade name and strength).
- (g) Total amount of charge used.
- (h) Maximum amount of charges per delay period of eight (8) milli-seconds or greater.
- (i) Weather conditions.
- (j) The person taking the seismograph reading shall accurately indicate exact location of seismograph if used, and shall show the distance of seismograph from blast.
- (k) Seismograph records, where required:
 - 1. Name of person and firm analyzing the seismograph record.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-08
Phosphate

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0400-42-08-.01 Introduction
 0400-42-08-.02 Access Roads
 0400-42-08-.03 Operation, Backfilling and Grading
 0400-42-08-.04 Revegetation

~~0400-3-8-.01~~ 0400-42-08-.01 Introduction.

In addition to fulfilling all requirements of T.C.A. §§ ~~58-1540; 58-1564, 59-8-201 through 59-8-228~~ and all requirements of Chapters ~~0400-3-1; 0400-3-6 (Regs. 1-6)~~ 0400-42-01 through 0400-42-06, the following special provisions contained in this Chapter ~~0400-3-8 (Reg. 12)~~ shall be adhered to by all operators of phosphate mines.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-8-.02~~ 0400-42-08-.02 Access Roads

- (1) Definition.

“Access road or haulageway” shall mean any road constructed, improved or used by the operator (except public roads) which ends at the pit or mine and which is located within the permitted area.

- (2) Planning and Construction.

Operators are required to plan such roads in accordance with accepted engineering standards with proper protection of streams by culverts where traversed. No road shall be constructed up a watercourse or drainage channel proper, or so close to its banks that material would spill into the channel during construction, use or maintenance. The location of the proposed haulageway shall be identified on the site by visible markings at the time the reclamation and mining plan is preinspected and prior to commencement of construction.

- (3) Abandonment of Access Roads.

If the haulageway is to remain as a permanent road, it shall be left properly surfaced and drained for minimum maintenance by the landowner. If the road will be abandoned, it shall be graded to the approximate contour of the adjacent land and sown in grasses.

~~0400-3-8-.03~~ 0400-42-08-.03 Operation, Backfilling and Grading

(1) Mining and Regrading Requirements.

Initial stripping operations and mining shall be conducted so as to facilitate backfilling and grading to approximately the original or rolling topography and elimination of all highwalls, spoil piles and water-collecting depressions.

(2) Water Control.

Operators will conduct their operations so as to minimize adverse effects to streams. There shall be no mining in stream beds and under no circumstance, whatever will access roads be constructed so as to interfere with streams. Stream crossings shall include culverts or other structures adequate to accommodate peak water flow, and such structures shall be removed at the conclusion of reclamation unless special circumstances preclude such action. Where there is potential for undue siltation, the operator shall construct either log or rock silt traps designed to reduce water velocity and permit the settlement of excess suspended matter.

(3) Reclamation Timing

(a) Reclamation shall proceed concurrently with mining. The reclamation grading shall be concluded within three (3) months after completion of the removal of the mineral from any given acre, as required by ~~Section 8 (c) of the Law~~ T.C.A. 59-8-208(c). However, the Division recognizes the necessity for maintaining acceptable quality of material for furnace feed so the operator may temporarily abandon a pit, leaving no more than two (2) acres of stripped mineral and unreclaimed surface. The unreclaimed surface must be "dressed" and the shaped areas shall be sown to retard erosion and to hasten returning the adjacent surfaces to useful production.

(b) With the characteristic limestone "cutters" in the phosphate field, where frequently there is a dearth of fill material, operators will not be required to haul fill material in to accomplish grading to the "original contour". In these circumstances, first priority in use of available material will be the filling of the cavities and pits which might be hazardous with the remaining mine-scarred areas to be graded to the best advantage.

(4) Regrading Where Bench is Produced.

Where rim or collar deposits produce a bench, operators may regrade the area so that a rolling terrace is produced, but the highwall must be reduced to a stable slope no steeper than 35 degrees. The terrace shall be smoothly graded with all available fill material.

