



COLORADO DIVISION OF MINERALS AND GEOLOGY

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Regulations of the Colorado Mined Land Reclamation Board for Coal Mining

Effective August 30, 1980

Colorado Mined Land Reclamation Board

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2 CCR 407-2

Revisions

8/28/80	10/01/81	11/30/83	6/15/89	6/30/91	1/24/96	6/26/02
12/01/80	3/02/82	11/20/87	1/17/90	5/02/94	12/18/96	9/14/05
6/30/81	7/28/83	2/01/89	6/30/90	8/01/95	3/21/01	

RULES AND REGULATIONS
OF
THE COLORADO MINED LAND RECLAMATION BOARD
PURSUANT TO THE COLORADO SURFACE COAL
MINING RECLAMATION ACT

- RULE 1: General Provisions
- RULE 2: Permits
- RULE 3: Performance Bond Requirements
- RULE 4: Performance Standards
- RULE 5: Inspection, Enforcement and Civil Penalties
- RULE 6: Blasters Training and Certification
- RULE 7: Designating Areas Unsuitable for Surface Coal Mining
- RULE 8: Mine Subsidence Protection Program

NB: Numbers in margin refer to Statutory authority for these Rules (e.g., "111(2)" refers to Section 34-33-111(2) of the Colorado Surface Coal Mining Reclamation Act, Article 33 of Title 34, as amended, (House Bill 1223/1979 Session Laws) Colorado Revised Statutes).

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RULE 1 GENERAL PROVISIONS

1.01 SCOPE

These Rules are proposed in accordance with Title 34, Article 33 of the Colorado Revised Statutes of 1973 (House Bill No. 1223), known as the Colorado Surface Coal Mining Reclamation Act, and establish the procedures through which the Board and the Division will implement the provisions of the Act. A written statement of the basis and purpose of these Rules has been prepared and adopted by the Mined Land Reclamation Board, and is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4).

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on August 26, 1981 and effective September 30, 1981, is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on January 27, 1982 and effective March 2, 1982, is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on May 24, 1984, and effective June 30, 1984, is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on August 22, 1984 and effective September 30, 1984, is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on September 27, 1984 and effective November 30, 1984, is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on November 15, 1984 and effective January 24, 1985, is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on April 24, 1986 is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on July 24, 1986 is hereby incorporated in these Rules by reference pursuant to C.R.S., 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on October 23, 1986 and effective November 30, 1986 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1973, 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement of the basis and purpose of the amendments to these Rules adopted by the Board on December 16, 1987 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1973, 24-4-103(4) and is available at the office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on December 14, 1988 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1973, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on May 23, 1990 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1973, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on May 22, 1991 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1973, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement of the basis, specific statutory authority, and purpose of the amendments to these rules adopted by the Board on March 23, 1994 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1973, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement of the basis, specific statutory authority, and purpose of the amendments to these rules adopted by the Board on May 24, 1995 is hereby

incorporated in these Rules by reference pursuant to C.R.S. 1973, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on January 24, 1996 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1995, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on December 18, 1996 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1995, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on March 21, 2001 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1995, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on June 26, 2002 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1995, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

A written statement on the basis and purpose of the amendments to these Rules adopted by the Board on September 14, 2005 is hereby incorporated in these Rules by reference pursuant to C.R.S. 1995, 24-4-103(4) and is available at the Office of the Mined Land Reclamation Board.

- (1) Rule 1 contains direction on the State's regulatory authorities and responsibilities under the Act, definitions applicable to the Rules and directions on the restriction of State employee financial interests.
- (2) Rule 2 contains requirements for the application for, and decisions on, permits for surface coal mining and reclamation operations. Rule 2 addresses coal exploration and requirements and decisions on permits for special categories of coal mining.
- (3) Rule 3 establishes requirements and procedures pertaining to reclamation performance bonds, their release and forfeiture.
- (4) Rule 4 contains environmental and other performance standards that apply to coal exploration and surface coal mining and reclamation operations. The

standards establish the minimum requirements for such activities. Performance standards applicable to special mining situations such as alluvial valley floors, prime farmland, mountaintop removal and operations on steep slopes are included.

- (5) Rule 5 specifies inspection, enforcement and civil penalty provisions.
- (6) Rule 6 specifies requirements for the training, examination and certification of blasters.
- (7) Rule 7 identifies the criteria and procedures for the designation of lands unsuitable for surface coal mining operations.
- (8) Rule 8 contains the Mine Subsidence Protection Program.
- (9) Materials cited in these rules are hereby incorporated by reference. The materials incorporated in these rules by reference do not include later amendments to or editions of the incorporated materials. All materials incorporated by reference are available for inspection at State Publications Depository Libraries, through inter-library loan, and at the Division office located in Room 215, Centennial Building, 1313 Sherman Street, Denver, Colorado 80203. The Division director can provide further information regarding how the incorporated material may be obtained or examined.

1.02 AUTHORITY

The Division and Board have the full power and authority to carry out and administer the provisions of the Act. The Division and Board have jurisdiction and authority over all persons and property, public and private, necessary to enforce the provisions of the Act and these Rules.

1.03 RESPONSIBILITIES

1.03.1 The Division and Board are responsible for:

- (1) The regulation of surface coal mining and reclamation operations and coal exploration. This responsibility includes the following activities:
 - (a) Receive notices of intention to explore and applications for new, revised or renewed approvals for coal exploration and permits for surface coal mining and reclamation operations, review those

applications and approve or disapprove requests for exploration approvals, permits, revisions and renewals of existing permits;

- (b) Receive fees for permit applications;
 - (c) Implement, administer and enforce a system of performance bonds or other equivalent guarantees;
 - (d) Inspect and monitor coal exploration and surface coal mining and reclamation operations including provisions allowing for public participation in the process;
 - (e) Enforce the administrative, civil and criminal sanctions of the Act and these Rules;
 - (f) Administer and enforce the performance standards as set forth in the Act and these Rules;
 - (g) Issue public notices and hold public hearings;
 - (h) Consult with State and Federal agencies having responsibility for the protection and management of fish, wildlife, historic, cultural and archeological resources, and related environmental values;
 - (i) Monitor, review and enforce restrictions against direct and indirect financial interests of state employees in coal exploration, surface coal mining and reclamation operations or underground mining activities;
 - (j) Provide for public participation in the development, revision and enforcement of State Rules, the State program, and permits under the State program;
 - (k) Provide administrative review of actions required by the Act and these Rules;
 - (l) Provide for a small operator assistance program; and
 - (m) Provide for the training, examination and certification of blasters.
- (2) Administering, maintaining, and enforcing an approved cooperative agreement between the Governor of Colorado and the Secretary. Such

agreements will provide cooperative Federal and State regulation of surface coal mining and reclamation operations on Federal lands within the State; and

- 106(1)(a) (3) If a Mining and Mineral Research Institute is created pursuant to Section 801 and funded pursuant to 802 of the Surface Mining Control and Reclamation Act of 1977 (P.L. 95-87) in the State of Colorado, and Part 890 of Chapter VII of 30 CFR, the Board and Division may advise and provide guidance to the Institute in identifying research needs in the fields of coal energy resources and conversion and environmental areas which include but are not limited to surface coal mining and reclamation operations.

108 **1.03.2 The Board is responsible for:**

- (1) The development and promulgation of reasonable Rules and Regulations respecting the administration and enforcement of the Act;
- 126(1)(a) (2) Making decisions on the designation of areas unsuitable for surface coal mining operations, on the termination of such decisions and on frivolous petitions;
- 130(1) (3) The formation of a data base and inventory system to be used in the evaluation of petitions for designating lands unsuitable; and
- 106(2) (4) Requesting data and technical assistance, as it deems necessary for the performance of reclamation and enforcement duties prescribed by these Rules and the Act from the Department of Agriculture, the Department of Higher Education, the Department of Health, the State Soil Conservation Board, the Colorado Geological Survey, the Division of Parks and Outdoor Recreation, the Division of Water Resources, the Division of Wildlife, the University of Colorado, Colorado State University, Colorado School of Mines, and the State Forester. It is the duty of these agencies to furnish the Board and its designees such data and technical assistance, as is practically required, in a timely manner that will allow compliance with Sections 34-33-118, 34-33-119 and 34-33-126 of the Act.

1.03.3 The Division shall:

- 106(1)(a) (1) Carry on a continuing review of the problems of surface coal mining and land reclamation in the State;

- 106(1)(b) (2) Cause to be published the monthly agenda of the Board with a brief description of any affected land and the name of the applicant. These publications shall be in a newspaper of general circulation in the locality of the proposed surface coal mining operations listed in that month's agenda. The Division shall also cause to be published monthly, and mailed to all persons on the mailing list and any party to an administrative proceeding in these Rules, a list including name of the applicant, operator, or petitioner for:
- (a) Newly filed notices of intent to explore;
 - (b) Pending coal exploration applications;
 - (c) New, revised, or renewed permit applications;
 - (d) Pending petitions to designate lands unsuitable for surface coal mining;
 - (e) Requests for bond release; and
 - (f) Notices of informal conferences or public hearings pertaining to any of these Rules, scheduled for the upcoming month.
- (3) Coordinate the issuance of surface coal mining and reclamation permits and the approval of coal exploration required by the Act and these Rules with other State, Federal and local agencies.

1.03.4 The Department.

- 107 (1) The Department may initiate and encourage studies and programs with the Division and other appropriate state agencies relating to the development of less destructive methods of surface coal mining operations, better methods of land reclamation, and more effective post reclamation use. The Department and Division shall coordinate the provisions of the Act and these Rules with the programs of other state agencies dealing with environmental, recreational, rehabilitation, and related concerns.
- 132 (2) (a) The Department and any person contemplating opening a surface coal mining operation in this state may, at their discretion, enter into one or more site-specific agreements to identify and

coordinate local, State, and Federal government jurisdiction and review of land use planning, environmental analysis, and socioeconomic evaluation, to establish coordinating procedures for required action, and to ensure that such procedures be undertaken in a timely, sequential manner. Any such agreements shall be consistent with the provisions of the Act and these Rules.

- (b) Such site-specific agreements may include:
 - (i) The schedule for completion of data collection required for environmental, technical, and policy review; and
 - (ii) The schedule for completion of evaluation, review, and comments by all parties.
- (c) Such agreements may list all applicable laws, regulations, and ordinances of this State and its agencies, the Federal government and its agencies, and of the county or counties in which the proposed operation will be situated. The Department may, with the advice and concurrence of the Board, develop rules and regulations to ensure relative uniformity in such agreements.

1.04 DEFINITIONS

- (1) "Abandoned site" means a surface coal mining and reclamation operation for which the Division has found in writing that:
 - (a) All surface and underground coal mining and reclamation activities of the operator at the site have ceased;
 - (b) The Division has issued at least one notice of violation or cessation order, and either:
 - (i) Is unable to serve the notice despite diligent efforts to do so;
or
 - (ii) The notice was served and has progressed to a failure-to-abate cessation order;

(c) The Division:

- (i) Is taking action to ensure that the permittee and operator, and owners and controllers of the permittee and operator, will be precluded from receiving future permits while violations continue at the site; and
- (ii) Is taking action pursuant to sections 34-33-123(7), 123(9), 123(10), or 123(12) of the Act to ensure that abatement occurs, or that there will not be a recurrence of the failure-to-abate, except where after evaluating the circumstances it concludes that further enforcement offers little or no likelihood of successfully compelling abatement or recovering any reclamation costs; and

(d) Where the site is, or was, permitted or bonded:

- (i) The permit has either expired or been revoked; and
- (ii) The Division has initiated and is diligently pursuing forfeiture of, or has forfeited, any available performance bond.

(1a) "Acid drainage" means water with a pH of less than 6.0 and in which total acidity exceeds total alkalinity, discharged from an active, inactive, or abandoned surface coal mine and reclamation operation or from an area affected by surface coal mining and reclamation operations.

(2) "Acid-forming materials" means earth materials that contain sulfide minerals or other materials which, if exposed to air, water or weathering processes, form acids that may create acid drainage.

(3) "Act" means the Colorado Surface Coal Mining Reclamation Act, Article 33 of Title 34, as amended, Colorado Revised Statutes of 1973.

(4) "Active mining area" means a place where work or other activity related to the extraction, removal, or recovery of coal is being conducted except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.

103(1) (5) "Administrator" means the director of the Division of Mined Land Reclamation in the Department of Natural Resources.

- (6) "Adjacent area" means land located outside the affected area, permit area or area to be affected over the life of the mine depending on the context in which adjacent area is used, where air, surface or ground water, fish, wildlife, vegetation or other resources protected by the Act may be adversely affected by surface coal mining and reclamation operations.
- (7) "Affected area" means, with respect to surface coal mining activities, any land or water upon or in which those activities are conducted or located. With respect to underground mining activities, "affected area" means: (i) any water or surface land upon or in which those activities are conducted or located; and (ii) land or water which is located above or below underground mine workings.
- (8) "Agricultural activities" means, with respect to alluvial valley floors, the use of any tract of land for the production of animal or vegetable life, in a manner typical of regional agricultural practices, where the use is enhanced or facilitated by subirrigation or flood irrigation associated with alluvial valley floors. These uses include, but are not limited to, the pasturing, or grazing, of livestock, and the cropping, cultivation, or harvesting of plants whose production is aided by the availability of water from subirrigation or flood irrigation. These uses do not include agricultural practices which do not benefit from the availability of water from subirrigation or flood irrigation.
- (9) "Agricultural use" means the use of any tract of land for the production of animal or vegetable life. The uses include, but are not limited to, the pasturing, grazing, and watering of livestock, and the cropping, cultivation, and harvesting of plants.
- 103(2) (10) "Alluvial valley floors" means the unconsolidated stream-laid deposits holding streams with water availability sufficient for subirrigation or flood irrigation agricultural activities but does not include upland areas which are generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from sheet erosion, deposits formed by unconcentrated runoff or slope wash, together with talus, other mass movement accumulations, and windblown deposits.
- (11) "Applicant" means any person who seeks to obtain exploration approval or a permit.

- (12) "Application" means the documents and other related information filed with the Board and the Division, in accordance with the Act and these Rules, for the issuance of exploration approval or a permit.
- 103(3) (13) "Approximate original contour" means that surface configuration achieved by backfilling and grading of the mined areas so that the reclaimed area, including any terracing or access roads, closely resembles the general surface configuration of the land prior to mining and blends into and complements the drainage pattern of the surrounding terrain, with all the highwalls, refuse piles and spoil piles eliminated. Water impoundments may be permitted where the Board determines that they are in compliance with Section 34-33-120(2)(h) of the Act and 4.05.9, 4.05.17 and 4.16.
- (14) "Aquifer" means a zone, stratum or group of strata acting as a hydraulic unit that can store and transmit water in sufficient quantities for beneficial use.
- (15) "Area" (with respect to designation of an area as unsuitable in Rule 7) means an amount of surface land or water defined with sufficient precision so as to enable the Board and other interested persons to determine, with reasonable exactness, its location and size. An "area" is generally larger than, and may encompass more acreage than, a specific mine site.
- (16) "Auger mining" means a method of mining coal at a cliff or highwall by drilling holes into an exposed coal seam from the highwall and transporting the coal along an auger bit to the surface.
- (17) "Best technology currently available" means equipment, devices, systems, methods, or techniques which will (a) prevent, to the extent possible, additional contributions of suspended solids to stream flow or runoff outside the permit area but in no event result in contributions of suspended solids in excess of requirements set by applicable State or Federal laws; and (b) minimize, to the extent possible, disturbances and adverse impacts on fish, wildlife and related environmental values, and achieve enhancement of those resources where practicable. The term includes equipment, devices, systems, methods, or techniques which are appropriate for intended use and are currently available, as determined by the Division, even if they are not in routine use. The term includes, but is not limited to, construction practices, siting requirements, vegetation selection and planting requirements, animal stocking

requirements, scheduling of activities and design of sedimentation ponds in accordance with these Rules and the Act. Within the constraints of the Act and these Rules, the Division shall have the discretion to determine the best technology currently available on a case-by-case basis.

- (17a) "Blaster certification program" means the requirements set forth in Rule 6 to ensure that all blasting operations are conducted by trained and competent persons.
- 103(4) (18) "Board" means the Mined Land Reclamation Board created pursuant to Section 34-32-105, C.R.S.
- (19) "Cash" means (a) all cash items except cash (1) restricted by an agreement, or (2) described as earmarked for a particular purpose; and (b) short-term investments such as stock, bonds, notes, and certificates of deposit, where the intent and ability to sell them in the near future is established by the operator.
- (20) "Cemetery" means an area of land where human bodies are interred.
- (20a) "Certified blaster" means a person certified under the requirements of Rule 6 to be directly responsible for the blasting operations in surface coal mining operations, and surface blasting operations of underground coal mining operations. A certified blaster shall be familiar with the blasting requirements of Rule 2.05.4(6) and 4.08. A certified blaster is differentiated from a shotfirer certified by the State of Colorado in accordance with 34-21-116, C.R.S. A certified blaster has design responsibilities, whereas the shotfirer does not. The blaster certification applies only to surface blasting activities, whereas the shotfirer certification applies to surface and underground blasting activities.
- (21) "Coal" means combustible, carbonaceous rock, classified as anthracite, bituminous, subbituminous, or lignite, by the American Society of Testing and Materials, (ASTM) publication D-388-77, "Standard Specifications for Classification of Coal by Rank," pages 220 through 224. This publication is hereby incorporated by reference as it exists on the date of adoption of these regulations.
- (22) "Coal exploration" means (a) the field gathering of surface or subsurface geologic, physical, or chemical data by mapping, trenching, drilling, geophysical, or other techniques necessary to determine the

quality and quantity of overburden and coal of an area; (b) the disturbance of the natural land surface in the gathering of environmental data to establish the conditions of an area before beginning surface coal mining and reclamation operations under the requirements of these Rules; or (c) the gathering of any environmental data in an area designated unsuitable for surface coal mining operations.

- (22a) "Coal mine waste" means coal processing waste and underground development waste.
- (23) "Coal processing plant" means a collecting of facilities where coal is subjected to chemical or physical processing, including crushing and sizing, to separate the coal from its impurities and other activities necessary for the beneficiation of coal into a saleable form. These facilities may consist of, but need not be limited to: refuse pile reprocessing facilities, loading facilities; storage and stockpile facilities; sheds, shops and other buildings; water treatment and water storage facilities; settling basins and impoundments; coal processing and other waste disposal areas; roads, attendant railroads and other transport facilities.
- (24) "Coal processing waste" means earth materials which are separated and wasted from product coal, after physical processing to separate the coal from its impurities and other activities necessary for the beneficiation of coal into a saleable form.
- (25) "Collateral bond" means an indemnity agreement in a sum certain payable to the State executed by the permittee and which is supported by the deposit with the State of cash in a federally insured or equivalently protected account, negotiable bonds of the United States government or any political subdivision of this State endorsed to the order of the State, negotiable certificates of deposit, or an irrevocable letter of credit of any bank organized or transacting business in the United States.
- (26) "Combustible material" means organic material that is capable of burning, either as self-sustained fire or through oxidation, accompanied by the evolution of heat and a significant temperature rise.
- (27) "Community or institutional building" means any structure, other than public building or occupied dwelling, which is used primarily for meetings, gatherings or functions of local civic organizations or other

community groups; functions as an educational, cultural, historic, religious, scientific, correctional, mental health or physical health care facility; or is used for public services, including, but not limited to, water supply, power generation and sewage treatment.

- (28) "Compaction" means increasing the density of a material by reducing the voids between the particles and is generally accomplished by controlled placement and mechanical effort such as repeated application of wheel, track or roller loads from heavy equipment.
- (29) "Complete exploration application" means an application for exploration approval which contains all information required under 2.02 and the Act.
- 103(5) (30) "Complete permit application" means an application which minimally addresses each and every requirement of Rules 2 and 4 and Sections 34-33-110 and 34-33-111 and Sections 34-33-120 or 34-33-121 of the Act.
- (31) "Cropland" means land used for the production of adapted crops for harvest, alone or in a rotation with grasses and legumes, and includes row crops, small grain crops, hay crops, nursery crops, orchard crops, and other similar specialty crops.
- (31a) "Cumulative impact area" means the area which includes, at a minimum, the entire projected lives through bond release of: the proposed operation; all existing operations; any operation for which a permit application has been submitted to the Division; all other operations required to meet diligent development requirements for leased federal coal, for which there is actual mine development information available.
- (31b) "Current assets" means cash or other assets or resources which are reasonably expected to be converted to cash or sold or consumed within one year or within the normal operating cycle of the business.
- (31c) "Current liabilities" means obligations which are reasonably expected to be paid or liquidated within one year or within the normal operating cycle of the business.
- 103(6) (32) "Department" means the Department of Natural Resources.

- (33) "Designated Natural Areas" mean those areas designated pursuant to the Colorado Natural Areas Act, Section 36-10-101 *et seq.*, C.R.S.
- (34) "Direct financial interest" means ownership or part ownership by an employee of lands, stocks, bonds, debentures, warrants, partnership shares, or other holdings and also means any other arrangement where the employee may benefit from his or her holding in or salary from coal exploration, surface coal mining and reclamation operations or underground mining activities. Direct financial interests include employment, pensions, creditor, real property and other financial relationships.
- (35) "Director" means the Director, Office of Surface Mining Reclamation and Enforcement or the Director's representative.
- (36) "Disturbed area" means an area where vegetation, topsoil, or overburden is removed or upon which topsoil, spoil, coal processing waste, underground development waste or noncoal waste is placed by surface coal mining operations. Those areas are classified as disturbed until reclamation is completed and the performance bond or other assurance of performance required by Rule 3 is released.
- (37) "Diversion" means a channel, embankment, or other manmade structure constructed to divert water from one area to another or to change the route of a natural water course.
- 103(7) (38) "Division" means the Division of Mined Land Reclamation in the Department of Natural Resources.
- (39) "Downslope" means the land surface below the projected coal seam to be mined.
- (40) "Embankment" means an artificial deposit of material that is raised above the natural surface of the land and used to contain, divert, or store water, support roads or railways, or for other similar purposes.
- (41) "Employee" (regarding employee financial interests in Section 1.10) means:
- (a) Any person employed by the Division who performs any function or duty under the Act; and

- (b) Consultants to the Board or Division who perform any function or duty under the Act, which involves decision making functions for the Division under the authority of State law or regulations;
 - (c) But does not mean members of the Board.
- (42) "Ephemeral stream" means a stream which flows only in direct response to precipitation in the immediate watershed or in response to the melting of a cover of snow or ice, and which has a channel bottom that is always above the local water table.
- (43) "Essential hydrologic functions" means the role of an alluvial valley floor in collecting, storing, regulating, and making the natural flow of surface or ground water, or both, usefully available for agricultural activities by reason of the valley floor's topographic position, the landscape and the physical properties of its underlying materials. A combination of these functions provides a water supply during extended periods of low precipitation.
- (a) The role of the valley floor in collecting water includes accumulating runoff and discharge from aquifers in sufficient amounts to make the water available at the alluvial valley floor greater than the amount available from direct precipitation.
 - (b) The role of the alluvial valley floor in storing water involves limiting the rate of discharge of surface water, holding moisture in soils, and holding ground water in porous materials.
 - (c)
 - (i) The role of the alluvial valley floor in regulating the natural flow of surface water results from the characteristic configuration of the channel flood plain and adjacent low terraces.
 - (ii) The role of the alluvial valley floor in regulating the natural flow of ground water results from the properties of the aquifers which control inflow and outflow.
 - (d) The role of the alluvial valley floor in making water usefully available for agricultural activities results from the existence of flood plains and terraces where surface and ground water can be provided in sufficient quantities to support the growth of agriculturally useful plants, from the presence of earth materials

suitable for growth of agriculturally useful plants, from the temporal and physical distribution of water making it accessible to plants throughout the critical phases of the growth cycle either by flood irrigation or by subirrigation, from the natural control of alluvial valley floors in limiting destructive extremes of stream discharge, and from the erosional stability of earth materials suitable for the growth of agriculturally useful plants.

- (43a) "Excess spoil" means spoil material not necessary to achieve the approximate original contour, provided that spoil material used to blend the mined area with the surrounding terrain in non-steep slope areas shall not be considered excess spoil.
- 103(8) (44) "Executive Director" means the executive director of the Department of Natural Resources.
- (45) "Existing structure" means a structure or facility used in connection with or to facilitate surface coal mining and reclamation operations for which construction begins prior to the approval of a State program or implementation of a Federal program or Federal lands program, whichever occurs first.
- (46) "Extraction of coal as incidental part" means the extraction of coal which is necessary to enable the construction to be accomplished. For purposes of these Rules, only that coal extracted from within the right-of-way, in the case of a road, railroad, utility line or other construction, or within the boundaries of the area directly affected by other types of government-financed construction, may be considered incidental to that construction. Extraction of coal outside the right-of-way or boundary of the area directly affected by the construction shall be subject to the requirements of the Act and these Rules.
- (46a) "Farming", with respect to alluvial valley floors, is synonymous with the term "agricultural activities".
- 103(9) (47) "Federal land" means any land, including mineral interests, owned by the United States, but excluding Indian lands.
- (47a) "Fixed assets" means plants and equipment, but does not include land or coal in place.