(5) Water Impoundments.

The operator may elect to impound water to provide lakes or ponds for wildlife, recreation or water supply purposes, provided such impoundments will not create conditions that will contribute to soil erosion, or stream pollution or jeopardize the health, safety or property of adjacent landowners. Impoundments must be included in the mine and reclamation plan and details concerning the size and location and the construction plans of dams, embankments and spillway must be included. The proposed impoundment must meet safety requirements of appropriate State agencies and must be approved by the ~~State Health~~ Department if the surface area exceeds one acre.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-8-.04~~ 0400-42-08-.04 Revegetation

(1) Revegetation Plan.

Each operator shall submit a Revegetation Plan in accordance with T.C.A. § ~~58-1548~~ 59-8-209 and Chapter ~~0400-3-5 (Reg. 5)~~ 0400-42-05. Since most of the area mined for phosphate will be returned to farmland or pasture, no specific planting requirements are established. However, the plan must provide for stabilization of the area as quickly as possible, after it has been mined in order to prevent erosion and siltation of streams, and to return the area to productive use.

(2) Evaluation of Vegetation Survival

- (a) Inspection and evaluation of vegetation for cover and survival shall be made as soon as it is possible to determine if a satisfactory stand has been established. In no instance shall this vegetative cover check be made until after the completion of the first growing season. A revegetation evaluation report shall be prepared and filed by the inspector.
- (b) If the regraded area is planted in row crops, the revegetation inspection may be made and the report filed as soon as the crop germination becomes evident. The Commissioner shall then cause the remainder of the bond to be released.

(3) Standards for Legumes and/or Perennial Grasses.

Standards for legumes and/or perennial grasses shall require at least an eighty percent (80%) ground cover. Bare areas shall not exceed 2,500 square feet (50 feet by 50 feet) in size, nor total more than twenty percent (20%) of the area seeded unless such areas are too stony to support vegetation.

(4) Performance Bond Release.

After the vegetative cover has been inspected and approved, the operator shall submit his final report to the Commissioner and request release of the remaining portion of the performance bond still in force. No revegetation performance bonds will be released until the approved revegetation plan has been carried out unless the Commissioner determines that further efforts toward revegetation are impractical. No revegetation plans will be considered to have been carried out until satisfactory coverage and survival have been obtained.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-09
Sand and Gravel

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- 0400-42-09-.04 Revegetation

~~0400-3-9-.01~~ 0400-42-09-.01 Introduction.

In addition to fulfilling all requirements of T.C.A. §§ ~~58-1540; 58-1564~~ 59-8-201 through 59-8-228 and all requirements of Chapters ~~0400-3-1; 0400-3-6 (Regs. 1-6)~~ 0400-42-01 through 0400-42-06 the following special provisions contained in this Chapter ~~0400-3-9 (Reg. 13)~~ shall be adhered to all operators of sand and/or gravel mines.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-9-.02~~ 0400-42-09-.01 Access Roads

(1) Definition.

“Access road or haulageway” shall mean any road constructed, improved or used by the operator (except public roads) which ends at the pit or mine and which is located within the permitted area.

(2) Planning Construction.

Operators are required to plan such roads in accordance with accepted engineering standards with proper protection of streams by culverts where traversed. No road shall be constructed up a watercourse or drainage channel proper, or so close to its banks that material would spill into the channel during construction, use or maintenance. The location of the proposed haulageway shall be identified on the site by visible markings at the time the reclamation and mining plan is preinspected and prior to

commencement of construction.

(3) Abandonment of Access Roads.

If the haulageway is to remain as a permanent road, it shall be left properly surfaced and drained for minimum maintenance by the landowner. If the road will be abandoned, it shall be graded to the approximate contour of the adjacent land and sown in grasses.

~~0400-3-9-.03~~ 0400-42-09-.03 Operation, Backfilling and Grading

(1) Site Preparation and Mining

(a) Prior to opening a site heretofore undisturbed by mining, all possible preparation measures shall be taken so as to minimize the acreage disturbed and to facilitate reclamation at the conclusion of mining.

(b) Mining and handling of spoil shall be planned in advance and conducted so as to minimize offsite effects during mining and to achieve quick and permanent reclamation on each part of the site as soon as mining on that part is concluded.

(2) Regrading.

At the conclusion of mining, the surfaces shall be graded to approximately the original contour, unless quantities of the mineral produced have altered significantly the contour of the disturbed areas. In such situations, the site shall be regraded to rolling topography which will blend in naturally with the surrounding terrain. No water collecting depressions shall be left unless approved impoundments are to be constructed.

(3) Water Impoundments.

The operator may elect to impound water to provide lakes or ponds for wildlife, recreation or water supply purposes, provided such impoundments will not create conditions that will contribute to soft erosion, or stream pollution or jeopardize the health, safety or property of adjacent landowners. Impoundments must be included in the mine and reclamation plan and details concerning the size and location and the construction plans of dams, embankments and spillways must be included. The proposed impoundment must meet safety requirements of appropriate State agencies and must be approved by the ~~State Health~~ Department if the surface area exceeds one acre.

(4) Water Control.

Because pits generally are small and are active intermittently as there is a demand for the product, the operator shall incorporate into the mining program appropriate measures to control erosion and offsite damage from silt by construction of log or rock silt traps. Other measures shall be required as appropriate to abate the problems associated with temporarily inactive sites.

(5) Alternate Reclamation.

The Division is aware of circumstances which might cause termination of mining with substantial quantities of the mineral remaining for probable future production, so the operator is encouraged to reclaim mined areas at the site which are not necessarily due to his operations. Such alternate reclamation must have the approval of the Commissioner in advance and must be where all the mineral has been exhausted with the likelihood of disturbance by future mining extremely remote.

(6) Dredging and other Special Circumstances.

In special circumstances such as those where an operation is conducted in an approved stream bed or impoundment and the product removal medium is pumping or any modification of dredging, special provisions must be justified. The final site use might be a water impoundment for recreational use, or the stream bed might be improved by mining through channel clearing. The operator must provide a logical plan approved by a local or area planning agency.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-9-.04~~ ~~0400-42-09-.04~~ Revegetation

(1) Revegetation Plan.

Each operator shall submit a Revegetation Plan in accordance with T.C.A. § ~~58-1548~~ 59-8-209 and Chapter ~~0400-3-5 (Reg. 5)~~ 0400-42-05. Since most of the area mined for sand and gravel will be returned to farmland or pastures no specific planting requirements are established. However, the plan must provide for stabilization of the area, as quickly as possible, after it has been mined in order to prevent erosion and siltation of streams and to return the area to productive use.

(2) Evaluation of Vegetation Survival

(a) Inspection and evaluation of vegetation for cover and survival shall be made as soon as it is possible to determine if a satisfactory stand has been established. In no instance shall this vegetative cover check be made until after the completion of the first growing season. A revegetation evaluation report shall be prepared and filed by the inspector.

(b) If the regraded area is planted in row crops, the revegetation inspection may be made and the report filed as soon as the crop germination becomes evident. The Commissioner shall then cause the remainder of the bond to be released.

(3) Standards for Legumes and/or Perennial Grasses.

Standards for legumes and/or perennial grasses shall require at least an eighty percent (80%) ground cover. Bare areas shall not exceed 2,500 square feet (50 feet by 50 feet) in size, nor total more than twenty percent (20%) of the area seeded unless such areas are too stony to support vegetation.

(4) Performance Bond Release.

After the revegetative cover has been inspected and approved, the operator shall submit his final report to the Commissioner and request release of the remaining portion of the performance bond still in force. No revegetation performance bonds will be released until the approved revegetation plan has been carried out unless the Commissioner determines that further efforts toward revegetation are impractical. No revegetation plans will be considered to have been carried out until satisfactory coverage and survival have been obtained.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-10
Ballclay

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~~0400-3-10-.01~~ ~~0400-42-10-.01~~ Introduction.