- (48) "Flood irrigation" means, with respect to alluvial valley floors, supplying water to plants by natural overflow or the diversion of flows, so that the irrigated surface is largely covered by a sheet of water.
- (49) "Fragile lands" (e.g. designation of lands unsuitable) means geographic areas containing natural, ecologic, scientific or esthetic resources that may easily suffer damage or destruction by surface coal mining operations. Examples of fragile lands may include uncommon surface geologic formations, valuable habitats for fish or wildlife, critical habitats for endangered or threatened species of animals or plants, National Landmark Sites, Designated Natural Areas, areas where mining may cause flooding, environmental corridors containing a concentration of ecologic and esthetic features, areas of recreational value due to high environmental quality, and buffer zones adjacent to the boundaries of areas where surface coal mining operations are prohibited under Section 522(e) of 30 USC 1201 and 30 CFR 761.
- (50) "Fugitive dust" means that particulate matter not emitted from a duct or stack which becomes airborne due to the forces of wind or surface coal mining and reclamation operations or both. During such operations it may include emissions from haul roads; wind erosion of exposed surfaces, storage piles and spoil piles; reclamation operations and other activities in which material is either removed, stored, transported, or redistributed.
- (51) "General area" means, with respect to hydrology, the topographic and ground water basin surrounding the area to be mined during the life of the operation which is of sufficient size, including aerial extent and depth, to include one or more watersheds containing perennial streams and ground water systems and to allow assessment of the probable cumulative impacts on the quality and quantity of surface and ground water systems in the basins.
- (52) "Government financing agency" means a Federal, State, county, municipal, or local government body, or a department, bureau, agency or office of the unit which, directly or through another unit of government, finances construction.
- (53) "Government-financed construction" means construction funded 50 percent or more by funds appropriated from a government financing agency's budget or obtained from general revenue bonds, but shall not mean government financing agency guarantees, insurance, loans, funds

obtained through industrial revenue bonds or their equivalent, or in-kind payments.

- (54) "Ground water" means subsurface water that fills available openings in rock, soil materials or unconsolidated sediment to the extent that they are considered water saturated.
- (55) "Half-shrub" means a perennial plant with a woody base whose annually produced stems die back year to year. For the purposes of 2.04.10 and 4.15, half-shrubs shall be treated as perennial herbaceous vegetation.
- (56) "Head-of-hollow fill" means a fill structure consisting of any material, other than coal processing waste and organic material, placed in the uppermost reaches of a hollow where side slopes of the existing hollow measured at the steepest point are greater than 20' or the average slope of the profile of the hollow from the toe of the fill to the top of the fill is greater than 10'. In fills with less than 250,000 cubic yards of material, associated with contour mining, the top surface of the fill will be at the elevation of the coal seam. In all other head-of-hollow fills, the top surface of the fill, when completed, is at approximately the same elevation as the adjacent ridge line, and no significant area of natural drainage occurs above the fill draining into the fill area.
- (57) Deleted.
- (58) "Highwall" means the face of exposed overburden and coal in an open cut of surface coal mining operations or for entry to underground mining operations.
- (59) "Historic lands" means historic or cultural districts, places, structures or objects, including archeological sites; National Historic Landmark sites; sites listed on, or eligible for listing on, after a survey, a State or National Register of Historic Places; sites having religious or cultural significance to native Americans or religious groups or sites for which historic designation is pending.
- (60) "Historically used for cropland" means (1) lands that have been used for cropland for any 5 years or more out of the 10 years immediately preceding the acquisition, including purchase, lease, or option, of the land for the purpose of conducting or allowing through resale, lease or option the conduct of surface coal mining operations; (2) lands that the

Division determines, on the basis of additional cropland history of the surrounding lands and the lands under consideration, that the permit area is clearly cropland but falls outside the specific 5-years-in-10 criterion, in which case the regulations for prime farmland may be applied to include more years of cropland history only to increase the prime farmland acreage to be preserved; or (3) lands that would likely have been used as cropland for any 5 out of the last 10 years immediately preceding such acquisition but for the fact of ownership or control of the land unrelated to the productivity of the land.

- (61) "Hydrologic balance" means the relationship between the quality and quantity of water inflow to, water outflow from, and water storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake, or reservoir. It encompasses the dynamic relationships among precipitation, runoff, evaporation, transpiration, and changes in ground and surface water storage.
- (62) "Hydrologic regime" means the entire state of water movement in a given area. It is a function of the climate and geology, and includes the phenomena by which water first occurs as atmospheric water vapor, passes into a liquid or solid form, falls as precipitation, moves along the ground surface, or into and through the subsurface, and returns to the atmosphere as vapor by means of evaporation and transpiration.
- 103(11) (63) "Imminent danger to the health and safety of the public" means the existence of any condition or practice, or any violation of a permit or other requirement of these Rules in a surface coal mining and reclamation operation which could reasonably be expected to cause substantial physical harm to persons outside the permit area before such condition, practice, or violation can be abated. A reasonable expectation of death or serious injury before abatement exists if a rational person, subjected to the same conditions, or practices giving rise to peril, would not expose himself to the danger during the time necessary for abatement.
- (63a) "Impounding structure" means a dam, embankment or other structure used to impound water, slurry, or other liquid or semi-liquid material.
- (64) "Impoundment" means a basin, naturally formed or artificially built, which is built to or does in fact retain water, sediment, or slurried waste in support of mining and reclamation operations. The immediate active mining pit area is not included.

- 103(12) (65) "Indian lands" means all lands, including, but not limited to, mineral interests within the exterior boundaries of any Federal Indian reservation, notwithstanding the issuance of any patent, and including right-of-way and all lands including mineral interests held in trust for or supervised by any Indian tribe.
- 103(13) (66) "Indian tribe" means any Indian tribe, band, group, or community having a governing body recognized by the Secretary of the United States Department of the Interior.
- (67) "Indirect financial interest" means the same financial relationships as for direct ownership, but where the employee reaps the benefits of such interests, including interests held by his or her spouse, minor child and other relatives, including in-laws, residing in the employee's home. The employee will not be deemed to have an indirect financial interest if there is no relationship between the employee's functions or duties and the coal exploration, surface coal mining and reclamation operations or underground mining activity in which the spouse, minor children or other resident relatives hold a financial interest. For purposes of this provision, ownership of shares in mutual funds or other similar diversified investment funds that have interests in coal or coal related firms does not constitute a prohibited indirect financial interest.
- (68) "In situ processes" means activities conducted on the surface or underground in connection with in-place distillation, retorting, leaching, or other chemical or physical processing of coal. The term includes, but is not limited to, in situ gasification, in situ leaching, slurry mining, solution mining, borehole mining and fluid recovery mining.
- (69) "Intermittent stream" means a stream or reach of a stream that is below the local water table for at least some part of the year, and obtains its flow from both surface runoff and ground water discharge.
- (70) "Irreparable damage to the environment" and "Irreparable harm to the environment" mean any damage to the environment that cannot be corrected by actions of the applicant.
- (70a) "Knowingly" means, with respect to individual civil penalties, that an individual knew or had reason to know in authorizing, ordering or carrying out an act or omission on the part of a corporate permittee that

such act or omission constituted a violation, failure or refusal to comply with any regulatory requirements or order of the Board.

- (71) "Land use" means specific uses or management-related activities rather than the vegetation or cover of the land. Land uses may be identified in combination when joint or seasonal uses occur. All of the land uses defined below may include land used for support facilities which are adjacent to, or are an integral part of the land use. Changes of land uses or uses from one of the following categories to another as a result of surface coal mining and reclamation operations shall be considered as a change to an alternative land use which is subject to approval by the Division.
- (a) "Cropland" means land used for the production of adapted crops for harvest, alone or in rotation with grasses and legumes, and includes row crops, small grain crops, hay crops, nursery crops, orchard crops, and other similar specialty crops.
 - (b) "Pastureland" means land which is used for the production of adapted, domesticated forage plants for livestock grazing or occasional hay production. Pastureland maintenance entails cultural inputs such as seeding, irrigation, fertilization, brush control and pest control.
 - (c) "Rangeland" means land on which plant cover is principally valuable for forage. Except for brush control, management is primarily achieved by regulating the intensity of grazing and season of use.
 - (d) "Forestry" means use or management of land for the long-term production of wood, wood fiber, or wood-derived products.
 - (e) "Residential" means use of land for single- and multiple-family housing, mobile home parks, and other residential lodgings. Support facilities include, but are not limited to, vehicle parking and open space that directly relate to the residential use.
 - (f) "Industrial or Commercial" means use of land for:
 - (i) Extraction or transformation of materials for fabrication of products, wholesaling of products or for long-term storage of products. This includes all heavy and light manufacturing

facilities such as lumber and wood processing, chemical manufacturing, petroleum refining, and fabricated metal products manufacture. Support facilities include, but are not limited to, all rail, road, and other transportation facilities.

- (ii) Retail or trade of goods or services, including hotels, motels, stores, restaurants, and other commercial establishments. Support facilities include, but are not limited to, parking, storage or shipping facilities.
 - (iii) Developed commercial recreation, including facilities such as amusement parks, athletic or recreational sports facilities, and other intensive use recreational facilities. This designation applies only to lands which are physically developed for intensive recreational use, and does not include adjacent lands which are not physically affected.
- (g) "Recreation" means use of land for non-intensive public or private leisure-time uses, such as hiking, canoeing, and other undeveloped recreational uses.
- (h) "Fish and wildlife habitat" means land used wholly or partially in the production, protection or management of species of fish or wildlife.
- (i) "Developed water resources" means use of land for storing water for beneficial uses such as stockponds, irrigation, fire protection, flood control, and water supply.
- (j) "Undeveloped land" means land with no current use or level of management. It includes land that has never been developed, or if previously developed, land that has been allowed to return naturally to an undeveloped state or has been allowed to return to forest through natural succession.
- (71a) "Liabilities" means obligations to transfer assets or provide services to other entities in the future as a result of past transactions.
- (72) "Materially damage the quantity or quality of water" means, with respect to alluvial valley floors, changes in the quality or quantity of the water supplied to subirrigated or flood irrigated areas on alluvial valley floors significant to farming where such changes are caused by surface

coal mining and reclamation operations and result in changes that significantly and adversely affect the capability of the alluvial valley floor to support farming.

- (73) "Minor revision" means a modification in permit provisions to reflect minor alterations in the location of roads or other facilities within the permit area, minor alterations in the timing or sequencing of mining or reclamation plans approved in accordance with the requirements of these Rules or other minor alterations in surface coal mining and reclamation operations which shall not cause a significant alteration in the permittee's reclamation plan.
- (74) "Mulch" means vegetation residues or other suitable materials that aid in soil stabilization and soil moisture conservation, thus providing micro-climatic conditions suitable for plant germination and growth.
- (75) "Natural hazard areas" means geographic areas in which natural conditions exist which pose, or as a result of surface coal mining operations, may pose a threat to the health, safety or welfare of people, property or the environment, including areas subject to landslides, cave-ins, severe wind or soil erosion, frequent flooding, avalanches and areas of unstable geology.
- (76) "Net worth" means total assets minus total liabilities and is equivalent to owners' equity.
- (77) "No significant recreational, timber, economic or other values incompatible with surface coal mining operations" means those significant values which could be damaged by, and are not capable of existing together with, surface coal mining operations because of the undesirable effects mining would have on those values, either on the area included in the permit application or on off-site areas which could be affected by mining. Those values to be evaluated for their importance include:

- (a) Recreation, including hiking, boating, camping, skiing, or other related outdoor activities;
 - (b) Timber management or silviculture;
 - (c) Agriculture, aquaculture or production of other natural, processed or manufactured products which enter commerce; and
 - (d) Scenic, historic, archeologic, esthetic, fish, wildlife, plants, or cultural interests.
- (78) "Noxious weeds" means species that have been included on official State or county lists of noxious weeds.
- (79) "Occupied dwelling" means any building that is currently being used on a regular or temporary basis for human habitation.
- 103(14) (80) "Operator" means any person engaged in surface coal mining and reclamation operations who removes or intends to remove more than 250 tons of coal from the earth or from coal mine waste disposal facilities within 12 consecutive calendar months in any one location.
- 103(15) (81) "Other minerals" means clay, stone, sand, gravel, metalliferous and nonmetalliferous ores, oil shale and oil extracted from shale by an in situ process, and any other solid material or substances of commercial value excavated in solid form from natural deposits on or in the earth, exclusive of coal and those minerals which occur naturally in liquid or gaseous form.
- (81a) "Other treatment facilities" means any chemical treatments, such as flocculation or neutralization, or mechanical structures, such as, but not limited to, clarifiers or precipitators, that have a point source discharge and are utilized:
- (i) to prevent additional contributions of dissolved or suspended solids to streamflow or runoff outside the permit area; or
 - (ii) to comply with all applicable State and Federal water-quality laws and regulations.

- (82) "Outslope" means the face of the spoil or embankment sloping downward from the highest elevation to the toe.
- (83) "Overburden" means for surface coal mining activities, materials of any nature, consolidated or unconsolidated, that overlies a coal deposit, excluding topsoil.
- (83a) "Owned or controlled" and "owns or controls" means any one or a combination of the relationships specified in paragraphs (a) and (b) of this definition -
 - (a) (1) Being a permittee of a surface coal mining operation; (2) based on instruments of ownership or voting securities, owning of record in excess of 50 percent of an entity; or (3) having any other relationship which gives one person authority directly or indirectly to determine the manner in which an applicant, an operator, and other entity conducts surface coal mining operations.
 - (b) The following relationships are presumed to constitute ownership or control unless it can be demonstrated that the person subject to the presumption does not in fact have the authority directly or indirectly to determine the manner in which the relevant surface coal mining operation is conducted:
 - (i) Being an officer or director of an entity;
 - (ii) Being the operator of a surface coal mining operation;
 - (iii) Having the ability to commit the financial or real property assets or working resources of an entity;
 - (iv) Being a general partner in a partnership;
 - (v) Based on the instruments of ownership or the voting securities of a corporate entity, owning of record 10 through 50 percent of the entity; or
 - (vi) Owning or controlling coal to be mined by another person under a lease, sublease or other contract and having the right to receive such coal after mining or having authority to determine the manner in which that person or another person conducts a surface coal mining operation.

- (83b) "Parent corporation" means a corporation which owns or controls the applicant.
- (84) "Perennial stream" means a stream or part of a stream that flows continuously during all of the calendar year as a result of ground water discharge or surface runoff. The term does not include intermittent stream or ephemeral stream.
- (85) "Performance bond" means a surety bond, collateral bond, or self-bond or a combination thereof, by which a permittee assures faithful performance of all the requirements of the Act, these Rules, the permit, and the reclamation plan.(86) "Permanent diversion" means a diversion remaining after surface coal mining and reclamation operations are completed which have been approved for retention by the Board and Division and other appropriate State and Federal agencies.
- (86a) "Permanent impoundment" means an impoundment which is approved by the Division, and if required, by other State and Federal agencies for retention as part of the post-mining land use.
- 103(16) (87) "Permit" means a permit to conduct surface coal mining and reclamation operations.
- 103(17) (88) "Permit applicant" means a person applying for a permit.
- 103(18) (89) "Permit area" means the area of land indicated on the approved map submitted by the operator with his/her application, which area of land shall be covered by the operator's bond as required by the Act and these Rules. The permit boundary, which shall circumscribe the permit area, shall be identified through a complete and detailed legal description as required by Rule 2.03.6. Permit area includes all areas of land which are or will be affected by surface coal mining and reclamation operations during the term of the permit.
- 103(19) (90) "Permit revision" means a significant alteration of the terms or requirements of a permit issued under the Rules and the Act, including, but not limited to, significant changes in the reclamation plan, and other actions which the Board may by regulation prescribe. "Permit revision" does not include a technical revision as defined in 1.04(136).

- 103(20) (91) "Permittee" means a person holding a permit.
- 103(21) (92) "Person" means an individual, partnership, association, society, joint stock company, firm, company, corporation, Indian tribe conducting surface coal mining and reclamation operations outside Indian lands, any other business organization, and any agency, unit or instrumentality of Federal, State, or local government including any publicly owned utility or publicly owned corporation of Federal, State, or local government.
- (93) "Person having an interest which is or may be adversely affected or person with a valid legal interest" shall include any and all persons.
- (93a) "Point of compliance" means any geographic location at which compliance with applicable ground water quality standards established by the Water Quality Control Commission must be attained and where this compliance will be demonstrated by compliance monitoring of the groundwater or by other valid means approved by the Division.
- (94) "Precipitation event" means a quantity of water resulting from drizzle, rain, snow, sleet, or hail in a limited period of time. It may be expressed in terms of recurrence interval. As used in these Rules, precipitation event also includes that quantity of water emanating from snow cover as snowmelt in a limited period of time.
- (95) "Prime farmland" means land which has been historically used for cropland and that, in accordance with 7 C.F.R. 657, as amended, has the best combination of physical and chemical characteristics of producing food, feed, forage, fiber and oilseed crops, is also available for these uses and as interpreted by the USDA Soil Conservation Service for Colorado.
- (96) "Principal shareholder" means any person who is the record or beneficial owner of 10 percent or more of any class of voting stock.
- (97) "Probable cumulative impacts" means the expected total qualitative and quantitative effects of surface coal and reclamation operations on the hydrologic regime.
- (98) "Probable hydrologic consequence" means the projected result of proposed surface coal mining and reclamation operations which may reasonably be expected to change the quantity or quality of the surface

and ground water; the depth to ground water; the surface or ground water flow, timing and pattern; the stream channel conditions; and the aquatic habitat on the permit area and other affected areas.

- (99) "Productivity" means the vegetation yield produced by a unit area for a unit of time.
- (100) "Property to be mined" means both the surface and mineral estates on and underneath lands within the permit area.
- (101) "Public building" means any structure that is owned by a public agency or used principally for public business, meetings or other group gatherings.
- (102) "Public Office" means a facility under the direction and control of a governmental entity which is open to public access on a regular basis during reasonable business hours.
- (103) "Public park" means an area dedicated or designated by any Federal, State, or local agency for public recreational use, whether or not such use is limited to certain times or days, including any land leased, reserved or held open to the public because of that use.
- (103a) "Reasonably available spoil" means spoil and suitable coal mine waste material generated by a re-mining operation, or other spoil or suitable coal mine waste material located in the permit area that is accessible and available for use and that when rehandled will not cause a hazard to public safety or significant damage to the environment.
- (104) "Recharge capacity" means the ability of the soils and underlying materials to allow precipitation and runoff to infiltrate and reach a zone of saturation.
- (105) "Reclamation" means any activity or procedure required to achieve compliance with a reclamation plan approved under 2.05 including any necessary work required for compliance with the Act and these Rules.
- 103(23) (106) "Reclamation plan" means a plan submitted by an applicant in accordance with these Rules and the Act which sets forth a plan for reclamation of the proposed surface coal mining operations pursuant to Rule 2 and Section 34-33-111 of the Act.

- (107) "Recurrence interval" means the interval of time in which a precipitation event is expected to occur once, on the average. For example, the 10-year, 24-hour precipitation event would be that 24-hour precipitation event expected to occur, on the average, once in 10 years.
- (108) "Reference area" means a land unit maintained under management approved by the Division for the purpose of measuring vegetation ground cover, productivity and plant species diversity that is produced naturally or by crop production methods. Reference areas must be representative of geology, soil, slope, and vegetation in the permit area as determined by premining inventories.
- (108a) "Refuse pile" means a surface deposit of coal mine waste that does not impound water, slurry, or other liquid or semi-liquid material.
- (109) "Regional Director" means the Director of the Region V Office of Surface Mining or the Regional Director's representative.
- (110) "Renewable resource lands" means aquifers and areas for the recharge of aquifers, areas for agricultural or silvicultural production of food and fiber, and pasturelands.
- (111) "Road" means a surface right-of-way for purposes of travel by land vehicles used in coal exploration or surface coal mining and reclamation operations. A road consists of the entire area within the right-of-way, including the roadbed, shoulders, parking and side area, approach structures, ditches, surface, and such contiguous appendages as are necessary for the total structure. The term does not include public roads, ramps, and routes of travel within or adjacent to the immediate mining pit area or within spoil or coal mine waste disposal areas.
 - (a) "Haul road" means any road used for the transportation of coal, spoil or coal mine waste.
 - (b) "Access road" means roads frequently traveled or used for purposes other than the transportation of coal, spoil or coal mine waste, including, but not limited to, roads used for supervision of mining operations, or servicing major facilities including sedimentation or monitoring facilities, or other frequent uses.
 - (c) "Light-use road" means roads infrequently traveled or used on an intermittent basis for purposes other than transportation of coal,

spoil or coal mine waste, including, but not limited to, roads used for monitoring, periodic maintenance of monitoring facilities, or other occasional uses.

- (112) "Safety factor" means the ratio of the available shear strength to the developed shear stress or the ratio of the sum of the resisting forces to the sum of the loading or driving forces, as determined by accepted engineering practices.
- 103(24) (113) "Secretary" means the Secretary of the Interior.
- (114) "Sediment" means undissolved organic or inorganic material transported or deposited by water.
- (115) "Sedimentation Pond" means an impoundment used as a primary sediment control structure to remove solids from water to meet water-quality standards or effluent limitations before the water leaves the permit area. In accordance with C.R.S. 37-87-114.5, the State Engineer's requirements at C.R.S. 37-87-105 through 37-87-114 are not applicable to those structures designed solely to control sediment or which do not store water. Secondary sedimentation control measures, such as ditches, riprap, check dams, mulches, and other measures to reduce overland flow velocity, reduce runoff volume or trap sediment shall not be considered a sedimentation pond, but may contribute to the sediment control program for a drainage.
- (116) "Self-bond" means an indemnity agreement in a sum certain executed by the applicant or by the applicant and any corporate guarantor and made payable to the Division with or without separate surety.
- (117) "Significant, environmental harm to land, air or water resources" means:
- (a) An environmental harm is an adverse impact on land, air or water resources which resources include, but are not limited to, plant and animal life.
 - (b) An environmental harm is significant if that harm is appreciable and not immediately repairable.
- (118) "Significant forest cover" means an existing plant community consisting predominantly of trees and other woody vegetation. The Secretary of

Agriculture shall decide on a case-by-case basis whether the forest cover is significant within those National Forests west of the 100th meridian.

- (119) "Slope" means average inclination surface, measured from the horizontal, generally expressed as a ratio of a unit of vertical distance to a given number of units of horizontal distance (e.g. 5h:1v). It may also be expressed as a percent or in degrees.
- (120) "Soil horizon" means the layers of soil parallel or nearly parallel to the land surface. Major soil horizons are defined as the O, A, E, B and C horizons as defined by the U.S.D.A. Soil Conservation Service in the National Soils Handbook.
- (121) "Soil survey" means field and related investigation, resulting in a map showing the geographic distribution of different kinds of soils and an accompanying report that describes, classifies and interprets such soils for use. Soil surveys must meet the standards of the National Cooperative Soil Survey.
- (122) "Spoil" means overburden that has been removed during surface coal mining operations.
- (123) "Stabilize" means to prevent undesirable movement of soil, spoil piles, or areas of disturbed earth by modifying the configuration of the mass, or by otherwise modifying the physical or chemical properties, such as providing a protective surface coating.
- (124) "State or local land use plans or programs" means all State, regional, county, municipal or city land use plans which have been formally and officially approved and adopted by the State or local legislative body; however, in the event that there is no plan which meets the above requirements, if a land use plan exists which has not yet been approved and adopted by the State or local legislative body, but has been approved by the appropriate State or local planning agency, then such plan is a "plan or program" for purposes of this definition if it has been given force and effect by the State or local planning officials.
- 120(4)(b) (125) "Steep slope" means any slope of more than 20' or such lesser slope as may be designated by the Board or Division after consideration of soil, climate, and other characteristics of the region.

- (126) "Subirrigation" means, with respect to alluvial valley floors, the supplying of water to agriculturally useful plants from underneath or from a partially saturated or saturated subsurface zone where water is available for use by those plants. Subirrigation may be identified by:
- (a) Diurnal fluctuation of the water table, due to the differences in nighttime and daytime evapotranspiration rates;
 - (b) Increasing soil moisture from a portion of the root zone down to the saturated zone, due to capillary action;
 - (c) Mottling the soils in the root zones;
 - (d) Existence of an important part of the root zone within the capillary fringe or water table of an alluvial aquifer; or
 - (e) An increase in streamflow or a rise in ground water levels, shortly after the first killing frost on the valley floor.
- (127) "Substantially disturb" means, for purposes of coal exploration, to impact significantly upon land, air, or water resources by such activities as blasting, removal of significant amounts of vegetation, mechanical excavation, drilling or altering coal or water exploratory holes or wells, construction of roads and other access routes, the placement of permanent structures, excavated earth, or other debris on the surface of land or removal of more than 250 tons of coal.
- (128) "Substantial legal and financial commitments in a surface coal mining operation" means significant investments that have been made on the basis of a long-term coal contract in power plants, railroads, coal-handling, preparation, extraction or storage facilities and other capital-intensive activities. An example would be an existing mine, not actually producing coal, but in a substantial stage of development prior to production. Costs of acquiring the coal in place or of the right to mine it without an existing mine, as described in the above example, alone are not sufficient to constitute substantial legal and financial commitments.
- 115(2) (129) "Successor in interest" means any person who succeeds to rights granted under a permit, by transfer, assignment, or sale of those rights.