In addition to fulfilling all requirements of T.C.A. §§ ~~58-1540; 58-1564~~ 59-8-201 through 59-8-228 and all requirements of Chapters ~~0400-3-1; 0400-3-6 (Regs. 1-6)~~ 0400-42-01 through 0400-42-06, the following special provisions contained in Chapter ~~0400-3-10 (Reg. 14)~~ 0400-42-10 shall be adhered to by all operators of Ball Clay mines.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-10-.02~~ ~~0400-42-10-.02~~ Access Roads

(1) Definition.

“Access road or haulageway” shall mean any road constructed, improved or used by the operator (except public roads) which ends at the pit or mine and which is located within the permitted area.

(2) Planning and Construction.

Operators are required to plan such roads in accordance with accepted engineering standards with protection of streams by culverts where traversed. No road shall be constructed up a watercourse, or drainage channel proper, or so close to its banks that material would spill into the channel during construction, use or maintenance. The location of the proposed haulageway shall be identified on the site by visible markings at the time the reclamation and mining plan is preinspected and prior to commencement of construction.

(3) Abandonment of Access Roads.

If the haulageway is to remain as a permanent road, it shall be left properly surfaced and drained for minimum maintenance by the landowner. If the road will be abandoned, it shall be graded to the approximate contour of the adjacent land and sown in grasses.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-10-.03~~ 0400-42-10-.03 Operation, Backfilling and Graging

(1) Planning and Denoting Spoil Areas

(a) In the mining and reclamation plan provided for in Chapter ~~0400-3-2~~ 0400-42-02, the operator will denote the area on which the spoil is to be placed and shall plan the entire operation and select the area with the aim of disturbing no more than the absolute minimum acreage and possibly to convert to productivity some acreage which otherwise might be classified as wasteland.

(2) Mining Procedure

(a) Because ball clays frequently lie in beds with many feet of overburden, it is generally necessary to strip the lens, or bed, and move the waste material offsite via scrapers, leaving the exposed Ball Clay for production over a period of many years as the trade demands. For this reason, prompt reclamation of active Ball Clay pits is not practical or feasible. Instead, operators shall take all possible measures to control both onsite and offsite damage through the proper handling of spoil material and the prompt planting of vegetation to control erosion from the spoil deposit.

(b) The adverse effects of mining must be controlled through the deposit of waste within mined-out areas of an active pit rather than through the expansion of existing spoil deposits. Operators shall determine which areas within a pit have future marketable clays and shall designate the other areas in the pit where the product is exhausted for deposit of spoil. While changing markets will alter the product picture, the industry must adjust its techniques so as to reduce the areas disturbed in the mining process.

(3) Water Control

(a) As a move to control stream degradation and siltation in the Ball Clay mining area, all operators must adopt programs which will strictly control erosion and siltation. Since the industry is one in which reclamation concurrent with mining is not feasible, all operators shall initiate prompt revegetation programs where most needed in order to reduce erosion of spoil deposits and siltation of streams and to achieve release of bond on the spoil deposit areas.

(b) Operators will conduct their operations so as to minimize adverse effects to streams. There shall be no mining in stream beds, and under no circumstance, whatever will access roads be constructed so as to interfere with streams. Stream crossings shall include culverts or other structures adequate to accommodate peak water flow, and such structures shall be removed at the conclusion of reclamation unless special circumstances preclude such action. Where there is potential for undue siltation, the operator shall construct either log or rock silt traps designed to reduce water velocity and permit the settlement of excess suspended matter.

(4) Regrading

- (a) When all marketable Ball Clay in a pit is exhausted, if the ultimate use of the mined area is to be a water impoundment, the highwalls shall be reduced and graded to no more than a ten degree (10°) slope so as to blend into the surrounding topography. Then those areas above the water line shall be fertilized and sown in grasses approved by the Commissioner according to the recommendations of the County Agent.
- (b) If the reclamation plan for the mined-out areas does not include a water impoundment, the disturbed acreage shall be graded to rolling topography with no slopes exceeding twenty-eight degrees (28°) and with the final effect designed to blend naturally into the surrounding terrain. No water-collecting depressions shall be left unless they are approved impoundments contained in the approved mining and reclamation plan.
- (c) The spoil produced by removing the initial overburden from the Clay Bed shall be deposited in old mined-out areas, gullies, hollows or similar wasteland whenever possible. The spoil shall be graded to blend naturally with the surrounding terrain. The angle at the edge of the spoil piles between the spoil and the undisturbed land shall not exceed twelve degrees (12°) and no slope shall exceed twenty-eight degrees (28°).

(5) Water Impoundments.

The operator may elect to impound water to provide lakes or ponds for wildlife, recreation or water supply purposes, provided such impoundments will not create conditions that will contribute to soil erosion, or stream pollution or jeopardize the health, safety or property of adjacent landowners. Impoundments must be included in the mine and reclamation plan and details concerning the size and location and the construction plans of dams, embankments and spillways must be included. The proposed impoundment must meet safety requirements of appropriate State agencies and must be approved by the ~~State Health~~ Department if the surface area exceeds one acre.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-10-.04~~ 0400-42-10-.04 Revegetation

(1) Revegetation Plan.

Each operator shall submit a Revegetation Plan in accordance with T.C.A. § ~~58-1548~~ 59-8-209 and Chapter ~~0400-3-5 (Reg. 5)~~ 0400-42-05. Since most of the area mined for Ball Clay or covered by spoil will be returned to farmland or pasture, no specific planting requirements are established. However, the plan must provide for stabilization of the area, as quickly as possible, after it has been disturbed in order to control erosion and siltation of streams and to return the area to productive use.

(2) Seeding of Spoil Areas.

Areas covered by spoil shall be fertilized and seeded with legumes and/or perennial grasses immediately after grading while the surface is still loose and scarified. If seeding is not accomplished before the soil has become hardened, mulching will be required following seeding.

(3) Revegetation of Pit Floor and Walls

- (a) After completion of mining in a Ball Clay pit and regrading of the pit according to ~~Rule 0400-3-10-.03 paragraph (4) of Rule 0400-42-10-.03~~ all exposed areas not to be covered by water shall be fertilized and seeded with legumes and/or perennial grasses immediately after grading while the surface is still loose and scarified. If seeding is not accomplished before the soil has become hardened, mulching will be required following the seeding.
- (b) Steep slopes not to be used for farmland or pasture shall also be planted in trees or shrubs during the next tree-planting season.

(4) Evaluation of Vegetation Survival

- (a) Inspection and evaluation of vegetation for cover and survival shall be made as soon as it is possible to determine if a satisfactory stand has been established. In no instance shall this

vegetative cover check be made until after the completion of the first growing season. A revegetation evaluation report shall be prepared and filed by the inspector.

- (b) If the regraded area is planted in row crops, the revegetation inspection may be made and the report filed as soon as the crop germination becomes evident. The Commissioner shall then cause the remainder of the bond to be released.

(5) Standards for Legumes and/or Perennial Grasses.

Standards for legumes and/or perennial grasses shall require at least an eighty percent (80%) ground cover. Bare areas shall not exceed 2,500 square feet (50 feet by 50 feet) in size, nor total more than twenty percent (20%) of the area seeded unless such areas are too stony to support vegetation.

(6) Standards for Woody Plants.

Trees or shrubs shall be planted at a 6-foot by 6-foot spacing. Standards for woody plants shall require the survival of a minimum of six hundred (600) trees (including volunteer trees) and/or planted shrubs per acre. Distribution of stems shall be generally uniform, with no areas larger than one-fourth (1/4) acre with substandard stocking, that is, with spacing averaging more than seventy (70) square feet per stem.

(7) Performance Bond Release.