- (130) "Surety bond" means an indemnity agreement in a sum certain payable to the State executed by the permittee which is supported by the performance guarantee of a corporation licensed to do business as a surety in Colorado.
- (131) "Surface coal mining activities" means those surface coal mining and reclamation operations incident to the extraction of coal from the earth by removing the materials over a coal seam, before removing the coal, by auger coal mining or by recovery of coal from a deposit that is not in its original geologic location.
- (132) "Surface coal mining operations" means:
- (a) Activities conducted on the surface of lands in connection with a surface coal mine or activities subject to the requirements of Section 34-33-121 of the Act and Rule 4 which involve surface operations and surface impacts incident to an underground coal mine. Such activities include excavation for the purpose of obtaining coal, including such common methods as contour, strip, auger, mountaintop removal, box cut, open pit, and area mining, removal of coal from coal mine waste disposal facilities, the use of explosives and blasting, and the use of in situ distillation or retorting, leaching or other chemical or physical processing, and the cleaning, concentrating, or other processing or preparation, loading of coal for interstate commerce at or near the mine site; except that such activities do not include any of the following: Coal exploration subject to Section 34-33-117 of the Act and 2.02, the exploration and extraction of natural petroleum in a liquid or gaseous state by means of wells or pipe, or the extraction of geothermal resources; and
 - (b) The areas upon which such activities occur or where such activities disturb the natural land surface. Such areas shall also include any adjacent land the use of which is incidental to any such activities, all lands affected by the construction of new roads or the improvement or use of existing roads to gain access to the site of such activities and for haulage, excavations, workings, impoundments, dams, ventilation shafts, entryways, refuse banks, dumps, stockpiles, overburden piles, spoil banks, culm banks, tailings, holes or depressions, repair areas, storage areas, processing areas, shipping areas, and other areas upon which are

sited structures, facilities, or other property or materials on the surface, resulting from or incident to such activities.

- 103(25) (133) "Surface coal mining and reclamation operations" means surface coal mining operations and all activities necessary and incident to the reclamation of such operations.
- (134) "Surface water" means water that is either flowing or standing on the surface of the earth.
- (135) "Suspended solids or nonfilterable residue" (expressed as milligrams per liter), means organic or inorganic materials carried or held in suspension in water which are retained by a standard glass fiber filter in the procedure outlined by the Environmental Protection Agency's regulations for waste water and analyses (40 CFR 136).
- (135a) "Tangible net worth" means net worth minus intangibles such as goodwill and rights to patents or royalties.
- 103(27) (136) "Technical revision" means a minor change, including incidental permit boundary revisions, to the terms or requirements of a permit issued under these Rules, which change shall not cause a significant alteration in the operator's reclamation plan. The term includes, but is not limited to, increases in coal production, reduction or termination of approved environmental monitoring programs, or design changes for regulated structures or facilities.
- (137) "Temporary diversion" means a diversion of a stream or overland flow which is used during coal exploration or surface coal mining and reclamation operations and not approved by the Division to remain after reclamation as part of the approved postmining land use.
- (137a) "Temporary impoundment" means an impoundment used during surface coal mining and reclamation operations, but not approved by the Division to remain as part of the approved post-mining land use.
- (138) "Ton" means 2000 pounds avoirdupois (.90718 metric ton).
- (139) "Toxic-forming materials" means earth materials or wastes which, if acted upon by air, water, weathering, or microbiological processes, are likely to produce chemical or physical conditions in soils or water that are detrimental to biota or uses of water.

- (140) "Toxic mine drainage" means water that is discharged from active or abandoned mines or other areas affected by coal exploration or surface coal mining and reclamation operations, which contains a substance that through chemical action or physical effects is likely to kill, injure, or impair biota commonly present in the area that might be exposed to it.
- (141) "Transfer, assignment, or sale of rights" means a change in ownership or other effective control over the right to conduct surface coal mining and reclamation operations under a permit issued by the Division.
- (142) "Unconsolidated stream-laid deposits holding streams" means, with respect to alluvial valley floors, all flood plains and terraces located in the lower reaches of valleys which contain perennial or other streams with channels that are greater than 3 feet in bankfull width and greater than 0.5 feet in bankfull depth.
- (143) "Underground development waste" means waste rock mixtures of coal, shale, claystone, siltstone, sandstone, limestone, or related materials that are excavated, moved, and disposed of during development and preparation of areas incident to underground mining activities.
- (144) "Underground mining activities" means a combination of:
 - (a) Surface operations incident to underground extraction of coal or in situ processing, such as construction, use, maintenance, and reclamation of roads, above-ground repair areas, storage areas, processing areas, shipping areas, areas upon which are sited support facilities including hoist and ventilating ducts, areas utilized for the disposal and storage of waste, and areas on which materials incident to underground mining operations are placed; and
 - (b) Underground operations such as underground construction, operation, and reclamation of shafts, adits, underground support facilities, in situ processing, and underground mining, hauling, storage, and blasting, subject to review for surface and hydrologic impacts in accordance with Rules 2 and 4.
- (145) "Undeveloped rangeland" means, for purposes of alluvial valley floors, lands where the use is not specifically controlled and managed.

- 103(28)
- (146) "Unwarranted failure to comply" means the failure of a permittee to (1) prevent the occurrence of any violation of his permit or any requirement of these Rules due to indifference, lack of diligence, or lack of reasonable care or (2) the failure to abate any violation of such permit or this article due to indifference, lack of diligence, or lack of reasonable care.
 - (147) "Upland areas" means, with respect to alluvial valley floors, those geomorphic features located outside the flood plain and terrace complex, such as isolated higher terraces, alluvial fans, pediment surfaces, landslide deposits, and surfaces covered with residuum, mud flows or debris flows, as well as highland areas underlain by bedrock and covered by residual weathered material or material deposited by sheetwash, rillwash, or wind.
 - (148) "Valley fill" means a fill structure consisting of any material other than coal waste and organic material that is placed in a valley where side slopes of the existing valley measured at the steepest point are greater than 20E or the average slope of the profile of the valley from the toe of the fill to the top of the fill is greater than 10E.
 - (149) "Valid existing rights" means:
 - (a) Except for haul roads,
 - (i) Those property rights in existence on August 3, 1977, that were created by a legally binding conveyance, lease, deed, contract or other document which authorizes the applicant to produce coal by surface coal mining operations; and
 - (ii) The person proposing to conduct surface coal mining operations on such lands either:
 - (A) Had been validly issued, on or before August 3, 1977 all State and Federal permits necessary to conduct such operations on those lands, or
 - (B) Can demonstrate to the Division that the coal is both needed for, and immediately adjacent to, an on-going surface coal mining operation for which all permits were obtained prior to August 3, 1977;

- (b) For haul roads, "valid existing rights" means:
 - (i) A recorded right of way, recorded easement or a permit for a coal haul road recorded as of August 3, 1977, or
 - (ii) Any other road in existence as of August 3, 1977.
- (150) "Violation notice" means any written notification from a governmental entity of a violation of law, whether by letter, memorandum, legal or administrative pleading, or other written communication.
- (151) "Water table" means the upper surface of a zone of saturation, where the body of ground water is not confined by an overlying impermeable zone.
- (152) "Willful violation" means an act or omission which violates the Act, these Rules, P. L. 95-87, or 30 CFR Chapter VII, or any permit condition committed by a person who intends the result which actually occurs.
- (153) "Willfully" means that, with respect to individual civil penalties, that an individual acted:
 - (a) Either intentionally, voluntarily or consciously; and
 - (b) With intentional disregard or plain indifference to legal requirements in authorizing, ordering or carrying out a corporate permittee's action or omission that constituted a violation, failure or refusal to comply with any regulatory requirements or order of the Board.

1.05 APPLICABILITY

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1.05.1 General.

- (1) These Rules shall apply to all coal exploration and surface coal mining and reclamation operations, except:
 - (a) The extraction of coal by a landowner for his or her own non-commercial use from land owned or leased by him or her. Non-commercial use does not include the extraction of coal by one unit of an integrated company or other business or non-profit

entity which uses the coal in its own manufacturing or power plants;

129(1)(c)

(b) The extraction of coal as an incidental part of Federal, State or local government financed highway or other construction; however, any person extracting coal incident to government financed highway or other construction who extracts more than 250 tons of coal shall maintain, on the site of the extraction operation and available for inspection, appropriate documents for the construction.

(2) The Division may on its own initiative and shall, within 10 working days of a request from any person who intends to conduct surface coal mining operations, make a written determination whether the operation is exempt under this rule. The Division shall give reasonable notice of the request to interested persons. Before the time a determination is made, any person may submit, and the Division shall consider, any written information relevant to the determination. A person requesting that an operation be declared exempt shall have the burden of establishing the exemption. If a written determination of exemption is reversed through subsequent administrative or judicial action, any person who, in good faith, has made a complete and accurate request for an exemption and relied upon the determination, shall not be cited for violations which occurred prior to the date of the reversal.

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1.05.2 Public Agencies, Public Utilities, and Public Corporations.

Any agency, unit, or instrumentality of the State or local government, including any publicly owned utility or publicly owned corporation of State or local government, which proposes to engage in surface coal mining operations, which are subject to the requirements of the Act and these Rules, shall comply with the provisions of this Act and these Rules.

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1.06 PETITIONS TO INITIATE RULEMAKING

(1) Any person may petition the Board to initiate a proceeding for the issuance, amendment or repeal of any Rule under the Act. The petition shall be submitted to the Mined Land Reclamation Board; Department of Natural Resources; 1313 Sherman Street, Room 215; Denver, Colorado 80203.

- (2) The petition shall be a concise statement of the facts, technical justification and law which require issuance, amendment or repeal of a Rule under the Act and shall indicate whether the petitioner desires a public hearing.
- (3) Upon receipt of the petition, the Board shall determine if the petition sets forth facts, technical justification and law which may provide a reasonable basis for issuance, amendment or repeal of the Rules. Amendment, repeal or revision of the Federal Surface Mining Control and Reclamation Act (P.L. 95-87) or regulations promulgated thereto shall be considered to provide a reasonable basis. The Board shall conduct an investigation or take other action to determine whether the petition shall be granted and may hold a hearing if appropriate. If the Board determines that the petition has a reasonable basis, a notice shall be published in the newspaper of the largest circulation for the State and the monthly mailing list seeking comments from the public on the proposed change.
- (4) Within 90 days from receipt of the petition, the Board shall issue a written decision either granting or denying the petition. The Board's decision shall constitute the final decision.
 - (a) If the petition is granted, the Board shall initiate a rulemaking proceeding.
 - (b) If the petition is denied, the Board shall notify the petitioner in writing, setting forth the reasons for denial.

135 **1.07 NOTICE OF CITIZEN SUITS**

- (1) Any person having an interest which is or may be adversely affected may commence a civil action on his or her own behalf to compel compliance with the provisions of these Rules and the Act according to the provisions set forth in Section 34-33-135 of the Act.
- 135(2)(a), (b)
- (2) A person who intends to initiate a civil action on his or her own behalf shall give notice of intent to do so, in accordance with 1.07.
 - (3) Notice shall be given by certified mail to the Administrator and Attorney General.

- (4) Notice shall be given by certified mail to the alleged violator, if the complaint alleges a violation of the Act or any Rule, order or permit issued under the Act.
- (5) Service of notice under 1.07 is complete upon mailing to the last known address of the person being notified.
- (6) A person giving notice regarding an alleged violation shall state, to the extent known:
 - (a) Sufficient information to identify the provision of the Act, Rule, order or permit allegedly violated;
 - (b) The act or omission alleged to constitute a violation;
 - (c) The name, address and telephone numbers of the person or persons responsible for the alleged violation;
 - (d) The date, time and location of the alleged violation;
 - (e) The name, address and telephone number of the person giving notice; and
 - (f) The name, address and telephone number of the legal counsel, if any, for the person giving notice.
- (7) A person giving notice of an alleged failure by the Board or Division to perform a mandatory act or duty under the Act shall state, to the extent known:
 - (a) The provision of the Act containing the mandatory act or duty allegedly not performed;
 - (b) Sufficient information to identify the omission alleged to constitute the failure to perform a mandatory act or duty under the Act;
 - (c) The name, address and telephone number of the person giving notice; and
 - (d) The name, address and telephone number of the legal counsel, if any, for the person giving notice.

1.08 AVAILABILITY OF RECORDS

- (1) Records required by these Rules and the Act except those records of a confidential, proprietary nature as determined consistent with the provisions of the Rules, shall be made available to the public at the Division's office.
- (2) Other records or documents, not containing confidential, proprietary information as determined consistent with the applicable provisions of these Rules, in the possession of the Division or Board may be requested in accordance with both the Act and these Rules, and Section 24-6-101, *et seq.*, C.R.S., known as the Colorado Sunshine Law.

1.09 COMPUTATION OF TIME

- (1) Except as otherwise provided, computation of time under these Rules is based on calendar days.
- (2) In computing any period of prescribed time, the day on which the designated period of time begins is not included. The last day of the period is included unless it is a Saturday, Sunday or legal holiday on which the Board or Division is not open for business, in which event the period runs until the end of the next day which is not a Saturday, Sunday or legal holiday.
- (3) Intermediate Saturdays, Sundays and legal holiday are excluded from the computation when the period of prescribed time is 7 days or less.

1.10 RESTRICTIONS ON EMPLOYEE FINANCIAL INTERESTS

1.10.1 Objective.

- 122(9) The objective is to establish methods which will ensure that each employee of the Division who performs any function or duty under the Act does not have a direct or indirect financial interest in any coal exploration, surface coal mining and reclamation operation, or underground mining activity.

1.10.2 Responsibilities.

- (1) Division employees performing any duties or functions under the Act and these Rules shall:

- (a) File a fully completed statement of employment and financial interest 120 days after these regulations become effective or upon entrance to duty, and annually thereafter on February 1 of each year, except that new employees are not required to file an annual statement on the subsequent annual filing date, if this date occurs within two months after their initial statement was filed;
 - (b) Have no direct or indirect financial interest in surface coal mining and reclamation operations and coal exploration; and
 - (c) Comply with directions issued by persons responsible for approving each statement and comply with directives issued by those persons responsible for ordering remedial action.
- (2) The Board members performing any duties or function under the Act and these rules shall:
- (a) File a fully completed statement of employment and financial interest upon entrance to duty, and annually thereafter on February 1 of each year, except that new Board members are not required to file an annual statement on the subsequent annual filing date, if this date occurs within two months after their initial statement was filed, and
 - (b) Recuse themselves from proceedings which may affect their direct or indirect financial interests.
- (3) The Administrator shall:
- (a) Provide advice, assistance, and guidance to all State employees required to file statements pursuant to this Rule; and inform such employees of the name, address and telephone number of other persons whom they may contact for advice and counseling;
 - (b) Promptly review the statement of the employee and financial interests and supplements, if any, filed by each employee, to determine if the employee has correctly identified those listed employment and financial interests which constitute a direct or indirect financial interest in surface coal mining and reclamation operations, or underground mining activities or coal exploration;

- (c) Resolve prohibited financial interest situations by ordering or initiating remedial action, advising the employee that remedial action which will resolve the prohibited interest is required within 90 days, or by reporting the violations to the Executive Director;
- (d) Certify on each statement that review has been made, that prohibited financial interests, if any, have been resolved, and that no other prohibited interests have been identified from the statement;
- (e) Submit to the Executive Director the initial listing and the subsequent annual listing of positions as required in this Rule;
- (f) Furnish a blank statement 45 days in advance of the filing date established in this Rule to each employee required to file a statement; and
- (g) Undertake such other activities as may be required to assure full compliance with applicable conflict of interest regulations promulgated by the Office of Surface Mining.

1.10.3 Penalties.

- (1) Any person who knowingly violates the provisions of Section 34-33-122(9), C.R.S., as adopted in 1.10.2(2) of these Rules, shall, upon conviction, be punished by a fine of not more than \$2,500, or by imprisonment of not more than one year, or both.
- (2) Any Division employee who fails to file the required financial interest statement will be considered in violation of the Act and these Rules and will be subject to removal from his or her position, if 90 days after an employee is notified by the Administrator to take remedial action, the employee is not in compliance with the requirements of the Act and these Rules.

1.10.4 Who Shall File.

- (1) Board members and all employees who perform any function or duty under the Act shall file a statement of employment and financial interests.

- (2) The Administrator shall prepare and submit to the Executive Director, an initial listing of positions that do not involve performance or any functions or duties under the Act within 60 days of the effective date of these Rules.
- (3) The Administrator shall annually review and update this listing. For monitoring and reporting reasons, the listing must be submitted to the Executive Director and must contain a written justification for inclusions of the positions listed. Proposed revisions or a certification that revision is not required shall be submitted to the Executive Director by no later than June 29 of each year. The Administrator may revise the listing by the addition or deletion of positions at any time he or she determines such revisions are required to carry out the purpose of the law or these Rules.

1.10.5 Where to File.

The Administrator shall file his or her statement with the Executive Director. All other employees shall file their statement with the Administrator.

1.10.6 What to Report.

- (1) Each employee shall report all information required on the statement of employment and financial interests of the employee, his or her spouse, minor children, or other relatives who are full-time residents of the employee's home. The report shall be on OSM Form 705-1. The statement consists of three major parts.
 - (a) A listing of all financial interests, including employment, security, real property, creditor and other financial interests held during the course of the preceding year;
 - (b) A certification that none of the listed financial interests represent a direct or indirect financial interest in an underground or surface coal mining operation except as specifically identified and described by the employee as part of the certificate; and
 - (c) A certification by the reviewer that the form was reviewed, that prohibited interests have been resolved, and that no other prohibited interests have been identified from the statement.
- (2) An employee is expected to:

- (a) Have complete knowledge of his or her personal involvement in business enterprises such as a sole proprietorship and partnership, his or her outside employment and the outside employment of the spouse and other covered relatives; and
 - (b) Be aware of the information contained in the annual financial statement or other corporate or business reports routinely circulated to investors or routinely made available to the public.
- (3) The exceptions shown in the employee certification of the form must provide enough information for the Director of the Division to determine the existence of a direct or indirect financial interest. Accordingly, the exceptions should:
- (a) List the financial interests;
 - (b) Show the number of shares, estimated value or annual income of the financial interests; and
 - (c) Include any other information which the employee believes should be considered in determining whether or not the interest represents a prohibited interest.

1.10.7 Gifts and Gratuities.

- (1) Employees shall not solicit or accept, directly or indirectly, any gift, gratuity, favor, entertainment, loan or any other thing of monetary value, from a coal company which:
 - (a) Conducts or is seeking to conduct operations or activities that are regulated by the Division; or
 - (b) Has interests that may be substantially affected by the performance or non-performance of the employee's official duty.
- (2) The prohibitions of this Rule do not apply in the context of obvious family or personal relationships (such as those between parents, children, or spouse of the employee, and the employee) when the circumstances make it clear that it is those relationships rather than the business of the persons concerned which are the motivating factors. An employee may accept:

- (a) Food and refreshments of nominal value on infrequent occasions in the ordinary course of a luncheon, dinner, or other meeting where an employee may properly be in attendance; and
- (b) Unsolicited advertising or promotional material, such as pens, pencils, note pads, calendars and other items of nominal value.

1.10.8 Resolving Prohibited Interests.

- (1) Remedial action may include:
 - (a) If an employee has a prohibited financial interest, the administrator shall advise the employee that remedial action which will resolve the prohibited interest is required within 90 days,
 - (b) Reassignment of the employee to a position which performs no function or duty under the Act,
 - (c) Divestiture of the prohibited financial interest, or
 - (d) Other appropriate action which either eliminates the prohibited interest or eliminates the situation which creates the conflict.
- (2) If 90 days after an employee is notified to take remedial action, that employee is not in compliance with the requirements of the Act and these Rules, the Administrator shall report the facts of the situation to the Executive Director. The failure of the employee to comply may result in the suspension or termination of the employee.

1.10.9 Appeals Procedure.

- (1) Employees have the right to appeal an order for remedial action and shall have 30 days to exercise this right before disciplinary action is initiated.
- (2) Employees other than the Administrator may file their appeal, in writing, through established procedures of the State Department of Personnel.
- (3) The Administrator may file his appeal in writing, with the Executive Director who will refer it to the Attorney General.

120(6) **1.11 REQUESTS TO THE BOARD**

Any additional criteria, mining or reclamation measures, or other conditions which the Division requires the operator to meet, satisfy, or undertake in connection with the issuance, revision, or transfer of permits or in connection with the conduct of a surface coal mining operation shall be based upon good cause shown by the Division, taking into consideration the specific conditions at the site, and shall bear a reasonable relationship to the purposes and provisions of these Rules. Any applicant or operator shall have the right, at any regular meeting of the Board, upon proper notice, to seek the informal opinion of the Board concerning any request or requirement of the Division for such additional criteria, mining or reclamation measures, or other conditions, and such informal opinion of the Board shall not be binding upon any of the parties.

136 **1.12 WATER RIGHTS**

Nothing contained in these Rules shall be construed to affect or impair the rights and obligations attendant upon the ownership of water rights under Colorado Water law.

1.13 LIMITATION ON THE EFFECT OF REGULATIONS REQUIRED BY FEDERAL LAW, RULES, OR REGULATIONS WHICH BECOME INEFFECTIVE

Any Rule or Regulation promulgated by the Board which is required by a Federal law, rule, or regulation shall become repealed and shall not be enforced when said Federal law is repealed or said Federal rule or regulation is deleted or withdrawn. Any provision of a permit issued under these Rules, that is required by any rule of the Board which is repealed in accordance with this provision shall not be enforceable. The repeal of such Rule or Regulation shall become effective ninety days after publication of the repeal in the Federal Register but will be subject to a rulemaking hearing by the Board as set forth in Article 4 of Title 24, C.R.S.

1.14 DECLARATORY ORDERS (C.R.S., 24-4-105)

- (1) Any person having an interest which is or may be adversely affected or person with a valid legal interest, as defined in Rule 1.04 (92) and (93), may petition the Board for declaratory order to terminate controversies or to remove uncertainties as to the applicability to the petitioner of any statutory provision or of any rule or order of the Board.

- (2) The petition must be submitted, at a minimum, 10 days prior to the Board meeting at which it is to be considered. At the regularly scheduled Board meeting, the Board will determine in its discretion and without notice to petitioner, whether to rule upon any such petition. If the Board determines that it will not rule upon such a petition, the Board shall promptly notify the petitioner of its action and state the reasons for such action.
- (3) In determining whether to rule upon a petition filed pursuant to this rule, the Board will consider the following matters, among others:
 - (a) Whether a ruling on the petition will terminate a controversy or remove uncertainties as to the applicability to petitioner of any statutory provision or rule or order of the Board.
 - (b) Whether the petition involves any subject, question or issue which is the subject of a formal or informal matter or investigation currently pending before the Board or a court involving one or more of the petitioners.
 - (c) Whether the petition involves any subject, question or issue which is the subject of a formal or informal matter or investigation currently pending before the Board or a court, but not involving any petitioner.
 - (d) Whether the petition seeks a ruling on a moot or hypothetical question or will result in an advisory ruling or opinion.
 - (e) Whether the petitioner has some other adequate legal remedy, other than an action for declaratory relief pursuant to Rule 57, Colo. R. Civ. P., which will terminate the controversy or remove any uncertainty as to the applicability to the petitioner of the statute, rule or order in question.
- (4) Any petition filed pursuant to this rule shall set forth the following:
 - (a) The name and address of the petitioner and whether the petitioner is a permittee pursuant to the Colorado Surface Coal Mining Reclamation Act.
 - (b) The statute, rule or order to which the petition relates.
 - (c) A concise statement of all of the facts necessary to show the nature of the controversy or uncertainty and the manner in which the statute, rule or order in question applies or potentially applies to the petitioner.

- (5) If the Board determines that it will rule on the petition, it will initiate proceedings on the petition no later than the next regularly scheduled meeting and the following procedures shall apply:
- (a) The Board may, without further notice, rule upon the petition based solely upon the facts presented in the petition. In such a case, any ruling of the Board will apply only to the extent of the facts presented in the petition and any amendment to the petition.
 - (b) The Board may order the petitioner to file a written brief, memorandum or statement of position.
 - (c) The Board may set the petitioner, upon due notice to petitioner, for a non-evidentiary hearing.
 - (d) The Board may request the petitioner to submit additional facts, in writing. In such event, such additional facts will be considered as an amendment to the petition.
 - (e) The Board may take administrative notice of facts pursuant to the Administrative Procedure Act (C.R.S. 24-4-105(8)) and may utilize its experience, technical competence and specialized knowledge in the disposition of the petition.
 - (f) If the Board rules upon the petition without a hearing, it shall within ten working days notify the petitioner of its decision by deposit in the mail.
 - (g) The Board may, in its discretion, set the petition for hearing at the next regularly scheduled Board meeting, upon due notice to petitioner, for the purpose of obtaining additional facts or information or to determine the truth of any facts set forth in the petition or to hear oral argument on the petition. The notice to the petitioner setting such hearing shall set forth, to the extent known, the factual or other matters into which the Board intends to inquire. For the purpose of such a hearing, to the extent necessary, the petitioner shall have the burden of proving all of the facts stated in the petition, all of the facts necessary to show the nature of the controversy or uncertainty and the manner in which the statute, rule or order in question applies or potentially applies to the petitioner and any other facts the petitioner desires the Board to consider.