After the vegetative cover has been inspected and approved, the operator shall submit his final report to the Commissioner and request release of the remaining portion of the performance bond still in force. No revegetation performance bonds will be released until the approved revegetation plan has been carried out unless the Commissioner determines that further efforts toward revegetation are impractical. No revegetation plans will be considered to have been carried out until satisfactory coverage and survival have been obtained.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-11
Brick, Clay and Shale

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0400-42-11-.04 Revegetation

~~0400-3-11-.01~~ 0400-42-11-.01 Introduction.

In addition to fulfilling all requirements of T.C.A. §§ ~~58-1540; 58-1564~~ 59-8-201 through 59-8-228 and all requirements of Chapters ~~0400-3-1; 0400-3-6 (Regs. 1-6)~~ 0400-42-01 through 0400-42-06, the following special provisions contained in Chapter ~~0400-3-11 (Reg. 15)~~ 0400-42-11 shall be adhered to by all operators of Brick, Clay or Shale mines.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-11-.02~~ 0400-42-11-.02 Access Roads

(1) Definition.

“Access road or haulageway” shall mean any road constructed, improved or used by the operator (except public roads) which ends at the pit or mine and which is located within the permitted area.

(2) Planning and Construction.

Operators are required to plan such roads in accordance with accepted engineering standards with proper protection of streams by culverts where traversed. No road shall be constructed up a watercourse or drainage channel proper, or so close to its banks that material would spill into the channel during

construction, use or maintenance. The location of the proposed haulageway shall be identified on the site by visible markings at the time the reclamation and mining plan is preinspected and prior to commencement of construction.

(3) Abandonment of Access Roads.

If the haulageway is to remain as a permanent road, it shall be left properly surfaced and drained for minimum maintenance by the landowner. If the road will be abandoned, it shall be graded to the approximate contour of the adjacent land and sown in grasses.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0400-3-11-.03~~ 0400-42-11-.03 Operation, Backfilling and Grading

(1) Mining and Reclamation Plan.

When a new pit is proposed and it is expected that operations will be active for a period of several years, the operator's mine and reclamation plan shall be submitted to the appropriate area planning agency for comment and suggestions, all aimed at production of the mineral with low-level environmental impact and efficient land use.

(2) Mining Requirements

(a) Planning and initial stripping operations and mining shall be conducted so as to facilitate backfilling and grading to approximately the original or rolling topography, and elimination of all highwalls, spoil piles and water-collecting depressions.

(b) The adverse effects of mining must be controlled through the deposit of waste within mined-out areas of an active pit rather than through deposit of the spoil offsite. Operators shall determine which areas within a pit have future marketable mineral deposits and shall designate the other areas in the pit where the product is exhausted for deposit of spoil.

(c) Because existing Brick, Clay and Shale pits frequently are active for many years, reclamation concurrent with mining is not feasible. Therefore, operators must exercise care to control adverse environmental effects of operations.

(d) Since the majority of active Clay and Shale operations are near or within urban areas, good housekeeping is essential for improving the image of mining and reducing adverse public reaction.

(3) Water Control.

Operators will conduct their operations so as to minimize adverse effects to streams. There shall be no mining in stream beds, and under no circumstance whatever will access roads be constructed so as to interfere with streams. Stream crossings shall include culverts or other structures adequate to accommodate peak water flow and such structures shall be removed at the conclusion of reclamation unless special circumstances preclude such action. Where there is potential for undue siltation, the operator shall construct either log or rock silt traps designed to reduce water velocity and permit the settlement of excess suspended matter.

(4) Regrading Requirements.

At the conclusion of mining the surface shall be graded to approximately the original contour, with the available material, unless the quantities of mineral produced have significantly altered the contour of the disturbed area. In such situations, the site shall be regraded to rolling topography which will blend in naturally with the surrounding terrain. No water-collecting depressions shall be left unless approved impoundments contained in the approved mining and reclamation plan are to be constructed.

(5) Water Impoundments.

The operator may elect to impound water to provide lakes or ponds for wildlife, recreation or water supply purposes, provided such impoundments will not create conditions that will contribute to soil erosion or

stream pollution or jeopardize the health, safety or property of adjacent landowners. Impoundments must be included in the mine and reclamation plan and details concerning the size and location and the construction plans of dams, embankments and spillways must be included. The proposed impoundment must meet safety requirements of appropriate State agencies and must be approved by the ~~State Health~~ Department if the surface area exceeds one acre.

~~0400-3-11-.04~~ 0400-42-11-.04 Revegetation

(1) Revegetation Plan.

Each operator shall submit a Revegetation Plan in accordance with T.C.A. § ~~58-1548~~ 59-8-209 and Chapter ~~0400-3-5 (Reg. 5)~~ 0400-42-05. Since most of the area mined for Brick, Clay or Shale will be returned to pasture or converted to industrial or recreational developments, no specific planting requirements are established. However, the plan must provide for stabilization of the area as quickly as possible after it has been mined in order to prevent erosion and siltation of streams, and to return the area to productive use.

(2) Initial Planting.

As soon as regrading is complete, the entire area shall be seeded with legumes and/or perennial grasses to control erosion, unless the approved after-use plan provides for construction to take place on the area and construction begins immediately. If the delay between regrading and construction is to be more than two (2) months, ground cover shall be provided.

(3) Evaluation of Vegetation Survival.

Inspection and evaluation of vegetation for cover and survival shall be made as soon as it is possible to determine if a satisfactory stand has been established. In no instance shall this vegetative cover check be made until after the completion of the first growing season. A revegetation evaluation report shall be prepared and filed by the inspector.

(4) Standards for Legumes and/or Perennial Grasses.

Standards for legumes and/or perennial grasses shall require at least an eighty percent (80%) ground cover. Bare areas shall not exceed 2,500 square feet (50 feet by 50 feet) in size, nor total more than twenty percent (20%) of the area seeded unless such areas are too stony to support vegetation.

(5) Performance Bond Release.

After the vegetative cover has been inspected and approved, the operator shall submit his final report to the Commissioner and request release of the remaining portion of the performance bond still in force. No revegetation performance bonds will be released until the approved revegetation plan has been carried out unless the Commissioner determines that further efforts toward revegetation are impractical. No revegetation plans will be considered to have been carried out until satisfactory coverage and survival have been obtained.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

Chapter 0400-42-12
Barite

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~~0400-3-12-.01~~ 0400-42-12-.01 Introduction.

In addition to fulfilling all requirements of ~~Sections 58-1540-58-1564~~, T.C.A. §§ 59-8-201 through 59-8-228 and all requirements of Chapters ~~0400-3-1 through 0400-3-6 (Regs. 1-6)~~. 0400-42-01 through 0400-42-06

the following special provisions contained in Chapter ~~0400-3-12 (Regs. 16)~~ 0400-42-12 shall be adhered to by all operators of barite mines.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

~~0300-3-12-.02~~ 0400-42-12-.02 Access Roads.

(1) Definition.

"Access road or haulageway" shall mean any road constructed, improved, or used by the operator (except public roads) which ends at the pit or mine and which is located within the permitted area.

(2) Planning and Construction.

Operators are required to plan such roads in accordance with accepted engineering standards with proper protection of streams by culverts where traversed. No road shall be constructed up a watercourse or drainage channel proper or so close to its banks that material would spill into the channel during construction, use, or maintenance. The location of the proposed haulageway shall be identified on the site by visible markings at the time the reclamation and mining plan is preinspected and prior to commencement of construction.

(3) Abandonment of Access Roads.

If the haulageway is to remain as a permanent road, it shall be left properly surfaced and drained for minimum maintenance by the landowner. If the road will be abandoned, it shall be graded to the approximate contour of the adjacent land and sown in grasses.

~~0400-3-12-.03~~ 0400-42-12-.03 Operation, Backfilling and Grading

(1) Site Preparation and Mining.

(a) Prior to, opening a site heretofore undisturbed by mining, all possible preparation measures shall be taken so as to minimize the acreage disturbed to facilitate reclamation at the conclusion of mining.