- (6) The parties to any proceeding pursuant to this rule shall be the Division, Board and the petitioner. Any other person may seek leave of the Board to intervene in such a proceeding, and leave to intervene will be granted at the sole discretion of the Board. A petition to intervene shall set forth a concise statement of the facts necessary to demonstrate the nature of its position, and the manner in which the statute, rule or order in question does or does not apply to the petitioner.
- (7) Any declaratory order or other order disposing of a petition pursuant to this rule shall constitute agency action and subject to judicial review pursuant to C.R.S., 24-4-106 and C.R.S., 34-33-128.

1.15 GUIDELINES

1.15.1 General.

The Division may develop and use guidelines from time to time in accordance with this section. The guidelines shall be suggestions only, and may be prepared to assist permittees and applicants in complying with the Act and Regulations adopted thereunder. The guidelines shall not be binding on the permittees or consultants. The procedure set forth below for adoption of guidelines shall apply to new guidelines and to amendments to previously adopted guidelines.

1.15.2 Subject Matter.

Guidelines may be published regarding any matter for which an ambiguity or insufficient specificity exists either in the Act or in the Regulations adopted thereunder, or regarding any matter in which the Division or the Board may exercise discretion in accordance with the Act and Regulations adopted thereunder.

1.15.3 Adoption.

The Division shall develop guidelines as follows:

- (1) The Division shall prepare a mailing list of persons to receive notice of proposed guidelines. In preparing the mailing list, the Division shall request a positive indication of interest in receiving notices of proposed guidelines from all persons who are on the mailing list to receive notices of Board meetings and agendas, persons who are on the

operator's list maintained by the Division, appropriate State and Federal agencies and local governmental bodies, municipalities, regional planning commissioners, boards of county commissioners, county planning agencies, sewage and water treatment authorities, water conservancy and water conservation districts. In addition, all other persons who request that they receive notices of proposed guidelines shall be on the list.

- (2) Notice of proposed guidelines shall be given to all persons who are on the mailing list prepared in accordance with 1.15.3(1), above.
- (3) The notice shall contain the full text of the proposed guidelines or changes thereto and shall further indicate that written or oral comments will be accepted for a period of 60 days following mailing of the notice in accordance with this section.
- (4) The Division shall inform the Board of any proposed guidelines at the next meeting of the Board following mailing of notice of the proposed guidelines in accordance with this section.
- (5) The Division shall consider all comments and questions raised during the comment period.
- (6) The Division may then prepare final guidelines and shall notify all persons who have submitted comments regarding the proposed guidelines of adoption. This notice shall contain the full text of the guidelines as adopted.

1.15.4 Use of Guidelines.

- (1) The guidelines as adopted may be used by permittees and applicants as non-binding guidance, suggestions or recommendations regarding procedures or information which is acceptable to the Division regarding compliance with the Act and Regulations adopted thereunder. The guidelines shall further be non-binding interpretations by the Division regarding ambiguities in the Act and Regulations adopted thereunder, or in areas in which the Division has discretion regarding compliance with the Act and Regulations adopted thereunder.
- (2) An operator shall be free to demonstrate compliance with the Act and Regulations adopted thereunder using procedures or information or an

interpretation of the Act and Regulations different from that set forth in guidelines.

RULE 2 PERMITS

2.01 GENERAL REQUIREMENTS

2.01.1 Scope.

This Section establishes the minimum general requirements for permits required to commence or continue surface coal mining and reclamation operations. The objectives of this Section are to insure that all persons make timely application for permits, and that all surface coal mining and reclamation operations are conducted only under permits issued in accordance with the requirements of the Act and these Rules.

109(1),(2) **2.01.2 General Requirements for Existing Operations.**

Not later than two months following the date of approval of the Colorado regulatory program by the Secretary, all operators who are conducting and intend to conduct surface coal mining operations eight months after such approval, shall file an application for a permit with the Division for such operations. The application shall comply with all applicable provisions of Rules 2 and 4. With regard to the requirements of 2.05.6(3)(b)(iv), the application shall be considered filed if it contains all applicable hydrologic information reasonably available to the applicant as of the date of the application.

109(1),(2) **2.01.3 General Requirements for Permits for All Surface Coal Mining and Reclamation Operations.**

(1) Except as provided for in 2.01.3(2) and 2.01.3(5), on and after eight months from the date on which the Colorado regulatory program is approved by the Secretary of the Interior, which date is set forth by Rule of the Board, no person shall conduct, on lands within this State, any surface coal mining and reclamation operations unless such person has first obtained a valid permit issued under the applicable provisions of these Rules.

109(3) (2) A person conducting surface coal mining and reclamation operations, under a permit issued or amended by the Division in accordance with requirements of the "Colorado Mined Land Reclamation Act" (Section 34-33-101, C.R.S.) and the Rules and Regulations promulgated there-with and operating in compliance with Section 502 of the Surface Mining Control and Reclamation Act of 1977 (P.L. 95-87), as

determined by the Division, may conduct these operations beyond the period prescribed in (1) above, if:

- (a) a complete application for a permit has been filed with the Division in accordance with the applicable provisions of Rules 2 and 4; and
 - (b) The Division has not yet rendered an initial decision with respect to such application.
- (3) If prior to the date of approval by the Secretary of the Colorado regulatory program, a person has filed with the Division an application for a permit in compliance with the Colorado Mined Land Reclamation Act," and Section 502 of the "Surface Mining Control and Reclamation Act" of 1977 (P.L. 95-87), as determined by the Division, the Board or Division shall, unless such application is withdrawn, act on such application in accordance with the "Colorado Mined Land Reclamation Act" and Section 502 of the "Surface Mining Control and Reclamation Act" of 1977 (P.L. 95-87); except that in no event shall such person be relieved of the obligation to obtain a permit as required by Section 34-33-109 (1) of the Act, 2.01.3(1), and P.L. 95-87.
- (4) Except as provided for in 2.01.3(2) and 2.01.3(5), no person conducting, or intending to conduct, surface coal mining and reclamation operations shall be relieved of the obligation to obtain a permit as required by 2.01.3(1) and the "Surface Mining Control and Reclamation Act" of 1977 (P.L. 95-87).
- (5) The operator of any surface coal mining and reclamation operation on Federal land, whose permit application and mining and reclamation plan have been approved by the Board or Division and the Federal Office of Surface Mining under the permanent Federal regulatory program, prior to the approval of the Colorado regulatory program by the Secretary, shall be considered to have satisfied the permit requirements of this Rule and need not submit another application for a permit or permit revision within the two months following the initial approval of the Colorado regulatory program, provided, however, that:
- (a) Proposed revisions and modifications of said permit must be submitted within twelve months of the approval by the Secretary of the Colorado regulatory program.

- (b) Revisions or modifications of said permit are made to reflect substantive differences between the Colorado regulatory program and the Federal regulatory program; and
- (c) All requirements of the Act and 2.07, pertaining to public participation and notification, are complied with.

- 109(1) (6) No permit shall be required for reclamation operations on abandoned or unreclaimed lands not required to be reclaimed under State or Federal law.

2.01.4 Permit Requirements for New Surface Coal Mining and Reclamation Operations.

- 109(1),(2) Each person who expects to conduct new surface coal mining and reclamation operations within the eight month period following approval of the Colorado regulatory program shall file a complete application for a permit in accordance with applicable provisions of Rules 2 and 4.

2.01.5 Permit Term.

- 109(5) (1) All permits issued pursuant to the requirements of the Act and these Rules shall be issued for a term not to exceed five years. The term shall commence upon the acceptance of the performance bond by the Division. The Board or Division may grant a permit for a longer term if the applicant demonstrates that:
- (a) A specified longer term is reasonably needed to allow the applicant to obtain necessary financing for equipment and the opening of the operation; and this need is confirmed in writing by the applicant's source for the financing, and
 - (b) The application is full and complete for the specified longer term.
- 109(6) (2) (a) A permit shall terminate if the permittee has not commenced the surface coal mining and reclamation operations covered by the permit within three years of the date of the issuance of the permit.
- 109(6) (b) The Division or Board may grant reasonable extensions of time for commencement of these operations, upon receipt of a written statement showing that such extensions of time are necessary, if:

- (i) Litigation precludes commencement or threatens substantial economic loss to the permittee, or
 - (ii) There are conditions beyond the control of and without the fault or negligence of the permittee.
- 109(6) (c) With respect to coal to be mined for use in a synthetic fuel facility or specified major electric generating facility, the permittee shall be deemed to have commenced surface coal mining operations at the time that the construction of the synthetic fuel or generating facility is initiated.
- 109(6) (d) In the case of a coal lease issued under the "Federal Mineral Lands Leasing Act, as amended," extensions of time may not extend beyond the period allowed for diligent development in accordance with Section 7 of that Act.
- 102, 110(8)
118(1) (e) Extensions of time granted by the Division or Board under 2.01.5(2)(b) shall be specifically set forth in the permit and notice of the extension shall be made to the public.

110(1) **2.01.6 Permit Fees.**

- (1) Each application for a surface coal mining and reclamation permit pursuant to these Rules shall be accompanied by a fee of twenty-five dollars, plus ten dollars for each acre of affected land.
- (2) The permit fee shall not exceed two thousand five hundred dollars and shall not exceed the actual or anticipated cost of reviewing, administering, and enforcing such permit issued pursuant to these Rules.
- (3) The cost of the fee may be paid over the term of the permit. The incremental permit fee payment shall not be less than twenty percent of the total permit fee.
- (4) All fees collected under this Rule shall be deposited in the general fund.

2.02 GENERAL REQUIREMENTS FOR COAL EXPLORATION

2.02.1 Scope.

117 This section establishes the requirements for coal exploration outside an approved permit area and is intended to ensure that such exploration is conducted in a manner that protects the environment and complies with these rules. These requirements include filing notices of intention when 250 tons or less of coal will be removed during exploration, applying for written approval when more than 250 tons of coal will be removed during exploration; complying with coal exploration and reclamation standards, and ensuring public availability of coal exploration information.

2.02.2 Exploration Involving Removal of 250 Tons or Less of Coal.

117(1)(a) (1) Any person who intends to conduct coal exploration during which 250 tons or less of coal will be removed from the area to be explored outside an approved permit area shall, prior to conducting the exploration, file with the Division a complete written notice of intention to explore.

117(1)(a) (2) The complete notice shall include:

- (a) The name, address, and telephone number of the person seeking to explore;
- (b) The name, address, and telephone number of the representative who will be present at and responsible for conducting the exploration activities;
- (c) A narrative description and map, at a scale of 1:24,000, or larger if requested by the Division, of the exploration area;

117(1)(a) (d) A statement of the period of intended exploration;

- (e) If the surface is owned by a person other than the person who intends to explore, a description of the basis upon which the person who will explore claims the right to enter such area for the purpose of conducting exploration and reclamation;
- (f) A narrative description of the practices proposed to be followed to protect the environment from adverse impacts as a result of the exploration activities;

- 117(5) (g) A narrative description of the methods to be used to conduct coal exploration and reclamation, including, but not limited to, the types and uses of equipment, drilling, surface blasting, road or other access route construction, excavated earth and other debris disposal activities, and other information set forth in Rule 1.04(127). The description shall set forth the maximum number of drill holes the person conducting the exploration intends to drill within each quarter-quarter section (40AC.); and
- 102, 117(5) (h) A statement, with appropriate references from the relevant State or Federal agencies or published sources, which determines that the exploration and reclamation described will not jeopardize the continued existence of an endangered or threatened species listed pursuant to Section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533) or the Nongame, Endangered or Threatened Species Conservation Act (Section 33-8-101 et seq. C.R.S.) or result in the destruction or adverse modification of critical habitat of those species.
- (3) The Division shall review the complete notice of intention to conduct coal exploration and shall make a determination within two weeks of the filing of such complete notice, whether the proposed exploration will substantially disturb the natural land surface, and if so whether the proposed activity qualifies as coal exploration or surface coal mining operations. The Division shall immediately notify the person in writing of its determination. The determination of substantial disturbance shall be made with reference to 1.04(127). If the Division determines that the proposed coal exploration activities will substantially disturb the natural land surface, the person who intends to conduct such coal exploration shall comply with 4.21.
- (4) If the Division determines that the proposed coal exploration activities qualify as surface coal mining operations, the application shall be returned to the person with the written determination. The person shall be informed of his rights to appeal such determination and that conduct of any activities included in the application are prohibited until a valid mining and reclamation permit is obtained.
- 102, 117(5)(5) A determination by the Division that substantial disturbance of the natural land surface by exploration with removal of 250 tons or less will require that the person who proposes to conduct the coal exploration post a

performance bond prior to initiation of exploration according to the requirements set forth in 3.05.

- (6) Within 30 days after the notification required by 2.02.2(3) above, any person with an interest which is or may be adversely affected may request a formal hearing on the reasons for the decision by the Division. Such request shall be in writing and state with reasonable specificity the reasons for the request and objections to the decision. If so requested, the formal hearing shall be conducted in accordance with the requirements of 2.07.4(3).
- (7) No person shall conduct coal exploration activities under 2.02.2 until they have received notification of the Division's determination on substantial disturbance and qualifications as coal exploration.

2.02.3 General Requirements: Exploration Involving Removal of More Than 250 Tons of Coal.

117(4),(5)

Any person who intends to conduct coal exploration in which more than 250 tons of coal are removed in the area to be explored outside an approved permit area or who wishes to conduct coal exploration within an area which has been designated unsuitable for all or certain types of surface coal mining operations shall, prior to conducting the exploration, obtain the written approval of the Board or Division, in accordance with the following:

- (1) Contents of complete application for approval. Each application shall contain, at a minimum, the following information:
 - (a) The name, address, and telephone number of the applicant;
 - (b) The name, address, and telephone number of the representative of the applicant who will be present at and be responsible for conducting the exploration;
 - (c) An exploration and reclamation plan, including:
 - (i) A narrative description of the proposed exploration area, cross-referenced to the map required under (e) below, including surface topography, geology, surface water, and other physical features; vegetative cover; the distribution and important habitats of fish, wildlife, and plants, including, but not limited to, an endangered or threatened species listed

pursuant to the Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.) or the Nongame, Endangered or Threatened Species Conservation Act (Section 33-8-101 et seq., C.R.S.); Designated Natural Areas, National Natural Landmarks, districts, sites, buildings or structures or objects listed on or known to be eligible for listing on the National Register of Historic Places; known archaeological resources located within the proposed exploration area; and any other information that may be required regarding historic or archaeological resources;

- (ii) A narrative description of the methods to be used to conduct coal exploration and reclamation, including, but not limited to, the types and uses of equipment, drilling, blasting, road or other access route construction, and excavated earth and other debris disposal activities; such uses and activities shall be in compliance with the applicable requirements of these Rules. For the proposed drill holes, the maximum number of holes located within each quarter-quarter section (40AC.), cross referenced to map location, and their size and depth;
 - (iii) An estimated timetable for conducting and completing each phase of the exploration and reclamation;
 - (iv) The estimated amounts of coal to be removed and a description of methods to be used to determine those amounts;
 - (v) A description of the measures to be used to comply with the applicable requirements of 4.21.
 - (vi) A statement of why extraction of more than 250 tons of coal is necessary for exploration.
- (d) The name and address of the owner of record of the surface land and of the subsurface mineral estate of the area to be explored;
- (e) A map at a scale of 1:24,000, or larger if requested by the Division, showing the areas of land to be substantially disturbed by the proposed exploration and reclamation. The map shall specifically show existing roads, occupied dwellings, and pipelines; proposed location of trenches, roads, and other access

routes and structures to be constructed; the location of land excavations to be conducted within each quarter-quarter section (40AC.); water and coal exploratory holes to be drilled or altered within each quarter-quarter section (40AC.); earth or debris disposal areas; existing bodies of surface water; historic, topographic, cultural and drainage features; and habitats of any endangered or threatened species listed pursuant to the Endangered Species Act of 1973 (U.S.C. 1531 et seq.), the Nongame, Endangered or Threatened Species Conservation Act (Section 33-8-101 et seq., C.R.S. as amended), Designated Natural Areas, National Natural Landmarks; and

- (f) If the surface is owned by a person other than the applicant, a description of the basis upon which the applicant claims the right to enter the land for the purpose of conducting exploration and reclamation.
- (2) Public notice and opportunity to comment. Public notice of the application and opportunity to comment shall be provided as follows:
- (a) Within five days of the filing of the complete application, a public notice of the filing of the application with the Division shall be posted at the Division office and advertised once by the applicant in a newspaper of general circulation in the county of the proposed exploration area.
 - (b) The public notice shall state the name and business address of the person seeking approval, the date of filing of the application, the address of the Division at which written comments on the application may be submitted, the closing date of the comment period, and a description of the general area of exploration.
 - (c) Any person with an interest which is or may be adversely affected shall have the right to file written comments on the application within 2 weeks after the requirements of (a) above are met.

2.02.4 Applications: Approval or Disapproval of Exploration Involving Removal of More Than 250 Tons of Coal.

- (1) Within two weeks of receipt of a completed application, the Division will notify the applicant as to whether a proposed activity qualifies as coal exploration or surface coal mining and reclamation operations. If

the Division determines that the proposed coal exploration activities qualify as surface coal mining operations, the application shall be returned to the person with the written determination. The person shall be informed of his rights to appeal such a determination and that conduct of any activities included in the application are prohibited until a valid mining and reclamation permit is obtained.

- 117(4),(5)
- (2) The Board or Division shall act upon a completed application within 60 days of filing, but no sooner than the expiration of the 2 week public comment period.
 - (3) The Board or Division shall approve a completed application filed in accordance with 2.02 if it finds, in writing, that the applicant has demonstrated that the exploration and reclamation described in the application:
 - (a) Will be conducted in accordance with 2.02, the Act, and these Rules;
 - (b) Will not jeopardize the continued existence of an endangered or threatened species listed pursuant to Section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533) or the Nongame, Endangered or Threatened Species Conservation Act (Section 33-8-101 *et seq.*, C.R.S.), or result in the destruction or adverse modification of critical habitat of those species; and
 - (c) Will not adversely affect any National Natural Landmarks, Designated Natural Area or any cultural resources or districts, sites, buildings, structures, or objects listed on the National Register of Historic Places, unless the proposed exploration has been jointly approved by the Division and the State or Federal agency having jurisdiction in such matters.
 - (4) Terms of approval. Each approval issued by the Board or Division shall contain conditions necessary to ensure that the exploration and reclamation will be conducted in compliance with the Act and these Rules.
 - (5) Upon approval by the Board or Division but prior to initiating exploration the applicant shall post a reclamation performance bond pursuant to 3.05.

2.02.5 Applications: Notice and Hearing for Exploration Involving Removal of More Than 250 Tons of Coal.

- (1) The Board or Division shall notify the applicant, the appropriate local government officials and any other commenters on the application, in writing, of its decision to approve or disapprove the application. If the application is disapproved, the notice to the applicant shall include statement of reason for disapproval. The Division or Board shall provide public notice of approval or disapproval of each application, by publication in a newspaper of general circulation in the general vicinity of the proposed operations.
- (2) Any person with an interest which is or may be adversely affected by a decision of the Board or Division pursuant to (1) above, shall have the opportunity for administrative and judicial review in accordance with Colorado law and as referenced at 2.07.4(3).

2.02.6 General Coal Exploration Compliance Duties.

- 117(3),(5) (1) Any person who conducts any coal exploration activities which cause substantial disturbance of the natural land surface as determined by the Division, in violation of these Rules or the Act, shall be subject to the provisions of Rule 5.
- 117(5) (2) The Division may request, and any person who conducts any coal exploration activities shall furnish to the Division, sufficient information to facilitate the Division's investigation of possible environmental damage or complaints submitted to the Division. Such requested information may include but need not be limited to stratigraphic findings, test hole logs and related data.
- (3) Any person conducting coal exploration activities which the Division has determined will cause substantial disturbance of the natural land surface or which will involve the removal of more than 250 tons of coal shall submit:
 - (a) A report for each successive 180-day period during coal exploration activities, no later than 10 days after the end of that period. A report will not be required for 180-day periods of inactivity. Such reports shall include, but need not be limited to, an update of the map submitted under 2.02.3(1)(e), showing the location of all holes drilled; additional, deleted or relocated holes;

any road construction; current location of all drill rigs and test equipment; and areas disturbed, graded and seeded.

- (b) A final written report, no later than 30 days after the end of the entire period for which notice of intent was filed or written approval was granted, to include but not necessarily limited to:
 - (i) A final update of the map submitted in 2.02.3(1)(e) showing the location of all holes drilled, any road construction, areas disturbed and all areas reclaimed.
 - (ii) A certification of completion by the person who conducted the coal exploration as follows: "I, the undersigned, hereby certify the exploration activities for which I posted bond are completed, and that, to the best of my knowledge, all the applicable reclamation requirements have been met." The certification shall be dated, signed and notarized.

- 117(5) (4) Time estimates for coal exploration may be extended by the Board or Division upon receipt of a written request for such extension. This request shall be submitted to the Division no less than 10 days prior to the original estimate of completion contained in the original approval or subsequent extension. Such request shall include valid reasons for the extension.

2.02.7 Sale of Coal for Testing Purposes

- (1) Except as provided under (2), any person who intends to commercially use or sell coal extracted during coal exploration operations under an exploration permit, shall first obtain a permit to conduct surface coal mining operations for those operations.
- (2) With the prior written approval of the Division, no permit to conduct surface coal mining operations is required for the sale or commercial use of coal extracted during exploration operations if such sale or commercial use is for coal testing purposes only. The person conducting the exploration shall file an application for such approval with the Division. The application shall demonstrate that the coal testing is necessary for the development of a surface coal mining and reclamation operation for which a surface coal mining permit application is to be submitted in the near future, and that the proposed commercial use or sale of coal extracted during exploration operations

is solely for the purpose of testing the coal. The application shall contain the following:

- (a) The name of the testing firm and the locations at which the coal will be tested.
- (b) If the coal will be sold directly to or commercially used directly by the intended end user, a statement from the intended end user or, if the coal is sold indirectly to the intended end user through an agent or broker, a statement from the agent or broker. The statement shall include:
 - (i) The specific reason for the test, including why the coal may be so different from the intended user's other coal supplies as to require testing;
 - (ii) The amount of coal necessary for the test and why a lesser amount is not sufficient; and
 - (iii) A description of the specific test that will be conducted.
- (c) Evidence that sufficient reserves of coal are available to the person conducting exploration or its principals for future commercial use or sale to the intended end user or agent or broker of such user identified above to demonstrate that the amount of coal to be removed is not the total reserve, but is a sampling of a larger reserve.
- (d) An explanation as to why other means of exploration, such as core drilling, are not adequate to determine the quality of the coal and/or the feasibility of developing a surface coal mining operation.

2.02.8 Public Availability of Information.

- 117(5)
- (1) Except as provided in (2) below, all information submitted to the Division under 2.02 shall be made available for public inspection and copying at the courthouse or other public office designated by the Division in the vicinity of the proposed exploration area and at the Division office.

- (2) (a) Information submitted to the Division pursuant to this Rule 2.02 as confidential concerning trade secrets or privileged commercial or financial information which relates to the competitive rights of the person or entity intending to explore the described area shall not be available for public examination. Such information shall be clearly marked and submitted in a packet separate from the notice of intent or application.
- 117(2) (b) Information requested to be held as confidential under 2.02.7 shall not be made publicly available until after notice and opportunity to be heard is afforded both persons seeking disclosure and those persons opposing disclosure of information and such information is determined by the Division not to be confidential, proprietary information.

Information for which disclosure is sought shall not be made available to those persons seeking disclosure prior to or during such opportunity to be heard. Such information shall not be made available until a final decision is made by the Board.

2.03 APPLICATION FOR PERMIT FOR SURFACE COAL MINING AND RECLAMATION OPERATIONS: MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION.

2.03.1 Objective.

The objective of 2.03 is to ensure that the Division receives all relevant information regarding ownership and control of surface coal mining operations, the ownership and control of the property to be affected by those operations, the compliance history and status of the applicant and other relevant persons, and other important information required in the application.

110(1) **2.03.2 Responsibilities.**

It is the responsibility of the permit applicant to provide to the Division a written application to perform surface coal mining and reclamation operations.

2.03.3 Format and Supplemental Information.

- 110 (1) Information in the application shall be current, presented clearly and concisely, and supported by appropriate references to technical and other written material available to the Division.

- (2) All tests, analyses or surveys carried out pursuant to these Rules shall be performed or certified by a qualified person.
- (3) All chemical and physical laboratory analyses shall be conducted by a laboratory using approved and standardized procedures. The Division may require the applicant to collect duplicate or split samples for submission to the Division and later analyses. In specific instances the Division may require that analyses be conducted by a mutually agreed upon independent laboratory.
- (4) All water quality sampling and laboratory analyses shall be conducted in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater", or the methodology in 40 CFR 136 and 434. "Standard Methods for the Examination of Water and Wastewater" is a joint publication of the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation and is available from the American Public Health Association, 1015 Fifteenth Street, NW, Washington, D.C. 20036. This document is also available for inspection at the Division's Denver office.

This publication is hereby incorporated by reference as it exists on the date of adoption of these regulations. This rule does not include later amendments to or editions of the incorporated material. Certified copies of the material are available at cost upon request. The Division director can provide further information regarding how the incorporated material may be obtained or examined.