(b) Mining and handling of spoil shall be planned in advance and conducted so as to minimize offsite effects during mining and to achieve quick and permanent reclamation on each part of the site as soon as mining on that part is concluded.

(2) Regrading.

At the conclusion of mining, the surfaces shall be graded to approximately the original contour, unless quantities of the mineral produced have altered significantly the contour of the disturbed areas, in such situations, the site shall be regraded to rolling topography which will blend in naturally with the surrounding terrain. No water-collecting depressions shall be left unless approved impoundments are to be constructed.

(3) Water Impoundments.

The operator may elect to impound water to provide lakes or ponds for wildlife, recreation, or water supply purposes, provided such impoundments will not create conditions that will contribute to soil erosion or stream pollution, or jeopardize the health, safety, or property of adjacent landowners. Impoundments must be included in the mine and reclamation plan and details concerning the size and location and the construction plans of dams, embankments, and spillways must be included. The proposed impoundment must meet safety requirements of appropriate State agencies and must be approved by the ~~State Health~~ Department if the surface area exceeds one acre.

(4) Water Control.

Because pits generally are small and are active intermittently as there is a demand for the product, the operator shall incorporate into the mining program appropriate measures of control erosion and offsite damage from silt by construction of log or rock silt traps. Other measures shall be required as appropriate

to abate the problems associated with temporarily inactive sites.

(5) Alternation Reclamation.

The Division is aware of circumstances which might cause termination of mining with substantial quantities of the mineral remaining for probable future production, so the operator is encouraged to reclaim mined areas at the site which are not necessarily due to his operations. Such alternate reclamation must have the approval of the Commissioner in advance, and must be where all the mineral has been exhausted with the likelihood of disturbance by future mining extremely remote.

~~0400-3-12-.04~~ 0400-42-12-.04 Revegetation.

(1) Revegetation Plan

Each operator shall submit a Revegetation Plan In accordance with ~~Section 58-1548~~, T.C.A. § 59-8-209 and Chapter ~~0400-3-5 (Reg. 5)~~ 0400-42-05. Since most of the area mined for barite will be returned to farmland or pasture, no specific planting requirements are established. However, the plan must provide for stabilization of the area as quickly as possible after it has been mined in order to control erosion and siltation of streams, and to return the area to productive use.

(2) Evaluation of Vegetation Survival.

(a) Inspection and evaluation of vegetation for cover and survival shall be made as soon as it is possible to determine if a satisfactory stand has been established. In no instance shall this vegetative cover check be made until after the completion of the first growing season. A revegetation evaluation report shall be prepared and filed by the inspector.

(b) If the regraded area is planted in row crops, the revegetation inspection may be made and the report filed as soon as the crop germination becomes evident. The Commissioner shall then cause the remainder of the bond to be released.

(3) Standards for Legumes and/or Perennial Grasses.

Standards for legumes and/or perennial grasses shall require at least an eighty percent (80%) ground cover. Bare areas shall not exceed 2,500 square feet (50 feet by 50 feet) in size, nor total more than twenty percent (20%) of the area seeded unless such area are too stony to support vegetation.

(4) Performance Bond.

After the revegetative cover has been inspected and improved, the operator shall submit his final report to the Commissioner and request release of the remaining portion of the performance bond still in force. No revegetation performance bonds will be released until the approved revegetation plan has been carried out unless the Commissioner determines that further efforts reward revegetation are impractical. No revegetation plans will be considered to have been carried out until satisfactory coverage and survival have been obtained.

Authority: T.C.A. §§ 59-8-201 et seq. and 4-5-201 et seq.

I certify that the information included in this filing is an accurate and complete representation of the intent and scope of rulemaking proposed by the agency.

Date: November 30, 2011

Signature: _____

Name of Officer: Paul E. Davis

Title of Officer: Director of the Division of Water Pollution Control

Subscribed and sworn to before me on: _____

Notary Public Signature: _____

My commission expires on: _____

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Filed with the Department of State on: _____

Tre Hargett
Secretary of State