- (5) All technical data submitted in the application shall be accompanied by:
 - (a) Names of persons or organizations which collected and analyzed such data;
 - (b) Dates of collection and analyses; and
 - (c) Descriptions of methodology used to collect and analyze the data.
- (6) An application for a surface coal mining and reclamation permit shall be made on forms provided by the Division.

- (7) With the information on land uses, soils, geology, vegetation, fish and wildlife, water quantity and quality, air quality, and archeological, cultural and historic features, the applicant shall submit the name, address, and position of officials of each private or academic research organization or governmental agency consulted in obtaining that information.
- (8) The applicant shall file with the Division three (3) reproducible copies of the complete permit application with original signatures. Applicants proposing to mine Federal coal shall file the required number of copies with the Office of Surface Mining.
- (9) A responsible official of the applicant shall certify that the information contained in the application is true and correct to the best of the official's information and belief.

2.03.4 Identification of Interests.

110(1),(2) Each application shall contain the following information, except that the submission of a social security number is voluntary.

- (1) Each application shall contain a statement of whether the applicant is a corporation, partnership, single proprietorship, association or other business entity.
- (2) The name, address, telephone number and, as applicable, social security number and employer identification number of the:
 - (a) Applicant;
 - (b) Applicant's resident agent; and
 - (c) Person who will pay the abandoned mine land reclamation fee.
- (3) For each person who owns or controls the applicant under the definition of "owned or controlled" and "owns and controls" in 1.04(83a), as applicable:
 - (a) The person's name, address, social security number and employer identification number;

- (b) The person's ownership or control relationship to the applicant, including percentage of ownership and location in organizational structure;
 - (c) The title of the person's position, date position was assumed, and when submitted under 2.07.7(5), date of departure from the position;
 - (d) Each additional name and identifying number, including employer identification number, Federal or State permit number, and MSHA number with date of issuance, under which the person owns or controls, or previously owned or controlled, a surface coal mining and reclamation operation in the United States within the five years preceding the date of the application; and
 - (e) The application number or other identifier of, and the regulatory authority for, any other pending surface coal mining operation permit application filed by the person in any state in the United States.
- (4) For any surface coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant under the definition of "owned or controlled" and "owns and controls" in 1.04(83a), the operation's:
- (a) Name, address, identifying numbers, including employer identification number, Federal or State permit number, the regulatory authority, MSHA number, and the date of issuance of the MSHA number; and
 - (b) Ownership or control relationship to the applicant, including percentage of ownership and location in organizational structure.
- (5) After an applicant is notified that his or her application is approved, but before the permit is issued, the applicant shall, as applicable, update, correct or indicate that no change has occurred in the information previously submitted under 2.03.4(1) through (4).
- 110(1),(2) (6) Each permit application shall contain the names and addresses of:
- 110(2)(b)(I) (a) Every legal or equitable owner of record of the property to be mined by surface coal mining activities or for underground mining activities,

areas to be affected by surface operations and facilities incidental thereto, and every legal or equitable owner of record of the coal to be mined;

110(2)(b)(II) (b) The holders of record of any leasehold interest in the property to be mined by surface coal mining activities, or for underground mining activities, area to be affected by surface operations and facilities incidental thereto, and any purchaser of record under a real estate contract of the coal to be mined;

110(2)(b)(III) (c) Any purchaser of record under a real estate contract of the property to be mined by surface coal mining activities or for underground mining activities, areas affected by facilities incidental thereto, and any purchaser of record under a real estate contract of the coal to be mined;

(7) Each application shall contain the names and addresses of the owners of record of all surface and subsurface areas contiguous to any part of the proposed permit area.

(8) Each application shall contain the name of the proposed mine and the Mine Safety and Health Administration identification number for the mine and all sections, if any.

(9) Each application shall contain a statement of all lands, interests in lands, options, or pending bids on interests held or made by the applicant for lands which are contiguous to the area to be covered by the permit. Information required by this paragraph may be considered confidential for purposes of these rules if the requirements of 2.07.5 are met.

(10) The applicant shall submit the information required by 2.03.4 and by 2.03.5.

2.03.5 Compliance Information. Each application shall contain:

110(2)(f) (1) A statement of whether the applicant, any subsidiary, affiliate, or persons controlled by or under common control with the applicant has:

(a) Had a Federal or State mining permit for surface coal mining operations suspended or revoked in the last five years prior to the date of submission of the application; or

- (b) Forfeited a mining bond or similar security deposited in lieu of bond.
- (2) If any such suspension, revocation or forfeiture has occurred, a statement of the facts involved, including:
- (a) Identification number and date of issuance of the permit or date and amount of bond or similar security;
 - (b) Identification of the authority that suspended or revoked a permit or forfeited a bond and the stated reasons for that action;
 - (c) The current status of the permit, bond, or similar security involved;
 - (d) The date, location, and type of any administrative or judicial proceedings initiated concerning the suspension, revocation or forfeiture; and
 - (e) The current status of these proceedings.
- 114(3) (3) A list of all violation notices received by the applicant during the three year period preceding the application date, for any violation of a provision of the Act, or of any law, rule or regulation of the United States, or of any State law, rule or regulation enacted pursuant to Federal law, rule or regulation pertaining to air or water environmental protection incurred in connection with any surface coal mining operation, and a list of all unabated cessation orders and unabated air and water quality violation notices received prior to the date of the application by any surface coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant. For each violation notice or cessation order reported, the lists shall include the following information, as applicable:
- (a) Any identifying numbers for the operation, including the Federal or State permit number and MSHA number, the dates of issuance of the violation notice and MSHA number, the name of the person to whom the violation notice was issued, and the name of the issuing regulatory authority, department or agency;
 - (b) A brief description of the particular violation alleged in the notice;

- (c) The date, location and type of any administrative or judicial proceedings initiated concerning the violation, including, but not limited to, proceedings initiated by the applicant to obtain administrative or judicial review of the violations;
 - (d) The current status of the proceedings and of the violation notice;
 - (e) The actions, if any, taken by the applicant to abate the violation;
and
 - (f) The final resolution of any notice of violation.
- (4) After an applicant is notified that his or her application is approved, but before the permit is issued, the applicant shall, as applicable, update, correct or indicate that no change has occurred in the information previously submitted under this section.

2.03.6 Right of Entry and Operation Information.

- 110(2)(j) (1) Each application shall contain a complete and detailed legal description of the proposed permit boundary, a description of the documents upon which the applicant bases his or her legal right to enter and begin surface coal mining operations in the permit area, and a statement as to whether that right is the subject of pending litigation. The description shall identify those documents by type and date of execution, identify the specific lands to which the document pertains, and explain the legal rights claimed by the applicant.
- 114(2)(e) (2) Where the private mineral estate to be mined has been severed from the private surface estate (in circumstances involving the surface mining of coal or where underground mining activities concurrently involve the surface mining of coal) the application shall also provide, for lands to be affected within the permit area:
- 114(2)(f)(I) (a) A copy of the written consent of the surface owner to the extraction of coal by surface mining methods; or
- 114(2)(f)(II) (b) A copy of the document of conveyance that expressly grants or reserves the right to extract the coal by surface mining methods;
or

- 114(2)(f)(II) (c) If the conveyance does not expressly grant the right to extract the coal by surface mining methods, documentation that under the applicable State law, the applicant has the legal authority to extract the coal by these methods.
- 110(2)(j) (3) Nothing in 2.03 shall be construed as vesting in the Division or Board
114(2)(f)(II) the jurisdiction to adjudicate property right disputes.

2.03.7 Relationship to Areas Designated Unsuitable for Mining.

- 114(2)(d) (1) Each application shall contain a statement of available information on whether the proposed permit area is within an area designated unsuitable for surface coal mining operations under Rule 7 of these Rules or 30 CFR 764 and 769 or under study for designation in an administrative proceeding under Rule 7 or 30 CFR 764 and 769.
- (2) If an applicant claims that the proposed permit area should not be included within an area designated, or under study for designation, as unsuitable for surface coal mining operations because he or she has made substantial legal and financial commitments, in relation to the operation for which he or she is applying for a permit, prior to January 4, 1977, the application shall contain information supporting such an assertion.
- 114(2)(g)(v) (3) If an applicant proposes to conduct surface mining activities or conduct or locate surface operations or facilities within 300 feet measured horizontally of an occupied dwelling, the application shall contain the written waiver of the owner of the dwelling which states that the owner and signator had the legal right to deny mining and knowingly waived that right. The waiver must be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver.

2.03.8 Permit Term Information.

- 110(2)(i) (1) Each application for surface mining activities shall state the anticipated or actual starting and termination date of each phase of the surface mining activities and the anticipated number of acres of land to be affected for each phase of mining and over the total life of the permit.
- (2) Each application for underground mining activities shall state the anticipated or actual starting date and termination date of each phase of

the underground mining activities and the anticipated number of acres of surface lands to be affected, and the horizontal and vertical extent of proposed underground mine workings, for each phase of mining and over the total life of the permit.

- (3) If the applicant proposes to conduct the surface or underground mining activities in excess of 5 years, the application shall contain the information needed for the showing required under 2.01.5.

2.03.9 Personal Injury and Property Damage Insurance Information.

- 110(5)
- (1) Prior to issuance of a permit each applicant shall submit to the Division for inclusion in the permit application, a certificate certifying that the applicant has a public liability insurance policy in force for the surface coal mining and reclamation operation for which the permit is sought. The certificate shall provide for personal injury and property damage protection in an amount adequate to compensate any persons injured or property damaged as a result of surface coal mining and reclamation operations, including use of explosives, and entitled to compensation under the applicable provisions of State law. Minimum insurance coverage for bodily injury shall be \$300,000 for each occurrence and \$500,000 aggregate; and minimum insurance coverage for property damage shall be \$300,000 for each occurrence and \$500,000 aggregate.
 - (2) The policy shall be maintained in full force during the life of the permit and any renewal thereof, including completion of all reclamation operations under Rule 4.
 - (3) The policy shall include a rider requiring that the insurer notify the Division whenever substantive changes are made in the policy, including any termination or failure to renew.
 - (4) The Division may accept from the applicant, in lieu of a certificate for public liability insurance policy, satisfactory evidence from the applicant that it has satisfied applicable State or Federal self-insurance requirements.

2.03.10 Identification of Other Licenses and Permits.

- 110(8)
- Each application shall contain a list of all other licenses and permits needed by the applicant to conduct the proposed surface or underground mining activities. This list shall identify each license and permit by:

- (1) Type of permit or license;
- (2) Name and address of issuing authority;
- (3) Identification numbers of applications for those permits or licenses, or, if issued, the identification numbers of the permits or licenses; and
- (4) If a decision has been made, the date of approval or disapproval by each issuing authority.

2.03.11 Identification of Location of Public Office for Filing of Application.

110(2)(g) Each application shall identify, by name and address, the public office where the applicant will simultaneously file a copy of the application for public inspection under 2.07.3(4).

2.03.12 Newspaper Advertisement and Proof of Publication.

110(2)(g) A copy of the newspaper advertisement of the application and proof of the publication of the advertisement shall be filed with the Division and made a part of the complete application, not later than 4 weeks after the last date of publication required under 2.07.3(2).

2.04 APPLICATION FOR PERMIT FOR SURFACE OR UNDERGROUND MINING ACTIVITIES - MINIMUM REQUIREMENTS FOR INFORMATION ON ENVIRONMENTAL RESOURCES

2.04.1 Objectives.

111 The objectives of 2.04 are to ensure that each application provides the Division a complete and accurate description of the environmental resources that may be impacted or affected by proposed surface coal mining operations.

2.04.2 Responsibilities.

- (1) It is the responsibility of the applicant to provide, except where specifically exempted, all information required by 2.04 in the application.

- 106(2) (2) It is the responsibility of State and Federal government agencies to provide information for applications as specifically required by 2.04.
- 110(2) **2.04.3 General Requirements: Site Description and Land Use Information.**
- 110(2) (1) Each permit application shall include a description of the existing, premining environmental resources within the proposed permit area and adjacent areas that may be affected or impacted by the proposed surface or underground mining activities.
- (2) The application shall contain a statement of the condition, capability, and productivity of the land within the proposed permit area, except for underground mining which shall cover only those areas affected or to be affected by surface operations and facilities, including:
- 111(1)(b)(I,II,III) (a) A map, prepared according to the requirements of 2.10, and supporting narrative of the uses of the land existing at the time of the filing of the application, in accordance with land use categories established in the land use definition in 1.04. If the premining use of the land was changed within the five years prior to the date operations are proposed to begin, the historic use of the land shall also be described.
- (b) A narrative of land capability and productivity which analyzes the land-use description under 2.04.3(2) in conjunction with the other environmental resources information required under 2.04.3. The narrative shall provide analyses of:
- 111(1)(b)(II) (i) The capability of the land before any mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover and the hydrology of the proposed permit area; and
- 111(1)(b)(III) (ii) The productivity of the proposed permit area before mining, expressed as average yield of food, fiber, forage, or wood products from such lands obtained under high levels of management. The productivity shall be determined by yield data or estimates for similar sites based on current data from the U.S. Department of Agriculture, State agricultural universities or appropriate State natural resources or agricultural agencies.

- (3) The application shall state whether the proposed permit area has been previously mined, and, if so, the following information, if available:
 - (a) The type and description of mining method used;
 - (b) The coal seams or other mineral strata mined;
 - (c) The extent of coal or other mineral removed;
 - (d) The approximate dates of past mining; and
 - (e) The uses of the land preceding mining.
 - (f) The location and extent of acreage disturbed by previous surface coal mining and reclamation operations.
- (4) The application shall contain a description of the existing land uses and land use classification under local law, if any, of the proposed permit area and adjacent areas.

2.04.4 Cultural and Historic Resource Information.

- 110(2)(n)
- (1) The application shall contain a description of the cultural and historic resources listed or eligible for listing on the National Register of Historic Places and significant known archaeological sites existing on the date of application within all areas proposed or likely to be affected by surface activities or planned or probable subsidence over the life of the mine. The description shall be based on all available information, including, but not limited to, data of State and local archaeological, historical, and cultural preservation agencies.
 - (2) The Division may require the applicant, for good cause shown, to identify and evaluate important historic and archeological resources that may be eligible for listing on the National Register of Historic Places through collection of additional information, conducting of field investigations, or other appropriate analyses.

2.04.5 General Description of Hydrology and Geology.

- 110(2)(k)
110(2)(l)
- (1) Each application shall contain a description and map, prepared in accordance with 2.10, of the geology, surface and ground water systems, including water quality and quantity, of all lands within the proposed

permit area, the adjacent area, and the general area. The description shall include information on the characteristics of all surface and ground waters within the general area, and any water which will flow into or receive discharges of water from the general area. The description shall be prepared according to 2.04.5 and 2.04.7, and conform to the following:

- (a) Information on surface and groundwater systems including water quality, water quantity, and geology related to the hydrology of areas outside the permit area and within the general area shall be provided by the Division, to the extent that this data is available from an appropriate Federal or State agency.
 - (b) If this information is not available from those agencies, the applicant may gather and submit this information to the Division as part of the permit application.
 - (c) The permit shall not be approved by the Division until this information is made available in the application.
- (2) The use of approved modeling techniques may be included as part of the permit application, but the same surface and ground water information may be required for each site as when models are not used.
 - (3) Permit applications may comply with the requirements of 2.04.5(1), 2.04.6(1)(a), 2.04.6(2)(a) and 2.04.7 by providing accurate descriptive and predictive information relating to geology, water quality and quantity for the area to be affected over the estimated life of the operation based upon extrapolation by an expert in the field from documented data on the geology, water quality and quantity of similar areas, provided that the data used by the expert is included within the permit application, the expert opinion is approved by the Division and all such data are made available to the public for review and comment.

2.04.6 Geology Description.

(1) General Requirements

The geology description shall include a description of the geology (stratigraphy and structure) within the proposed permit and adjacent areas. This description shall be sufficient in detail to:

- (a) Define the relationship between structural geology and the occurrence, movement, quality and quantity of potentially impacted surface and ground water;
- (b) Assist in determining the feasibility of the proposed reclamation plan;
- (c) Assess the potential for off-site material damage to the hydrologic balance;
- (d) Assist in the preparation of the probable hydrologic consequence statement and the establishment of the hydrologic monitoring plan; and
- (e) Assist in the preparation of the subsidence control plan under 2.05.6(6).

(2) Surface Mining

110(2)(o)
110(2)(p), 110(7)

- (a) The description shall include a general statement of the geology (stratigraphy and structure) within the proposed area to be affected over the life of the operation down to and including the first aquifer and other coal seams, if any, below the lowest coal seam to be mined. A geologic map with geologic cross-sections of the permit area, prepared in accordance with 2.10, shall accompany the descriptions and include the following:
 - (i) Nature, depth, and thickness of the coal seams to be mined, any coal or rider seams above the seam to be mined, each stratum of the overburden, and the stratum immediately below the lowest coal seam to be mined;
 - (ii) The proposed permit area, including coal outcrops and the strike and dip of the coal to be mined;
- (b) (i) Test borings or core samples from the proposed permit area shall be collected and analyzed down to and including either the stratum immediately below the lowest coal seam to be mined or any aquifer below the lowest coal seam to be mined which may be adversely affected by mining, whichever is deeper, in order to provide the following data in the description:

- (A) Location of subsurface water zones, if encountered;
 - (B) Logs of drill holes, test borings or other sampling methods as approved by the Division showing the lithologic characteristics and thickness of each stratum and each coal seam;
 - (C) Physical properties of each stratum within the overburden and interburden including texture, overall swell, and other information sufficient to determine compatibility, erodability and an overall estimate of overburden and interburden swell;
 - (D) Chemical analysis of each stratum within the overburden and interburden and either the stratum immediately below the lowest coal seam to be mined or any aquifer below the lowest coal seam to be mined which may be adversely affected by mining, whichever is deeper, to identify, at a minimum, those horizons which contain potential acid-forming, toxic-forming, or alkalinity-producing materials; and
 - (E) Analyses of the coal seam, including, but not limited to, an analysis of the sulfur, pyrite, and marcasite content.
- (ii) Borehole spacing and physical and chemical analyses of core samples shall be determined in consultation with the Division.
 - (iii) If required by the Division, test borings, core samplings or samples obtained by other methods approved by the Division shall be collected and analyzed to greater depths within the proposed permit area, or for areas outside the proposed permit area to provide for evaluation of the impact of the proposed activities on the hydrologic balance.
 - (iv) An applicant may request that the requirement for a statement of the results of the test borings or core samples be waived by the Division. The waiver may be granted only if the Division makes a written determination that the

statement is unnecessary because other equivalent information is accessible to it in a satisfactory form. The source(s) of such equivalent information shall be referenced in the Division's written determination and the information itself shall be made readily accessible by the Division for public review as required by 1.08 if such information has not been determined to be of a confidential nature in accordance with 2.02.7 and 2.07.5.

(3) Underground Mining

110(2)(o)
110(2)(p), 110(7)

- (a) The description shall include a general statement of the geology (stratigraphy and structure) within the proposed area to be affected over the life of the operation, down to and including the first aquifer, and other coal seams, if any, below the lowest coal seam to be mined. The geology for the areas proposed to be affected by surface operations and facilities, those surface lands underlain by the coal to be mined, and the coal to be mined shall be separately described as follows including a map and cross sections prepared to the standards of 2.10 which shows:
- (i) Nature, depth, and thickness of the coal seams to be mined, any coal or rider seams above the seam(s) to be mined, each stratum of the overburden, and the stratum immediately below the lowest coal seam to be mined;
 - (ii) A geologic map with geologic cross sections of the proposed permit area, including coal crop lines and the strike and dip of the coal to be mined;
 - (iii) The geology for those surface lands within the permit area which are underlain by the coal seam to be extracted and the geology of the coal seam itself including:
 - (A) The logs of drill holes, test borings or other samples obtained by methods approved by the Division showing the lithologic characteristics, physical properties and thickness of each stratum which may be impacted;
 - (B) The location of subsurface water if encountered;

- (C) Chemical analysis of the coal seam for acid-forming or toxic-forming materials including, but not limited to, the pyrite, marcasite and sulphur content;
 - (D) The chemical analysis of the stratum immediately above and below the coal seam to be mined or any other stratum to be affected, for acid-forming, toxic-forming, or alkalinity-producing materials and their content as determined by the Division; and
 - (E) For proposed room and pillar mining operations, the thickness and engineering properties of clays or clay shale, if any, in the stratum immediately above and below each coal seam to be mined.
- (iv) The geology of the strata down to and including either the stratum immediately below any coal seam to be mined or any aquifer below the lowest coal seam to be mined which may be adversely affected by mining, whichever is deeper, shall be described for those areas to be affected by surface operations or facilities only in those cases where the strata will be removed or is already exposed down to the level of the coal seam to be mined, including the following data resulting from an analysis of test borings, core samples or outcrop samples:
- (A) The location of subsurface water, if encountered, and the location of where subsurface water will be exposed at the face-up area;
 - (B) The logs of drill holes, test borings, or other sampling methods as approved by the Division showing the lithologic characteristics of each strata to be affected;
 - (C) The physical properties of the strata immediately above and below the coal seam affected, including texture, and other information sufficient to determine compactability and clay content;
 - (D) The chemical analyses of the stratum immediately above and below the coal seam to be mined, or any other stratum to be affected, to identify at a minimum,

those horizons which contain potential acid-forming, toxic-forming, or alkalinity-producing materials.

- (v) The near surface geology of those surface operations and facilities not underlain by the coal seam to be extracted shall be described, including the following data resulting from analyses of test borings, core samplings or outcrop samples:
 - (A) A description of near-surface strata beneath the disturbed area;
 - (B) The lithologic characteristics of the strata to be affected, including physical and chemical properties identifying, at a minimum, texture; and analyses to identify those horizons which contain potential acid-forming, toxic-forming or alkalinity-producing materials.
- (b) An applicant may request the Division waive in whole or in part the requirements of 2.04.6(3)(a)(iii) and (iv). The waiver may be granted only if the Division makes a written determination that the collection and analysis of such data is unnecessary because other equivalent information is available to the Division in a satisfactory form.

2.04.7 Hydrology Description.

(1) Ground Water Information

110(2)(l)

- (a) The application shall contain a description of the ground water hydrology for the proposed permit and adjacent area, including, at a minimum:
 - (i) The depth below the surface and the horizontal extent of the potentiometric surface of each aquifer above, within and, if potentially impacted, below the lowest coal seam to be mined;
 - (ii) The lithology and thickness of the aquifers;
 - (iii) The seasonal quantity and quality of the water within each aquifer;

- (iv) Ownership, uses and location information for all existing wells, springs and other developed ground water resources; and
- (v) The quality of the subsurface water. Water quality sampling and laboratory analyses will be conducted in accordance with 2.03.3(4) and shall include:
 - (A) Total dissolved solids or specific conductance corrected to 25E C;
 - (B) pH;
 - (C) Total iron; and
 - (D) Total manganese.

(b) The application shall contain additional information which describes the recharge, storage, and discharge characteristics of aquifers and the quality and quantity of ground water for the proposed permit and adjacent areas, according to the parameters and in the detail required by the Division. The application shall also provide well locations and reported yields from all wells within the proposed permit and adjacent areas which are registered with the Office of the State Engineer.

(2) Surface Water Information

110(2)(k)
110(2)(l)

- (a) Surface water information shall be provided, including the name of the watershed which will receive water discharges from the permit area, the location of all surface water bodies such as streams, lakes, ponds and springs, the location of any water discharge into any surface body of water, and descriptions of surface drainage systems sufficient to identify, in detail, the seasonal variations in water quantity and quality within the proposed permit and adjacent areas. The application shall also contain information pertaining to ownership and use of surface water bodies.
- (b) Surface water information shall include:

- (i) Minimum, maximum, and average flows which identify critical low flow and peak discharge rates of streams sufficient to identify seasonal variations; and
- (ii) Water quality data from surface waters in, discharging into, or which will receive flows from surface or ground water from affected areas within the proposed permit area, sufficient to identify seasonal variations. Water quality sampling and laboratory analyses will be conducted in accordance with 2.03.3(4) and shall include:
 - (A) Total dissolved solids or electrical conductivity corrected to 25 degrees centigrade (specific conductance);
 - (B) Total suspended solids in milligrams per liter;
 - (C) Acidity;
 - (D) pH;
 - (E) Total and dissolved Iron, in milligrams per liter;
 - (F) Total Manganese, in milligrams per liter; and
 - (G) Such other information as the Division, for good cause shown, determines is relevant.

110(2)(l)

- (3) Alternative Water Supply Information. The application shall identify the extent to which the proposed surface coal mining operations may proximately result in contamination, diminution, or interruption of an underground or surface source of water within the proposed permit area and adjacent areas for domestic, agricultural, industrial, fish and wild-life, or other legitimate use. If contamination, diminution, or interruption may result, then the description shall identify the alternative sources of water supply or sources of augmentation water that could be developed to replace the existing sources. The alternate or substituted water shall be of a quality and quantity so as to meet the requirements for which the water has normally been used. (See Article 83 and 92 of Title 37 of the Colorado Revised Statutes.)
- (4) A map prepared according to the standards of 2.10 showing:

- (a) The locations of water supply intakes, ditches, reservoirs, and wells within a one mile minimum radius of the affected area, current users of surface water flowing into, out of, and within a hydrologic area defined by the Division, and those surface waters which will receive discharges from affected areas in the proposed permit area and adjacent area;
- (b) Elevations and locations of monitoring stations used to gather data for water quality and quantity.
- (c) Location and extent of sub-surface water, if encountered, within the proposed permit and adjacent areas, including but not limited to areal and vertical distribution of aquifers, and estimate of seasonal variations of aquifer characteristics on cross sections and contour maps as appropriate.
- (d) Location of surface water bodies such as streams, lakes, ponds, springs, constructed or natural drains, and irrigation ditches within the proposed permit and adjacent areas;
- (e) Location and dimension of existing areas of spoil, waste, and non-coal waste disposal, dams, embankments, other impoundments, and water treatment and air pollution control facilities within the proposed permit area;
- (f) Location, and depth, if available, of gas and oil wells within the proposed permit area and water wells in the permit area and adjacent area; and
- (g) Elevation and location of test borings and core samplings.

109(2)

- (5) Permit applications may comply with the requirements of 2.04.7(4)(c) and 2.04.7(2)(a) & (b) regarding the seasonal variability of surface and groundwater quality and quantity without the collection of data covering 12 consecutive months if accurate statistical procedures, approved by the Division, are used to extrapolate from a data base covering a shorter period of time.

2.04.8 Climatological Information.

- 110(2)(m)
- (1) When requested by the Division the application shall contain a statement of the climatological factors that are representative of the proposed permit area, including:
 - (a) The mean monthly precipitation;
 - (b) The average direction and velocity of the prevailing winds; and
 - (c) Mean monthly temperature and temperature ranges.
 - (2) The Division may for good cause shown request additional climatological data as deemed necessary to ensure compliance with the requirements of 2.04.8.
 - (3) Permit applications may comply with these requirements regarding seasonal variability of climatological factors without the collection of data covering 12 consecutive months if accurate statistical procedures, approved by the Division, are used to extrapolate from a data base covering a shorter period of time.

110(8) **2.04.9 Soils Resource Information.**

- (1) The applicant shall provide adequate soils information for those portions of the permit area to be disturbed by surface operations and facilities. Such information shall include at a minimum the following site specific information, or information properly extrapolated from adjacent or similar areas of the same soil type, where the Division determines, in its discretion, such extrapolation is appropriate.
 - (a) Description, sampling and analysis of soil horizons in sufficient detail to determine the horizons suitable for salvage;
 - (b) Soils analysis for representative samples of each soil horizon for each soil type with analyses conducted using standardized soil testing procedures. Soil testing parameters shall include:
 - (i) pH;
 - (ii) Salt hazard (electrical conductivity);
 - (iii) Sodium Absorption Ratio or exchangeable sodium percentage;

- (iv) Texture;
 - (v) Other analyses as required by the Division for good cause shown; and
 - (vi) The Division may waive any of the above parameters based upon a demonstration by the applicant that the parameter is not necessary based on site specific conditions.
- (c) A soils map or enlarged aerial photo of the same scale as the permit area map shall be provided which accurately portrays:
- (i) Soil sample locations except for those obtained from published reports; and
 - (ii) The horizons which the operator proposes to salvage within each portion of the permit area.
- (d) A narrative or table shall be provided which addresses the suitability of each major soil horizon as a plant growth media based on its physical and chemical characteristics.
- (e) A discussion of present and potential productivity of soils.
- (2) The intensity of soil sampling and the number of samples to analyze shall be based on the complexity and variability of soils within the permit area.
- (3) Where the applicant proposes to use selected overburden materials as a supplement or substitute to topsoil, the application shall provide results of the analyses, trials, and tests required under 4.06.2.

2.04.10 Vegetation Information.

- 110(8)
 - 111(1)(b)(II)
 - 111(1)(e)
 - 111(1)(g)
- (1) The permit application shall contain a vegetation map, prepared in accordance with 2.10, which delineates plant communities within the permit area, or in case of underground mining any area to be affected by surface operations or facilities, and within any proposed reference area(s). The delineation of plant communities shall be on the basis of the visually dominant perennial species.

- (2) If the applicant intends to use reference area(s) to evaluate the success of revegetation, as described in 4.15.7(4), the proposed locations of these reference area(s) must be included on the vegetation map.
- (3) The vegetation map shall include sufficient adjacent areas to allow evaluation of vegetation as important habitat for fish and wildlife for those species of fish and wildlife identified under 2.04.11. An aerial photograph, with the plant communities delineated, may be used in lieu of a vegetation map for this purpose.
- (4) Plant communities shall be described in terms of species composition, cover, productivity and woody plant density. The application shall include a discussion of environmental factors controlling or limiting distribution of species, such as elevation, slope, aspect, soils, water availability and past management. Current condition shall be discussed for each community type or portion thereof if significant differences exist within a type.
- (5) The potential for impacts to rare and endangered plant species shall be evaluated in accordance with requirements of 2.05.6(2)(a)(iii).

2.04.11 Fish and Wildlife Resources Information.

- 110(8)
- (1) Each application shall include a study of fish and wildlife and their habitats within the proposed permit area and portions of the adjacent area as determined by the Division, or in the case of underground mining, only those areas within the proposed permit area and portions of the adjacent area as determined by the Division where surface mining will be conducted or facilities located and the portions of the permit area where effects on such resources may reasonably be expected to occur.
 - (2) Prior to initiating such studies, the applicant shall contact the Division to determine what fish and wildlife resources information will be required.
 - (3) The Division, in consultation with the appropriate State and Federal fish and wildlife management, conservation, or land management agencies having responsibilities for fish and wildlife or their habitats, shall determine the level of detail and the areas of such studies, according to:

- (a) Published data and other information;
 - (b) Site-specific information obtained by the applicant; and
 - (c) Written guidance obtained from agencies consulted.
- (4) The potential for impacts to rare and endangered animal species shall be evaluated by the Division in consultation with appropriate Federal and State agencies.

2.04.12 Prime Farmland Investigation.

110(2)(q)
111(1)(b)(II)

- (1) For areas where mining was not authorized under permits issued or mining plans approved prior to August 3, 1977, the applicant shall conduct a preapplication investigation of the proposed permit area, or, in the case of underground mining, only those areas proposed to be disturbed by surface operations or facilities, to determine whether lands within the area may be prime farmland. The Division, following consultation with the U.S. Soil Conservation Service, shall determine the nature and extent of the required prime farmland investigation.
- (2) Land shall not be considered prime farmland where the applicant can demonstrate one of the following:
- (a) The land has not been historically used as cropland;
 - (b) The slope of the land is 6 percent or greater;
 - (c) The land is not irrigated or naturally subirrigated, has no developed irrigation water supply that is dependable or of adequate quality;
 - (d) A very rocky surface exists, or the land is frequently flooded during the growing season, more often than once in 2 years, and the flooding has reduced crop yields;
 - (e) The growing season is less than 90 days;
 - (f) On the basis of a soil survey of lands within the permit area, there are no soil map units that have been designated prime farmland by the U.S. Soil Conservation Service; or

- (g) Other factors as determined by the Secretary of Agriculture to show that the land is not prime farmland.
- (3) If the investigation establishes that the lands are not prime farmland, the applicant shall submit with the permit application a request for a negative determination which concludes that the land meets one of the criteria of 2.04.12(2).
- (4) The applicant may submit, prior to making an application for a permit, a request for a negative prime farmland determination by the Division and a statement which identifies the rationale for a negative determination.
- (5) If the investigation indicates that land within the proposed permit area may be prime farmland historically used for cropland, the applicant shall contact the U.S. Soil Conservation Service to determine if a soil survey exists for those lands and whether the applicable soil map units have been designated prime farmland. If no survey has been made for the lands proposed to be affected by surface operations or facilities, the applicant shall cause such a survey to be made in accordance with Rule 2.06.6(2).
 - (a) When a soil survey of lands within the proposed permit area, or, in the case of underground mining, only those areas proposed to be disturbed by surface operations or facilities, contains soil map units which have been designated as prime farmlands, the applicant shall submit an application for such designated land in accordance with 2.06.6.
 - (b) When a soil survey for lands within the proposed permit area, or, in the case of underground mining, only those areas proposed to be disturbed by surface operations or facilities contains soil map units which have not been designated as prime farmland after review by the U.S. Soil Conservation Service, the applicant shall submit a request for negative determination for nondesignated land with the permit application establishing compliance with 2.04.12(2).

2.04.13 Annual Reclamation Report.

- (1) By February 15, or other such date as agreed on, each permittee shall file an annual reclamation report covering the previous calendar year for

all areas under bond. The report shall include, but not be limited to, text, discussion and maps which address:

- (a) The name and address of the permittee and permit number;
 - (b) Location and number of acres disturbed during that year;
 - (c) Location and number of acres backfilled and graded during that year;
 - (d) Location and number acres topsoiled during that year;
 - (e) The species, location and number of acres of vegetation planted during that year, including any augmented seeding or cultural practices. Discrete areas planted with specific seedmixes should be indicated, and seedtags, invoices or other comparable documentation should be included; and
 - (f) Location, number of acres and date of planting for all previously revegetated areas.
- (2) The permittee may provide additional monitoring information as required by the approved permit.

2.05 APPLICATION FOR PERMIT FOR SURFACE OR UNDERGROUND MINING ACTIVITIES--MINIMUM REQUIREMENTS FOR OPERATION AND RECLAMATION PLANS

2.05.1 Objectives.

110(3)
111(1)(e) The objectives of 2.05 are to ensure that the Division is provided with comprehensive and reliable information on proposed surface coal mining and reclamation operations, and to ensure that those operations are allowed to be conducted only in compliance with these Rules and the Act. Information presented in the application which addresses 2.05 shall be referenced to the applicable environmental baseline information of 2.04 to demonstrate that a proposed operation is being conducted consistent with environmental resources information.

2.05.2 Operation Plan - Estimated Area for Life of Operation.

- 111(1)(a) Each application shall contain a general description of all surface coal mining operations proposed to be conducted during the life of the operation. This general description shall include, at a minimum, the following:
- 111(1)(e) (1) Production methods and equipment. A narrative description of the general type and method of coal mining procedures, engineering techniques, anticipated annual and total production of coal, by tonnage, and the major equipment to be used for all aspects of those operations and a description of the measures to be used to maximize the use and conservation of the coal resource as required in 4.01.1.
- 111(1)(a) (2) Operation description. A general description and appropriate map(s), prepared in accordance with 2.10, describing the area of land to be affected over the life of the operation, according to the anticipated sequence of mining and reclamation, and identifying each area of land for which it is anticipated a new, separate, five-year permit will be obtained and a performance bond will be posted throughout the operation and any change in a facility or feature shown under 2.10 which would result from the proposed operations.

2.05.3 Operation Plan - Permit Area.

- 111(1)(a) Each application shall contain a detailed description of the specific mining
111(1)(e) operations proposed to be conducted within the permit area. This description shall include, at a minimum, the following:
- (1) Production methods and equipment. A narrative description of the specific type and method of coal mining procedures and proposed engineering techniques, anticipated annual and total production of coal by tonnage, and the major equipment to be used for all aspects of those operations.
- (2) Operation description.
- (a) Surface mining. A detailed narrative description and appropriate map(s) prepared in accordance with 2.10, describing the land to be affected within the permit area according to the proposed sequence of mining and reclamation. Each narrative and/or map shall include a detailed timetable sufficient to describe the various mining phases proposed by the applicant. The maximum acreage

proposed for each phase of the operations within the permit area must be specified.

- (b) Underground Mining. A detailed narrative and appropriate map(s), prepared according to the standards of 2.10, sufficient to describe all proposed surface disturbances to be associated with the underground mining activities within the permit area. Each operation plan shall include a narrative, cross sections, map(s) and timetable(s) sufficient to describe the areal extent of the proposed underground workings and the stratum to be affected.
- (3) Mine facilities.
- (a) A description, plans, and drawings, describing the location, construction, modification, use, maintenance and removal of mine support facilities in the permit area including all buildings, structures, utility corridors and other support facilities including but not limited to those listed in 4.04. Plans and drawings shall include a map, to meet the standards prescribed in 2.10, appropriate cross sections, design drawings, and specifications sufficient to demonstrate compliance with 4.04.
 - (b) A description of each existing structure, for which there are specific design criteria or performance standards specified in these Rules, proposed to be used in connection with or to facilitate the surface coal mining and reclamation operations. The description shall include:
 - (i) (A) Location;
 - (B) Plans of the structure which describe its current condition;
 - (C) Approximate dates on which construction of the existing structure was begun and completed; and
 - (D) A showing, including relevant monitoring data or other evidence, whether the structure meets the design requirements or performance standards of Rule 4 or is eligible for exemption as set forth in 2.07.6.

- (ii) A compliance plan for each existing structure that is proposed to be modified or reconstructed for use in connection with or to facilitate the surface coal mining and reclamation operation. The compliance plan shall include:
 - (A) Design specifications for the modification or reconstruction of the structure to meet the requirements of these Rules;
 - (B) A construction schedule which shows dates for beginning and completing interim steps and final reconstruction;
 - (C) Provisions for monitoring the structure during and after modification or reconstruction to ensure that the performance standards of these Rules are met; and
 - (D) A showing that the risk of harm to the environment or to public health or safety is not significant during the period of modification or reconstruction.
- (c) A description of each road, conveyor, or rail system to be constructed, used, or maintained within the proposed permit area. The description shall include a map, prepared in accordance with 2.10, appropriate cross sections, and the following:
 - (i) Specifications for each road width, road gradient, road surface, road cut, fill embankment, culvert, bridge, drainage ditch, and drainage structure.
 - (ii) A report of appropriate geotechnical analysis, where approval of the Division is required for alternative specifications, or for steep cut slopes under 4.03.1(1)(e), 4.03.1(3)(d), 4.03.2(1)(e), or 4.03.2(3)(d).
 - (iii) A description of measures to be taken by the applicant for alteration or relocation of a natural drainage way under 4.03.1(4)(a)(i), 4.03.2(4)(a)(i), or 4.03.3(4)(d).
 - (iv) A description of measures, other than use of a rock headwall, to be taken to protect the inlet end of a ditch

relief culvert, for approval by the Division under 4.03.1(4)(e)(vi)(C).

- (v) A description of measures to be used to ensure that the interests of the public and landowners affected are protected if, under 2.07.6(2)(d)(iv), the applicant seeks to have the Division approve:
 - (A) Conducting the proposed surface mining activities within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join that right-of-way; or
 - (B) Relocating the public road.
 - (vi) Drawings and specifications for any stream fords proposed for use as temporary construction routes.
 - (vii) The plans and drawings for each haul road and access road shall be prepared by, or under the direction of, and certified by a qualified, registered professional engineer, experienced in the design and construction of roads, as meeting the requirements of this rule; current, prudent engineering practices; and the design criteria of 4.03.1 and 4.03.2.
- (4) Ponds, impoundments, other treatment facilities and diversions.
- (a) General. A general plan and detailed design plan shall be submitted for each sediment pond, impoundment, other treatment facility and diversion proposed to be constructed within the permit area.
 - (i) Each general plan shall:
 - (A) Be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance as appropriate from other engineers and experts in related fields such as geology, land surveying and landscape architecture.

- (B) Contain a description, map, prepared according to 2.10, and cross section of the structure and its location;
 - (C) Contain preliminary hydrologic and geologic information required to assess the hydrologic impact of the structure;
 - (D) Contain an analysis describing the potential effect on the structure from subsidence of the subsurface strata resulting from past underground mining activities if underground mining has occurred; and
 - (E) Contain a certification statement which includes a schedule setting forth the dates that any detailed design plan for structures that are not submitted with the general plan will be submitted to the Division. The Division shall have approved, in writing, the detailed design plan for a structure before construction of the structure begins.
- (ii) Each detailed design plan for a structure shall:
- (A) Be prepared by, or under the direction of, and certified by a qualified registered professional engineer experienced in the design and construction of impoundments with assistance as appropriate from other engineers and experts in related fields such as geology, land surveying and landscape architecture.
 - (B) Include any geotechnical investigation, design, and construction specifications required by the Division to ensure compliance with the safety factor requirements of Rule 4.05.6 and Rule 4.05.9;
 - (C) Describe the operation and maintenance requirements for each structure; and
 - (D) Describe the timetable and plans to remove each structure, if appropriate.

- (iii) If an impoundment has a capacity of more than 100 acre-feet, or has a dam or embankment in excess of 10 feet in vertical height, from the bottom of the channel to the bottom of the spillway, or has a surface area at high waterline in excess of 20 acres, then each plan under 2.05.3(4)(b) or (c) shall meet the applicable requirements of the State Engineer in accordance with C.R.S. 37-87-105. C.R.S. 37-87-105 is hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
- (iv) In cases where a sedimentation pond or impoundment meets or exceeds the criteria of 30 CFR 77.216(a), then the permittee shall also comply with the applicable requirements of the Mine Safety and Health Administration (MSHA), 30 CFR 77.216-1 and -2. 30 CFR 77.216(a), 30 CFR 77.216-1 and 30 CFR 77.216-2 are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
- (v) Any plans required to be submitted to, and approved by, the Office of the State Engineer or MSHA for impoundments shall also be submitted to the Division as part of the permit application.
- (vi) All impoundments meeting the Class B or Class C criteria for dams in the U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October 1985), "Earth Dams and Reservoirs" (TR60), shall comply with the requirements of this section for structures that meet or exceed the size or other criteria of 30 CFR 77.216(a). TR60 and 30 CFR 77.216(a) are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
- (vii) Each plan for an impoundment which meets the Class B or Class C criteria in U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October 1985), "Earth Dams and Reservoirs" (TR60) or meets the size or other criteria of 30 CFR 77.216(a) shall include a stability analysis of the structure. The stability

analysis shall include, but shall not be limited to, strength parameters, pore pressure, and long term seepage conditions. The plan shall also contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods. TR60 and 30 CFR 77.216(a) are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).

- (b) Sedimentation Ponds, whether temporary or permanent, shall be designed in conformance with the requirements of Rule 4.05.6, and the applicable requirements of Rule 4.05.9. Any sedimentation pond or earthen structure which will remain on the proposed permit area as a permanent impoundment shall also be designed to comply with the requirements of Rule 4.05.9.
- (c) Permanent and temporary impoundments. Permanent and temporary impoundments shall be designed to comply with the requirements of 4.05.9.
- (d) Diversions. Stream channel diversions and other diversions within the proposed permit area shall be designed to comply with requirements of 4.05.3 and 4.05.4.

111(1)(e) (5) Topsoil. A narrative explaining the method of removal and the amount to be removed and the plan for storage of topsoil, subsoil, and other material within the permit area subject to requirements of the topsoil removal performance standards of 4.06.2. This narrative shall specify the depth of material to be salvaged from all disturbed areas based on the soil information required by 2.04.9 and shall specify the volume of each type of material to be salvaged. A map of any proposed storage structures shall accompany the narrative. The maps shall be prepared according to the requirements of 2.10.

111(1)(e) (6) Overburden. A narrative and appropriate maps explaining the removal, handling and storage of all overburden material in the permit area. Each narrative should include pit dimensions, overburden volumes and swell factor anticipated for each phase of the proposed operation. Permanent excess spoil disposal structures shall comply with 2.05.3(6)(b). Temporary overburden disposal (storage) structures shall comply with the applicable performance standards of Rule 4;

information to demonstrate such compliance shall include, if applicable, location, geometry, and method of material placement. If appropriate for the proposed operation, each plan should also include:

- 110(6)
- (a) A surface blasting plan for the proposed permit area, explaining how the applicant intends to comply with the requirements of 4.08 and including the following:
 - (i) Types and approximate amounts of explosives to be used for each type of blasting operation to be conducted;
 - (ii) A plan for recording and retention of the following during blasting:
 - (A) Drilling patterns, including size, number, depths, and spacing of holes;
 - (B) Charge and packing of holes;
 - (C) Types of fuses and detonation controls; and
 - (D) Sequence and timing of firing holes.
 - (iii) Description of blasting warning and site access control equipment and procedures;
 - (iv) Description of types, capabilities, sensitivities, and locations of use of any blast monitoring equipment and procedures proposed to be used;
 - (v) Description of plans for recording and reporting to the Division the results of preblasting surveys, if required;
 - (vi) Description of unavoidable hazardous conditions for which deviations from the blasting schedule will be needed under 4.08.4(2);
 - (vii) The limitations the operator will meet with regard to ground vibration and airblast, the bases for those limitations, and the methods to be applied in controlling the adverse effects of blasting operations; and

(viii) On a map locate each explosive storage and handling facility.

- 111(1)(e) (b) Descriptions, including appropriate maps, prepared according to the standards of 2.10, and cross section drawings, of the proposed disposal site and design of the spoil disposal structures according to 4.09. These plans shall describe the geotechnical investigation, design, construction, operation, maintenance, and removal, if appropriate, of the site and structures and shall be prepared by a qualified registered professional engineer.
- 111(1)(e) (c) The results of a geotechnical investigation of the proposed disposal site, including the following:
- (i) The character of bedrock and any adverse geologic conditions in the disposal area;
 - (ii) A survey identifying all springs, seepage and ground water flow observed or anticipated during wet periods in the area of the disposal site;
 - (iii) A survey of the potential effects of subsidence of the subsurface strata due to past and future mining operations;
 - (iv) A technical description of the rock materials to be utilized in the construction of those disposal structures containing rock chimney cores or underlain by a rock drainage blanket; and
 - (v) A stability analysis including, but not limited to, strength parameters, pore pressures and long-term seepage conditions. These data shall be accompanied by a description of all engineering design assumptions and calculations and the alternatives considered in selecting the specific design specifications and methods.
- (d) If, under 4.09.1(10), rock toe buttresses or key-way cuts are required, the applications shall include the following:
- (i) The number, location and depth of borings or test pits which shall be determined with respect to the size of the spoil disposal structure and subsurface conditions; and

- (ii) Engineering specifications utilized to design the rock-toe buttresses or key-way cuts which shall be determined in accordance with 2.05.3(6)(c)(v).

(7) Coal Handling Structures.

111(1)(e),(f) A narrative and appropriate map, prepared to meet the standards of 2.10, generally explaining the location, construction, modification, use, maintenance and removal of coal removal, handling, storage, cleaning, and transportation areas and structures in accordance with 4.01.1.

(8) Coal Mine Waste And Non-Coal Processing Waste.

111(1)(e)
111(1)(l)
111(1)(m) A narrative explaining the construction, modification, use, maintenance, removal, and reclamation of coal processing and non-coal waste removal, handling, storage, transportation and disposal areas and structures in the permit area in accordance with Sections 4.10 and 4.11 including appropriate maps, which meet the requirements of 2.10, explaining the location of each source of waste, waste storage area, and waste disposal facility.

- (a) Each application shall contain a general plan and detailed design plan for each coal mine waste and non-coal processing waste bank, dam, or embankment proposed to be constructed within the permit area.

- (i) Each general plan shall:
 - (A) Be prepared by, or under the direction of and certified by a qualified registered professional engineer, or by a professional geologist with assistance from experts in related fields such as surveying and landscape architecture;
 - (B) Contain a description, map, prepared according to 2.10, and cross section of the structure and its location;
 - (C) Contain preliminary hydrologic and geologic information required to assess the hydrologic impact of the structure;

- (D) Contain a survey describing the potential effect on the structure from subsidence of the subsurface strata resulting from past underground mining activities if underground mining has occurred; and
 - (E) Contain a certification statement which includes a schedule setting forth the dates that any detailed design plan for structures that are not submitted with the general plan will be submitted to the Division. The Division shall have approved, in writing, the detailed design plan for a structure before construction of the structure begins.
- (ii) Each detailed design plan for a structure shall:
- (A) Be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture;
 - (B) Describe the operation and maintenance requirements for each structure;
 - (C) Describe the timetable and plans to remove each structure, if appropriate; and
 - (D) Include any geotechnical investigations, design, and construction requirements for the structure.
- (iii) If an impoundment has a capacity of more than 100 acre-feet, or has a dam or embankment in excess of 10 feet in vertical height, from the bottom of the channel to the bottom of the spillway, or has a surface area at high waterline in excess of 20 acres, then each plan under 2.05.8(b) or (c) shall meet the applicable requirements of the State Engineer in accordance with C.R.S. 37-87-105. C.R.S. 37-87-105 is hereby incorporated by reference, can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).

- (iv) In cases where a structure meets or exceeds the criteria of 30 CFR 77.216(a) then the permittee shall comply with the applicable requirements of the Mine Safety and Health Administration, 30 CFR 77.216-1 and -2. 30 CFR 77.216(a), 30 CFR 77.216-1 and 30 CFR 77.216-2 are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
 - (v) All impoundments meeting the Class B or Class C criteria for dams in the U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October 1985), "Earth Dams and Reservoirs" (TR60), shall comply with the requirements of this section for structures that meet or exceed the size or other criteria of the 30 CFR 77.216(a). TR60 and 30 CFR 77.216(a) are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
 - (vi) Each plan for an impoundment which meets the Class B or Class C criteria in U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October 1985), "Earth Dams and Reservoirs" (TR60) or meets the size or other criteria of 30 CFR 77.216(a) shall include a stability analysis of the structure. The stability analysis shall include, but shall not be limited to, strength parameters, pore pressure, and long term seepage conditions. The plan shall also contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods. TR60 and 30 CFR 77.216(a) are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
- (b) Coal processing waste banks. Coal processing waste banks shall be designed to comply with the requirements of 4.10.
 - (c) Coal processing waste dams and embankments. Coal processing waste dams and embankments shall be designed to comply with the requirements of 4.11.5, and shall contain the results of geo-

technical investigation of the proposed dam or embankment foundation area, to determine the structural competence of the foundation which will support the proposed dam or embankment structure and impoundment material. The geotechnical investigation shall be planned and supervised by an engineer or engineering geologist, according to the following:

- (i) The number, location, and depth of borings and test pits shall be determined using current prudent engineering practice for the size of dam or embankment, quantity of material to be impounded, and subsurface conditions.
 - (ii) The character of the overburden and bedrock, the proposed abutment sites, and any adverse geotechnical conditions which may affect the particular dam, embankment, or reservoir site shall be considered.
 - (iii) All springs, seepage, and ground water flow observed or anticipated during wet periods in the area of the proposed dam or embankment shall be identified on each plan.
 - (iv) An analysis shall be made of the engineering safety and environmental protection factors to allow for the possibility of mudflows, rock-debris falls, or other landslides into the dam, embankment, or impounded material.
- (9) Return of coal mine waste to abandoned workings.
- (a) Each plan shall describe the design, operation and maintenance of any proposed coal mine waste disposal facility, including flow diagrams and any other necessary drawings and maps, which must meet the standards of 2.10, for the approval of both the Division and the Mine Safety and Health Administration, in accordance with 4.11.3.
 - (b) Each plan shall describe the source and quality of waste to be stored, area to be backfilled, percent of the mine void to be filled, method of constructing underground retaining walls, influence of the backfilling operation on active underground mine operations, surface area to be supported by the backfill, and the anticipated occurrence of surface effects following backfilling.

- (c) The applicant shall describe the source of hydraulic transport medium, method of dewatering the placed backfill, retainment of water underground, treatment of water if released to surface streams, and the effect on the hydrologic regime.
- (d) The plan shall describe each permanent monitoring well to be located in the backfilled area, the stratum underlying the mined coal, and gradient from the backfilled area.
- (e) The requirements of 2.05.3 shall also apply to pneumatic backfilling operations, except where the operations are exempted by the Division from requirements specifying hydrologic monitoring.

2.05.4 Reclamation Plan.

110(3), 111

- (1) Each application shall contain a plan for reclamation of the lands within the proposed permit area, showing how the applicant will comply with environmental protection performance standards of the regulatory program. The plan shall include, at a minimum, all information required under the relevant sections of Rule 2.
- (2) Each plan shall contain the following information for the proposed permit area, including any roads which are to be removed, or modified for retention as part of the post-mining land use:
 - (a) A detailed timetable for the completion of each major step in the reclamation plan;
 - (b) A detailed estimate of the cost of reclamation of the proposed operations required to be covered by a performance bond with supporting calculations for the estimates;
 - (c) A plan for backfilling, soil stabilizing, compacting, and grading with postmining contour maps and appropriate cross sections that are typical and representative of the anticipated character of the final surface configuration of the proposed permit area, in accordance with 4.14, for stream channel reconstruction in accordance with 4.05.4, and for road removal or modification in accordance with 4.03.

- (d) A plan for removal, storage and redistribution of topsoil, subsoil, and other material to meet the requirements of 4.06.
- (e) A plan for revegetation to meet the requirements of 4.15, including, but not limited to, description of the:
 - (i) Schedule of revegetation;
 - (ii) Species and amounts per acre of seeds and seedlings to be used;
 - (iii) Methods to be used in planting and seeding;
 - (iv) Mulching techniques;
 - (v) Irrigation, if appropriate and pest and disease control measures, if any;
 - (vi) Measures proposed to be used to determine the success of revegetation in accordance with 4.15.7; and
 - (vii) Soil testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation and topsoil standards of 4.06.
- (f) A description of measures to be employed to ensure that all debris, acid-forming and toxic-forming materials constituting a fire hazard are disposed of in accordance with 4.11.4 and 4.14.3 and a description of the contingency plans which have been developed to preclude sustained combustion of such materials;
- (g) A description, including appropriate cross sections and maps, prepared in accordance with 2.10, of the measures to be used to seal or manage mine openings, and to plug, case, or manage exploration holes, other bore holes, wells, and other openings within the proposed permit area, in accordance with 4.07; and
- (h) A description of steps to be taken to comply with the requirements of the Clean Air Act (42 U.S.C. Sec. 7401 et seq.), the Clean Water Act (33 U.S.C. Sec. 1251 et seq.), and other applicable air and water quality laws and regulations and health and safety

standards, or a copy of an approved permit or application for a permit.

2.05.5 Postmining Land Uses.

(1) Surface coal mining activities.

111(1)(b),
(c),(d),(h)

(a) Each plan shall contain a detailed narrative of the proposed use, following reclamation of the land within the proposed permit area. In accordance with land use categories established in the narrative, the plan shall include a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land use policies and plans. This description shall explain:

(i) How the proposed postmining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use;

(ii) Where a land use different from the premining land use is proposed, all materials needed for approval of the alternative use under 4.16;

(iii) The consideration which has been given to making all of the proposed surface coal mining and reclamation operations consistent with surface owner plans and programs; and

(b) The description shall be accompanied by a copy of the comments concerning the proposed use by the legal or equitable owner of record of the surface of the proposed permit area and the State and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation.

(c) A map prepared to the standards of 2.10 shall accompany the plan.

(2) Underground mining activities.

(a) Each plan shall contain a detailed narrative of the proposed use following reclamation of the land to be affected by all surface operations and facilities within the permit area. In accordance with the land use categories established in the narrative, the plan

shall include a discussion of the utility and capacity of the reclaimed land to support a variety of uses and the relationship of the proposed use to existing land use policies and plans. The description shall explain:

- (i) How the proposed postmining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use;
 - (ii) Where a land use different from the premining land use is proposed, all materials needed for approval of the alternative use under 4.16; and
 - (iii) The consideration which has been given to making all of the proposed surface mining activities consistent with surface owner plans and applicable State and local land use plans and programs.
- (b) The description shall be accompanied by a copy of the comments concerning the proposed use by the legal or equitable owner of record of the surface of the proposed permit area and the State and local government agencies which would have to initiate, implement, approve, or authorize the use of the land following reclamation.
- (c) A map prepared to the standards of 2.10 shall accompany the plan.
- (d) For those disturbed areas within the permit area where long term structures or facilities exist or are to be constructed, the applicant may propose specific alternative land uses which may be approved towards the end of the life of the mine through the permit revision procedures required by 2.08. In such cases, the application shall contain a clear demonstration along with supporting information that the premining land use capability will be achieved.

2.05.6 Mitigation of the Impacts of Mining Operations.

- 111(1)(i) (1) Air Pollution Control Plan.
- 111(1)(i) (a) All permit applications for existing operations shall contain a copy of an initially approved or finally approved emission permit if

applicable from the Colorado Air Quality Control Commission, Air Pollution Control Division or the Air Quality Hearing Board. All permit applications for new operations shall contain a copy of the application for such emission permit and shall be updated accordingly as initial or final decisions are rendered.

- (b) All permit applications shall contain a description of the steps to be taken, including copies of permits or permit applications, if any, to comply with other applicable State or Federal air quality laws or regulations.

111(1)(c)
111(1)(m)(I)
111(1)(h), 102

(2) Fish and Wildlife Plan.

- (a) Each application shall contain a fish and wildlife plan, consistent with 4.18 which provides:

- (i) A statement of how the plan will minimize disturbances and adverse impacts on fish and wildlife and related environmental values during surface coal mining and reclamation operations, and how enhancement of these resources will be achieved, where practicable. The plan shall cover the permit area and portions of adjacent areas as determined by the Division pursuant to 2.04.11.

- (ii) If the applicant states that it will not be practicable, in accordance with 2.05.6(2)(a)(i), to achieve a condition which clearly shows a trend toward enhancement of fish and wildlife resources at the time revegetation has been successfully completed under 4.15, a statement shall be provided which establishes, to the satisfaction of the Division, why it is not practicable to achieve such a condition; and

- (iii) A statement explaining how the applicant will utilize impact control measures, management techniques, and monitoring methods to protect or enhance the following, if they are to be affected by the proposed activities:

- (A) Threatened or endangered species of plants or animals listed by the Secretary under the Endangered Species Act of 1973, as amended (16 U.S.C. Sec. 1531 et seq.) or threatened or endangered species of wildlife

designated by the state under the Nongame, Endangered and Threatened Species Conservation Act (Section 33-2-101 et seq., C.R.S.) and their habitats;

- (B) Species such as eagles, migratory birds or other animals protected by State or Federal law, and their habitats; or other species identified through the consultation process pursuant to 4.18; or
 - (C) Habitats of unusually high value for fish and wildlife, such as wetlands, riparian areas, cliffs supporting raptors, areas offering special shelter or protection, reproduction and nursery areas, and wintering areas.
- (b) For surface coal mining activities the plan shall include a map, prepared to the standards of 2.10 which shall show the location of each facility to be used to protect and enhance fish and wildlife and related environmental values.
 - (c) Upon request, the Division shall provide the resource information required by Rule 2.04.10 and the fish and wildlife plan required in (a) and (b) of this section to the U.S. Fish and Wildlife Service regional or field office for their review. This request shall be provided within 10 days of receipt of the request from the U.S. Fish and Wildlife Service.

111(1)(m) (3) Protection of hydrological balance.

- (a) Each application shall contain a detailed description with appropriate maps, which are prepared to the standards of 2.10, and cross section drawings, of the measures to be taken during and after the proposed surface or underground mining activities, in accordance with Rule 4 to ensure the protection of:
 - (i) The quality of surface and ground water, within both the proposed permit area and adjacent areas, from adverse effects of the proposed surface or underground mining activities;
 - (ii) The rights of present users to surface and ground water, which may be adversely affected by the surface coal mining and reclamation operations;

- (iii) The quantity of surface and ground water both within the proposed permit and adjacent area from adverse effects of the proposed mining activities, or where the protection of quantity cannot be ensured to provide alternative sources of water in accordance with 2.04.7(3) and 4.05.15; and
 - (iv) The quality of surface and ground water affected by any underground mines by locating mine openings in accordance with 4.05.10.
- (b) The description shall include:
- (i) A plan for control, in accordance with Rule 4, of surface and ground water drainage into, through and out of the proposed permit area and adjacent area;
 - (ii) A plan for treatment, where required by these Rules, and for surface and ground water drainage from the area to be affected by the activities, and proposed quantitative limits on pollutants in discharges subject to applicable State and Federal laws.
 - (iii) A determination of the probable hydrologic consequences of the proposed surface coal mining activities, or underground mining activities, on the proposed permit area and adjacent area, with respect to hydrologic regime and the quantity and quality of water in surface and ground water systems under all seasonal conditions, as determined by baseline hydrologic and geologic data collected from, or statistically representative of, the site. The probable hydrologic consequences will identify adverse impacts which may occur to the hydrologic balance including: impacts from acid- or toxic-forming materials; whether the operation would interrupt, diminish, or contaminate water sources; the effect the operation would have on sediment yields, flooding or streamflow, and surface and ground water availability; and the effect the operation would have on concentrations of total dissolved and total suspended solids, total iron, pH, total manganese, and other parameters required by the Division.

110(2)(l)

- (iv) A plan based on the probable hydrologic consequences determination and baseline hydrologic and geologic information submitted to comply with 2.04.5, 2.04.6, and 2.04.7 for the collection, recording, and reporting of ground and surface water quality and quantity data. The plan, in accordance with 4.05.13, shall identify monitoring site locations, points of compliance, parameters, sampling frequency, and describe how these data will be used to determine the impact on the hydrologic balance. At a minimum, the hydrologic monitoring plan shall include:
 - (A) Monitoring of at least total dissolved solids or electrical conductivity corrected to 25N centigrade (specific conductance), pH, manganese and iron;
 - (B) Monitoring of water levels, reported as feet above or below land surface datum, for ground water plans;
 - (C) Monitoring of total suspended solids and flow rate measurements for surface water plans; and
 - (D) Monitoring for additional water quality constituents may be required by the Division based upon site-specific conditions, approved postmining land use, or for good cause shown.
- (v) A hydrologic reclamation plan specifically addressing any potential adverse hydrologic consequences identified in the probable hydrologic consequences determination prepared based upon 2.05.6(3)(b)(iv) and shall include preventive and remedial measures as necessary to prevent material damage, to minimize hydrologic impacts, and to meet the performance standards of 4.05.
- (vi) The location of each water diversion, collection, conveyance, treatment, storage, and discharge facility to be used within the permit area.
- (vii) A plan for the restoration of the approximate recharge capacity of the permit area and adjacent area in accordance with 4.05.12(3).

(viii) If the determination of the probable hydrologic consequences (PHC) required by 2.05.6(3)(b)(iv) indicates that adverse impacts on or off the proposed permit area may occur to the hydrological balance, or that acid-forming or toxic-forming material is present and may result in the contamination of ground water or surface water supplies, then information supplemental to that required under 2.05.6(3)(b) shall be provided, as necessary, to evaluate such PHC and to plan remedial and reclamation activities. Such supplemental information may be based upon drilling, aquifer testing, hydrogeologic analysis of the water-bearing strata, flood flows, or analysis of other water quality or quantity characteristics.

(c) For underground mining activities, the application shall contain a detailed description, with appropriate drawings, of permanent entry seals and down-slope barriers designed to ensure stability under anticipated hydraulic heads developed while promoting mine inundation after mine closure for the proposed permit area and adjacent area.

111(1)(d)
111(1)(h)

(4) Protection of public parks and historic places.

(a) For any publicly owned park or place listed on the National Register of Historic Places that may be adversely affected by the proposed operation, each application shall describe the measures to be used to minimize or prevent these impacts and to obtain approval of the Division and the other agencies as required in 2.07.6(2)(e).

(b) The Division may require the applicant to protect historic or archeological sites listed on or those places eligible for listing, as determined by the SHPO, on the National Register of Historic Places through the appropriate mitigation and treatment measures. Such measures may be taken after permit issuance provided the required measures are completed before the sites are affected by any mining operations.

111(1)(i)

(5) Surface Mining Near Underground Mining. For surface mining activi-

- 120(2)(a) ties within the proposed permit area to be conducted within 500 feet of an underground mine, the application shall describe the measures to be used to comply with 4.19.
- 111(1)(c) (6) Subsidence Survey, Subsidence Monitoring, and Subsidence Control
111(1)(d) Plan.
111(1)(i)
- (a) For underground mining activities the application shall include an inventory of all structures and renewable resource lands which exist within the proposed permit and adjacent area.
- (i) If no such structures or renewable resource lands exist, no further information need be provided in the application under this Section.
- (ii) If such structures or renewable resource lands exist, the application shall include:
- (A) A brief description of all structures and renewable resource lands which exist within the proposed permit and adjacent area; and
- (B) An appropriate map, prepared according to Section 2.10, showing the location and configuration of structures and renewable resource lands within the permit and adjacent area.
- (b) If structures and renewable resource lands are determined to exist within the proposed permit and adjacent area, the application shall include a description of the worst possible consequences which subsidence, if it occurred, could have for such structures and renewable resource lands.
- (i) The application shall include a determination of whether subsidence, if it occurred, could cause material damage or diminution of reasonably foreseeable use of such structures and renewable resource lands. This description of worst possible subsidence consequences shall include:
- (A) A brief description of pre- and postmining land uses of the permit and adjacent area, as described pursuant to Sections 2.04.3 and 2.05.5;

- (B) A brief description of subsidence related phenomena predicted to occur within the permit and adjacent area; and
 - (C) A brief description of material subsidence damage or diminution of reasonably foreseeable use of structures and renewable resource lands which could result from the occurrence of the subsidence related phenomena described in accordance with Section 2.05.6(6)(b)(i)(B), including consideration of the definitions and considerations contained in Sections 2.05.6(6)(e)(ii)(A),(B), and (C).
- (ii) If the description of worst possible subsidence consequences, prepared in accordance with Section 2.05.6(6)(b)(i), determines that no material damage or diminution of reasonably foreseeable use could result in the event of mine subsidence within the permit and adjacent areas, and if the Division concurs with that conclusion, the application shall include a monitoring program designed to determine the accuracy of that conclusion, as described in Section 2.05.6(6)(c).
 - (iii) If the description of worst possible subsidence consequences, prepared in accordance with Section 2.05.6(6)(b)(i), determines that material damage or diminution of reasonably foreseeable use could result in the event of mine subsidence within the permit and adjacent areas, the application shall include additional information as required by either one of the following:
 - (A) A subsidence survey, as described in Section 2.05.6(6)(e); or
 - (B) A subsidence control plan, as described in Section 2.05.6(6)(f).
- (c) Subsidence Monitoring Program.
 - (i) The monitoring program shall be designed to determine the commencement and magnitude of subsidence movements

which occur and shall include the following monitoring techniques:

- (A) Monuments shall be installed and surveyed prior to the commencement of mining.
 - (B) Monuments shall be situated to appropriately monitor ground surface movement, vertical and horizontal, within the area proposed to be undermined, including an area to accommodate the predicted angle-of-draw.
 - (C) The orientation, location and elevation of each structure within the permit and adjacent area shall be monitored.
 - (D) Monitoring of established monuments and structures shall be performed at least quarterly, commencing one month prior to the initiation of mining beneath any established monument or structure.
 - (E) Results of the monitoring program shall be submitted to the Division at least semi-annually.
 - (F) The monitoring program shall be designed to extend for a time, beyond cessation of mining in any area, consistent with the need for verification of the subsidence prediction.
- (ii) The application shall include an appropriate map, prepared according to the standards of Section 2.10, showing the location of monuments to be installed and structures to be monitored within the permit and adjacent area.
- (d) (i) If a subsidence monitoring program determines, in the opinion of the Division, that the subsidence prediction was inaccurate and that material damage or diminution of reasonably foreseeable use of structures or renewable resource lands may occur, the permittee will be required to submit a subsidence control plan, as defined in Section 2.05.6(6)(f).

- (ii) In order to protect structures and renewable resource lands within the permit and adjacent area, the Division, after consultation with the permittee, shall suspend underground coal mining under structures of renewable resource lands, if imminent danger of material subsidence damage or diminution of reasonably foreseeable use is determined to exist.

- (e) A subsidence survey, prepared by appropriately qualified professionals in accord with the current state-of-the-art of subsidence prediction technology, shall contain the following information:
 - (i) A detailed description of subsidence predicted to occur within the permit and adjacent area, including:
 - (A) A brief description of the planned mining methods;
 - (B) A brief description of geologic properties which influence subsidence occurrence, such as rock mechanics character of the affected materials, geologic structure of the affected materials, faulting and fracturing of the involved geologic section, and permit and adjacent area topography;
 - (C) A brief description of local mining experience concerning subsidence occurrence, if any;
 - (D) A detailed description of subsidence related phenomena predicted to occur within the permit and adjacent area;
 - (E) The angle-of-draw predicted to be characteristic of the permit and adjacent area; and
 - (F) Appropriate maps, prepared according to the standards of Section 2.10, showing:
 - (I) Any existing subsidence features which exist within the permit and adjacent area;
 - (II) The extent of the proposed mine workings;

- (III) The ground surface areal extent of an area determined by the projection of the angle-of-draw, if predicted pursuant to Section 2.05.6(6)(e)(i)(E) or 45', if no prediction is made by the applicant, from the limits of the proposed mine workings to the ground surface; and
 - (IV) The areal extent of predicted subsidence related phenomena within the permit and adjacent area.
- (ii) A detailed description of material subsidence damage or diminution of reasonably foreseeable use of structures and renewable resource lands which could result from the occurrence of subsidence related phenomena predicted in accordance with Section 2.05.6(6)(e)(i)(D) within the permit and adjacent area, including consideration of the following:
- (A) Material subsidence damage means, with respect to structures, changes which make it technologically or economically infeasible to promptly restore the affected structures to the condition they would be in if subsidence had not occurred.
 - (B) Material subsidence damage means, with respect to renewable resource lands, changes which disrupt an aquifer, or a recharge area to an aquifer, which serves as a beneficial use of water or changes which make it technologically or economically infeasible to restore the productivity of the affected renewable resource lands, expressed in terms of food, fiber or forage, to the level it would be if subsidence had not occurred.
 - (C) A determination of diminution of reasonably foreseeable use of structures or renewable resource lands within the permit and adjacent area which shall consider the capability of those structures and lands, before and after subsidence occurrence, to support those uses described in Section 2.05.6(6)(b)(i)(A), giving consideration to factors such as soil and

foundation characteristics, topography, vegetative cover, surface hydrology and groundwater hydrology.

- (iii) If the subsidence survey determines that no material damage or diminution of reasonably foreseeable use could result in the event of subsidence predicted to occur within the permit and adjacent area, and the Division concurs with that conclusion, the application shall include a subsidence monitoring program designed to determine the accuracy of the subsidence prediction required by Section 2.05.6(6)(e)(i)(D).
 - (iv) If the subsidence survey determines that material damage or diminution of reasonable foreseeable use could result in the event of subsidence predicted to occur within the permit and adjacent area, or if the Division determines that such damage or diminution could occur, the application shall include a subsidence control plan as described in Section 2.05.6(6)(f).
- (f) A subsidence control plan, prepared by appropriately qualified professionals, shall contain the following information:
- (i) A description of the physical conditions, such as depth of cover, seam thickness, and lithology, which affect the likelihood or extent of subsidence and subsidence-related damage;
 - (ii) A detailed description of the mining method and other measures to be taken which may affect subsidence including:
 - (A) The technique of coal removal, such as longwall mining, room and pillar removal, hydraulic mining or other methods, including the size, sequence, and timing for the development of underground workings as required by Rule 2.05.3(2)(b); and
 - (B) The location and extent of areas in which planned-subsidence mining methods will be used, including all areas where measures will be taken to prevent or minimize subsidence and subsidence-related damage.

- (iii) A detailed description of the measures to be taken to prevent subsidence from causing material damage or lessening the value or reasonably foreseeable use of the surface, including:
 - (A) The anticipated effects of planned subsidence, if any;
 - (B) Measures, if any, to be taken in the mine to reduce the likelihood of subsidence, including such measures as:
 - (I) Backstowing or backfilling of voids;
 - (II) Leaving support pillars of coal; and
 - (III) Areas in which no coal removal is planned, including a description of the overlying area to be protected by leaving coal in place.
 - (C) Measures to be taken on the surface to prevent material damage or lessening of the value or foreseeable use of the surface including such measures as:
 - (I) Reinforcement of sensitive structures or features;
 - (II) Installation of footers designed to reduce damage caused by movement;
 - (III) Change of location of pipelines, utility lines or other features;
 - (IV) Relocation of movable improvements to sites outside the angle-of-draw; and
 - (V) Monitoring, if any, to determine the commencement and degree of subsidence so that other appropriate measures can be taken to prevent or reduce material damage.
- (iv) A detailed description of the measures to be taken to mitigate the effects of any material damage or diminution of value or foreseeable use of lands which may occur,

including one or more of the following as required in 4.20.3:

- (A) Restoration or rehabilitation of structures and features, including approximate land-surface contours, to premining condition.
 - (B) Replacement of structures destroyed by subsidence.
 - (C) Purchase of structures prior to mining and restoration of the land after subsidence to condition capable of supporting and suitable for the structures and foreseeable land uses.
 - (D) Purchase of non-cancellable insurance policies payable to the surface owner in the full amount of the possible material damage or other comparable measures.
- (v) A detailed description of measures to be taken to determine the degree of material damage or diminution of value or foreseeable use of the surface, including such measures as:
- (A) The results of pre-subsidence surveys of all structures and surface features which might be materially damaged by subsidence.
 - (B) Monitoring, if any, proposed to measure deformations near specified structures or features or otherwise as appropriate for the operation.
- (vi) Appropriate maps, prepared according to the standards of 2.10, showing the underground workings, the location of any facilities or structures proposed for subsidence control, and the location and extent of areas in which planned-subsidence mining methods will be used including all areas where measures will be taken to prevent or minimize subsidence and subsidence-related damage.
- (vii) A schedule for the submittal of a detailed plan of the underground workings, as required by Rule 4.20.1(3).

2.06 REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES OF MINING

2.06.1 Scope.

2.06 establishes minimum requirements for permits for the following special categories of surface coal mining and reclamation operations which are in addition to all applicable permit application requirements and procedures of Rule 2:

- 134 (1) Experimental practices mining;
- 120(3) (2) Mountaintop removal mining;
- 120(4) (3) Steep slope mining;
- 120(4) (4) Variances from approximate original contour restoration requirements for steep slope mining;
- 110(2)(q) (5) Prime farmlands;
- (6) Variances for delay in contemporaneous reclamation requirement in combined surface and underground mining operations;
- 131 (7) Mining of alluvial valley floors;
- 120(2)(i) (8) Augering;
- (9) Coal processing plants or support facilities not located within the permit area of a specified mine; and
- (10) In situ processing activities.

2.06.2 Experimental Practices Mining.

- 134 (1) Scope. The provisions of 2.06.2 apply to any person who conducts or intends to conduct surface coal mining and reclamation operations under a permit authorizing the use of alternative mining practices on an experimental basis if the practices require a variance from the environmental protection performance standards of Rule 4.

- (2) The purpose of 2.06.2 is to provide requirements for the permitting of surface coal mining and reclamation operations that encourage advances in mining and reclamation practices or allow postmining land use for industrial, commercial, residential or public use (including recreational facilities) on an experimental basis. It does not include small test plots of limited planned duration that affect a small percent of the total area being mined or reclaimed and that do not result in violations of any applicable air or water environmental regulations.
- (3) Experimental practice means the use of alternative surface coal mining and reclamation operation practices for experimental or research purposes.
- (4) No person shall engage in or maintain any experimental practice, unless that practice is first approved by the Board, upon the recommendation of the Division, and with the approval of the Director of the Office of Surface Mining as an authorized representative of the Secretary of the United States Department of the Interior. The Director must concur in the approval of any experimental practice and the approval of any revision which proposes significant alterations in the experimental practice before the experimental practice is authorized.
- (5) Each person who desires to conduct an experimental practice shall submit application for approval of the experimental practice by the Board, upon the recommendation of the Division. The application shall contain appropriate descriptions, maps, plans, and data which show:
 - (a) The nature of the experimental practice, including a description of the performance standards for which variances are requested and the duration of the experimental practice;
 - (b) How use of the experimental practice:
 - (i) Encourages advances in mining and reclamation technology, or
 - (ii) Allows a postmining land use for industrial, commercial, residential, or public use, including recreational facilities, on an experimental basis, when the results are not otherwise attainable under these Rules and the Act.

- (c) That the mining and reclamation operations proposed for using an experimental practice are not larger or more numerous than necessary to determine the effectiveness and economic feasibility of the experimental practice;
- (d) That the experimental practice:
 - (i) Is potentially more or at least as environmentally protective, during and after the proposed mining operations, as those required under Rule 4;
 - (ii) Will not reduce the protection afforded public health and safety below that provided by the requirements of Rule 4;
- (e) That the applicant will conduct special monitoring with respect to the experimental practice during and after the operations involved. The monitoring program shall:
 - (i) Insure the collection and analysis of sufficient and reliable data to enable the Board, upon the recommendation of the Division, to make adequate comparisons with other surface coal mining and reclamation operations employing similar experimental practices; and
 - (ii) Include requirements designed to identify, as soon as possible, potential risks to the environment and public health and safety from the use of the experimental practice.
- (6) Each application shall set forth the environmental protection performance standards of Rule 4 which will be implemented, in the event the objective of the experimental practice is a failure.
- (7) All experimental practices for which variances are sought shall be specifically identified within the newspaper advertisements by the applicant and the written notifications by the Division as required under 2.07.3.
- (8) No experimental practice shall be authorized, unless the Board, after the recommendation by the Division, first finds, in writing, upon the basis of a complete application filed in accordance with the requirements of 2.06.2 that:

- (a) The experimental practice meets all the requirements of 2.06.2(5)(b)-2.06.2(5)(e); and
 - (b) The experimental practice is based on a clearly defined set of objectives which can reasonably be expected to be achieved.
- (9) Each permit which authorizes an experimental practice must contain conditions which specifically:
- (a) Limit the experimental practice authorized to that approved by the Board and Director;
 - (b) Impose enforceable alternative environmental protection requirements; and
 - (c) Require the person to conduct the periodic monitoring, recording and reporting program set forth in the application, with such additional requirements as the Board or the Director may require.
- (10) Each permit which authorizes the use of an experimental practice shall be reviewed in its entirety at least every 2 1/2 years by the Division. After review, the Board shall require by order, supported by written findings, any reasonable revision or modification of the permit provisions necessary to ensure that the operations involved are conducted to fully protect the environment and public health and safety. Any person who is or may be adversely affected by the order shall be provided with an opportunity for a hearing by the Board pursuant to 2.07. The hearing must be requested within 30 days after the issuance of the order.

2.06.3 Mountaintop Removal Mining.

- 120(3) (1) Scope. 2.06.3 applies to any person who conducts or intends to conduct surface mining activities by mountaintop removal mining.
- 120(3)(a)
120(3)(b) (2) Mountaintop removal mining means surface mining activities, where the mining operation removes an entire coal seam or seams running through the upper fraction of a mountain, ridge, or hill, except as provided for in 4.26.2(2), by removing substantially all of the overburden off the bench and creating a level plateau or a gently rolling contour, with no highwalls remaining, which is capable of supporting postmining land uses in accordance with the requirements of 2.06.3.

- 120(3)(b) (3) The Division may issue a permit for mountaintop removal mining, without regard to the requirements of 4.14.1-4.14.5, to restore the lands disturbed by such mining to their approximate original contour, if it first finds, in writing, on the basis of a complete application, that the following requirements are met:
- (a) The proposed postmining land use of the lands to be affected will be an industrial, commercial, agricultural, residential, or public facility (including recreational facilities) use and, if:
 - (i) After consultation with the appropriate land-use planning agencies, if any, the proposed land use is deemed by the Division to constitute an equal or better economic or public use of the affected land compared with the premining use;
 - (ii) The applicant demonstrates compliance with the requirements for acceptable alternative postmining land uses in 4.16;
 - (iii) The applicant has presented specific plans for the proposed postmining land use and appropriate assurances that such will be as follows:
 - (A) Compatible with adjacent land uses and existing State and local land use plans and programs;
 - (B) Obtainable according to data regarding expected need and market;
 - (C) Assured of investment in necessary public facilities;
 - (D) Supported by commitments from public agencies where appropriate;
 - (E) Practicable with respect to private financial capability for completion of the proposed use;
 - (F) Planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use; and

- (G) Designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site.
 - (iv) The Division has provided, in writing, an opportunity of not more than 60 days to review and comment on such proposed use to the Board of County Commissioners in which the land is located and any State or Federal agency which the Division determines to have an interest in the proposed use.
 - (b) The applicant has demonstrated that, in place of restoration of the land to be affected to the approximate original contour under 4.14.1-4.14.5, the operation will be conducted in compliance with the requirements of 4.26.
 - (c) The special performance standards for mountaintop removal of 4.26 are made a specific condition of the permit.
 - (d) All other requirements of the Act, these Rules, and the regulatory program are met by the proposed operations.
 - (e) The permit is clearly identified as being for mountaintop removal mining.
- 120(3)(e) (4) (a) Any permits incorporating a variance issued under 2.06.3 shall be reviewed by the Division to evaluate the progress and development of mining activities and to establish that the permittee is proceeding in accordance with the terms of the variance, as follows:
- (i) Within the six month period preceding the end of the third year from the date of its issuance;
 - (ii) Before each permit renewal; and
 - (iii) Not later than the middle of each permit term.
- (b) Any review required under 2.06.3(4)(a) need not be held if the permittee has demonstrated and the Division finds, in writing, within three months before the scheduled review, that all

operations under the permit are proceeding and will continue to be conducted in accordance with the terms of the permit and requirements of the approved schedules, reclamation plan and the Act.

- (c) The terms and conditions of a permit for mountaintop removal mining may be modified at any time by the Division, if it determines that more stringent measures are necessary to insure that the operation involved is conducted in compliance with the requirements of the Act and these Rules.

2.06.4 Steep Slope Mining.

- (1) Scope. 2.06.4 applies to any person who conducts or intends to conduct steep slope mining and reclamation operations, except:
 - 120(4) (a) Where an operator proposes to conduct surface coal mining and reclamation operations on flat or gently rolling terrain, leaving a plain or predominantly flat area, but on which an occasional steep slope is encountered as the mining operation proceeds;
 - (b) Where a person obtains a permit for mountaintop removal mining;
or
 - (c) To the extent that a person obtains a permit incorporating a variance under 2.06.5.
- (2) Any application for a permit for surface coal mining and reclamation operations covered by 2.06.4 shall contain sufficient information to establish that the operations will be conducted in accordance with the steep slope performance standards in 4.27.3.
- (3) No permit shall be issued to any operations covered by this 2.06.4 unless the Division finds, in writing, that in addition to meeting all other requirements of the performance standards, the operation will be conducted in accordance with the requirements of 4.27.3.

2.06.5 Permits Incorporating Variances from Approximate Original Contour Restoration Requirements for Steep Slope Mining.

- (1) Scope. 2.06.5 applies to non-mountaintop removal steep slope surface coal mining and reclamation operations, where the operation is not to be

reclaimed to achieve the approximate original contour required by 4.14.1-4.14.6 and 4.27.3.

- (2) The Board or Division shall issue a permit for surface mining activities incorporating a variance from the requirement for restoration of the affected lands to their approximate original contour only if it first finds, in writing, that all of the following requirements are met:
 - 120(5)(b) (a) The applicant has demonstrated that the purpose of the variance is to make the lands to be affected within the permit area suitable for an industrial, commercial, agricultural, residential, or public use postmining land use.
 - 120(5)(c)(I) (b) The proposed use, after consultation with the appropriate land-use planning agencies, if any, constitutes an equal or better economic or public use.
 - 120(5)(c)(I) (c) The applicant has demonstrated compliance with the requirements for acceptable alternative postmining land uses of 4.16.
 - 120(5)(c)(II) (d) The applicant has demonstrated that the watershed of lands within the proposed permit area and adjacent areas will be improved by the operations. The watershed will only be deemed improved if:
 - (i) There will be a reduction in the amount of total suspended solids or other pollutants discharged to ground or surface waters from the permit area as compared to such discharges prior to mining, so as to improve public or private uses or the ecology of such waters; or, there will be reduced flood hazards within the watershed containing the permit area by reduction of the peak flow discharges from precipitation events or thaws;
 - (ii) The total volume of flows from the proposed permit area, during every season of the year, will not vary in a way that adversely affects the ecology of any surface water or any existing or planned use of surface or ground water; and
 - (iii) The appropriate State environmental agencies approve the plan.

- 120(5)(b) (e) The applicant has demonstrated that the owner of the surface of the lands within the permit area has knowingly requested, in writing, as part of the application, that a variance be granted. The request shall be made separately from any surface owner consent given for operations under 2.03.6, and shall show an understanding that the variance could not be granted without the surface owner's request.
- 120(5)(d) (f) The applicant has demonstrated that the proposed operations will be conducted in compliance with the requirements of 4.27.4.
- 120(5)(e) (g) All other requirements of the Act, these Rules, and the regulatory program will be met by the proposed operations.
- 120(5)(f) (3) Any permits incorporating a variance issued under 2.06.5 shall be reviewed by the Division to evaluate the progress and development of the mining activities and to establish that the permittee is proceeding in accordance with the terms of the variance, as follows:
- (a) Within the six month period preceding the end of the third year from the date of its issuance;
 - (b) Before each permit renewal; and
 - (c) Not later than the middle of each permit term.
- (4) If the permittee demonstrates to the Division at any of the times specified in 2.06.5(3) that the operations involved have been and continue to be conducted in compliance with the terms and conditions of the permit, the requirements of the Act, these Rules, and the regulatory program, the review required at that time need not be held.
- (5) The terms and conditions of a permit incorporating a variance under 2.06.5 may be modified at any time by the Division or Board if it determines that more stringent measures are necessary to insure that the operations involved are conducted in compliance with the requirements of this Act and these Rules.
- (6) If a variance is granted under 2.06.5:
- (a) The requirements of 4.27 shall be made a specific condition of the permit, and

- (b) The permit shall be specifically marked as containing a variance from approximate original contour.

2.06.6 Prime Farmlands.

- 110(2)(q) (1) Scope. 2.06.6 applies to any person who conducts or intends to conduct surface coal mining activities on prime farmlands historically used for cropland. Areas where mining is authorized under permits issued or mining plans approved prior to August 3, 1977, including lands that contain part of a continuous recoverable coal seam that was being mined in a single continuous mining pit (or multiple pits if the lands are proven to be part of a single continuous surface coal mining operation) began under a permit issued prior to August 3, 1977, and the permittee had a legal right to mine the lands prior to August 3, 1977, through ownership, contract or lease, but not including an option to buy lease or contract, are exempt from the requirements of this rule.
- 114(4)
- 120(2)(g)

A single continuous surface coal mining operation is presumed to consist only of a single continuous mining pit under a permit issued prior to August 3, 1977, but may include noncontiguous parcels if the operator can prove by clear and convincing evidence that, prior to August 3, 1977, the noncontiguous parcels were part of a single permitted operation. For the purposes of this paragraph, clear and convincing evidence includes, but is not limited to, contracts, leases, deeds or other properly executed legal documents (not including options) that specifically treat physically separate parcels as one surface coal mining operation.

- (2) Application contents for prime farmland. If land within the proposed permit area is prime farmland under 2.04.12, the applicant shall submit a plan for the mining and restoration of the land. Each plan shall contain, at a minimum:
 - (a) A soil survey of the permit area according to standards established by the U.S.D.A. Natural Resources Conservation Service for the National Cooperative Soil Survey. These standards are described in the National Soil Survey Handbook (Soil Survey Staff, 2001).
 - (i) This publication is hereby incorporated by reference as it exists on the date of adoption of these rules and does not include later amendments to or editions of this publication.

The National Soil Survey Handbook is available for inspection at the Division's Denver office, at the Denver office of the U.S.D.I. Office of Surface Mining Reclamation and Enforcement, and at the Colorado state office of the U.S.D.A. Natural Resources Conservation Service. It is also available on-line at <http://www.statlab.iastate.edu/soils/nssh/>.

- (ii) The soil survey shall include descriptions of soil mapping units and representative soil profiles. Descriptions of soil mapping units and representative profiles shall include such necessary information as determined by the U.S.D.A. Natural Resources Conservation Service, including, but not limited to, depth, pH, and range of density of soil horizons, determined in accordance with National Cooperative Soil Survey Standards as established under Rule 2.06.6(2)(a), for each prime farmland soil to be disturbed by mining. Soil profile descriptions of representative profiles from the locality may be used to comply with the requirements of this section if the use of such descriptions is approved by the U.S.D.A. Natural Resources Conservation Service. The Division may request the operator to provide information on other physical and chemical soil properties as needed to make a determination that the operator has the technological capability to restore the prime farmland within the permit area to the soil reconstruction standards of Rule 4.25.
- (b) The proposed method and type of equipment to be used for removal, storage, and replacement of the soil in accordance with 4.25.
- (c) The location of areas to be used for the separate stockpiling of the soil and plans for soil stabilization before redistribution.
- (d) If applicable, documentation, such as agricultural school studies or other scientific data from comparable areas, that supports the use of other suitable material, instead of the A, B, or C soil horizons, to obtain on the restored area equivalent or higher levels of yield as non-mined prime farmlands in the surrounding area under equivalent levels of management.

- (e) Plans for seeding or cropping the final graded disturbed land and the conservation practices to be used to adequately control erosion and sedimentation and restoration of an adequate soil moisture regime, during the period from completion of regrading until release of the performance bond. Proper adjustment for seasons must be proposed so that final graded land is not exposed to erosion during seasons when vegetation or conservation practices cannot be established due to weather conditions.
 - (f) Available agricultural school studies or other scientific data for areas with comparable soils, climate, and management (including water management) that demonstrate that the proposed method of reclamation will achieve, within a reasonable time, equivalent or higher levels of yield after mining as existed before mining.
 - (g) The productivity under high level of management, as determined by the U.S.D.A. Natural Resources Conservation Service, of each prime farmland soil to be disturbed by mining, for any crop to be used in determining success of revegetation on prime farmland soil. Where the U.S.D.A. Natural Resources Conservation Service has not made such a determination, productivity will be estimated based on crop yield information for the prime farmland soils to be disturbed by mining from within the permit area or the surrounding locality.
 - (h) In all cases, soil productivity for prime farmlands shall be returned to equivalent levels of yield as nonmined land of the same soil type in the surrounding area under equivalent management practices as determined from the soil survey performed pursuant to 2.06.6.
- (3) Consultation with the Secretary of Agriculture. Before any permit is issued for areas that include prime farmlands, the Division shall consult with the Secretary of Agriculture. The Secretary shall be provided, for review and comment, the proposed method of soil reconstruction in this plan submitted under 2.06.6(2).
- 114(4)
120(2)(g) (4) Issuance of permit. A permit for the mining and reclamation of prime reclamation of prime farmland may be granted by the Division, if it first finds, in writing, upon the basis of a complete application that:

- (a) The approved proposed postmining land use of these prime farmlands will be cropland;
- (b) The permit incorporates as specific conditions the contents of the plan submitted under 2.06.6(2) after consideration of any revisions to that plan suggested by the Secretary of Agriculture under 2.06.6(3);
- (c) The applicant has the technological capability to restore the prime farmland, within a reasonable time, to equivalent or higher levels of yield as nonmined prime farmland in the surrounding area under equivalent levels of management; and
- (d) The proposed operations will be conducted in compliance with the requirements of 4.25 and other environmental protection performance and reclamation standards of these Rules for mining and reclamation of prime farmland.

2.06.7 Variances for Delay in Contemporaneous Reclamation Requirements in Combined Surface and Underground Mining Operations.

120(2)(p)

- (1) Scope. 2.06.7 applies to any person who conducts or intends to conduct combined surface mining activities and underground mining activities, where contemporaneous reclamation as required by 4.13 is not practicable and a delay is requested to allow underground mining activities to be conducted before the reclamation operation for the surface mining activities can be completed.
- (2) Objective. The objective of 2.06.7 is to allow for delay in reclamation of surface mining activities, if that delay will allow underground mining activities to be conducted to ensure both maximum practical recovery of coal resources and to avoid multiple future disturbances of surface lands or waters.
- (3) Application contents for variances. Any person who desires to obtain a variance under 2.06.7 shall file with the Division a complete application for the surface mining activities and underground mining activities which are to be combined. The mining and reclamation operation plans for these permits shall contain appropriate narratives, maps prepared in accordance with 2.10, and plans, which:

- 120(2)(p)(I)(B) (a) Show why the proposed underground mining activities are necessary or desirable to assure maximum practical recovery of coal;
 - 120(2)(p)(I)(B) (b) Show how multiple future disturbances of surface lands or waters will be avoided;
 - (c) Identify the specific surface areas for which a variance is sought and the particular Sections of the Act, these Rules, and the regulatory program for which a variance is being sought.
 - (d) Show how the activities will comply with 4.22 and other applicable requirements of these Rules;
 - 120(2)(p)(I)(D) (e) Show why the variance sought is necessary for the implementation of the proposed underground mining activities;
 - 120(2)(p)(I)(E) (f) Provide an assessment of the adverse environmental consequences and damages, if any, that will result if the reclamation of surface mining activities is delayed; and
 - 120(2)(p)(I)(F) (g) Show how storage of spoil will be conducted to comply with the requirements of the Act, and the applicable performance standards of rule 4.
- (4) Issuance of a permit. A permit incorporating a variance under 2.06 may be issued by the Division or Board, if it first finds, in writing, upon the basis of a complete application filed in accordance with 2.06 that:
- 120(2)(p)(I)(A) (a) The applicant has presented, as part of the permit application, specific, feasible plans for the proposed underground mining activities;
 - 120(2)(p)(I)(B) (b) The proposed underground mining activities are necessary or desirable to assure maximum practical recovery of the mineral resource and will avoid multiple future disturbances of surface land or waters;
 - 120(2)(p)(I)(C) (c) The applicant has satisfactorily demonstrated that the application for the surface coal mining activities and underground mining activities conforms to the requirements of these Rules and that all other permits necessary for the underground mining activities have been issued by the appropriate authorities;

- 120(2)(p)(I)(D) (d) The surface area of surface coal mining activities proposed for the variance have been shown by the applicant to be necessary for implementing the proposed underground mining activities;
- 120(2)(p)(I)(E) (e) No substantial adverse environmental damage, either on-site or off-site, will result from the delay in completion of reclamation otherwise required by Section 34-33-120(2)(p), C.R.S., and 4.13;
- (f) The operations will, insofar as a variance is authorized, be conducted in compliance with the requirements of 4.22 and these Rules;
- 120(2)(p)(I)(F) (g) Provisions for storage of spoil will comply with the applicable performance standards of Rule 4.
- 120(2)(p)(IV) (h) Liability under the performance bond required to be filed by the applicant with the Division shall be for the duration of the underground mining activities and until all requirements of these Rules have been complied with; and
- (i) The permit for the surface coal mining activities contains specific conditions:
- (i) Delineating the particular surface areas for which a variance is authorized;
- (ii) Identifying the particular requirements of 4.22 and these Rules which are to be complied with; and
- (iii) Providing a detailed schedule for compliance with the particular requirements of 4.22 and these Rules identified under 2.06.7(4)(i).
- 120(2)(p)(III) (5) Review of permit containing variances. Variances granted under permits issued under 2.06.7 shall be reviewed by the Division no later than 3 years from the dates of issuance of the permit and any permit renewals.

2.06.8 Surface Coal Mining and Reclamation Operations on Areas, or Adjacent to Areas, Including Alluvial Valley Floors.

- 114(2)(e)
- (1) Scope. 2.06.8 applies to each person who conducts or intends to conduct surface coal mining and reclamation operations in, adjacent to or under a valley holding stream.
 - (2) No person shall engage in surface coal mining and reclamation operations subject to 2.06.8, except under a permit issued by the Division or Board in accordance with 2.06.8.
 - (3) Alluvial Valley Floor Determination.
- 131
- (a) Any person who proposes to engage in surface coal mining operations, may, prior to making an application for a permit, request in writing that the Board give an informal opinion on whether or not the area of the land to be affected by such proposed operations is in, adjacent to, or under an alluvial valley floor. The Board's informal opinion shall be based upon sound scientific data in the possession of the Division, Board, or other State agencies at the time of the request, shall be in writing, and shall be advisory in nature.
 - (b) Before applying for a permit or in conjunction with an application for a permit to conduct, or before conducting surface coal mining and reclamation operations within a valley holding a stream or in a location where the adjacent area includes any stream, the applicant shall either affirmatively demonstrate, based on available data, the presence of an alluvial valley floor, or submit to the Division the results of a field investigation of the proposed permit area and adjacent area. The field investigations shall include sufficiently detailed geologic, hydrologic, land use, soils, and vegetation studies on areas required to be investigated by the Division after consultation with the applicant, to enable the Division or Board to make an evaluation regarding the existence of the probable alluvial valley floor in the proposed permit area or adjacent area and to determine which areas, if any, require more detailed study in order to allow the Division or Board to make a final determination regarding the existence of an alluvial valley floor. Studies performed during the investigation by the applicant or subsequent studies as required of the applicant by the Division shall include an appropriate combination, adapted to site-specific conditions, of:
 - (i) Mapping of unconsolidated streamlaid deposits holding streams including, but not limited to, geologic maps of

unconsolidated deposits, maps of streams, delineation of surface watersheds and directions of shallow ground water flows through and into the unconsolidated deposits, topography showing local and regional terrace levels, and topography of terraces, flood plains and channels showing surface drainage patterns.

- (ii) Mapping of all lands that are currently or were historically flood irrigated, showing the location of each diversion structure, ditch, dam and related reservoir, irrigated land, and topography of those lands.
 - (iii) Mapping of all lands included in the area in accordance with 2.06.8(3) and subject to agricultural activities, showing the area in which different types of agricultural lands, such as flood irrigated lands, pasture lands and undeveloped rangelands exist, and accompanied by measurements of vegetation in terms of productivity and type.
 - (iv) Documentation that areas identified in 2.06.8(3) are, or are not, subirrigated, based on ground water monitoring data, representative water quality, soil moisture measurements, and measurements of rooting depth, soil mottling, and water requirements of vegetation.
 - (v) Documentation, based on representative sampling, that areas identified under 2.06.8(3) are, or are not, flood irrigable, based on streamflow, water quality, water yield, soils measurements, and topographic characteristics.
 - (vi) Analysis of a series of aerial photographs, including color infrared imagery flown at a time of year to show any late summer and fall differences between upland and valley floor vegetative growth and of a scale adequate for reconnaissance identification of areas that may be alluvial valley floors.
- (c) Based on the investigations conducted under 2.06.8(3)(b), the Division shall make a determination of the presence or absence of alluvial valley floors, the extent of any alluvial valley floors within the proposed permit area and adjacent areas that may be affected, and whether any stream in those areas may be excluded from further consideration as lying within an alluvial valley floor.

- (i) The Division shall determine that an alluvial valley floor exists if it finds that:
 - (A) Unconsolidated streamlaid deposits holding streams of sufficient size and inherent productive potential to support agricultural activities are present. If not currently being farmed, the minimum size of the alluvial body shall be based upon the accepted regional practice.
 - (B) There is sufficient water to support agricultural activities as evidenced by:
 - (I) The existence of flood irrigation in the area in question or its historical use;
 - (II) The capability of an area to be flood irrigated, based on streamflow water yield, soils, water quality, topography and regional practices; or
 - (III) Subirrigation of the lands in question, derived from the ground water system of the valley floor.
- (ii) The Division shall determine that an alluvial valley floor does not exist if it finds that:
 - (A) No streamlaid deposits meeting the pertinent size criteria as set forth under 2.06.8(3)(c)(i)(A) are present as determined from geologic maps, results of field investigations or similar studies;
 - (B) There is insufficient water available to support flood irrigation or subirrigation agricultural activities based on established regional practices determined from hydrologic characteristics, and analysis of the potential of the area for successful irrigation based upon its soils, climate, vegetation, and land use; or
 - (C) The area is generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from

sheet erosion, deposits by unconcentrated runoff or slope wash, together with talus, other mass movement accumulation and wind blown deposits.

- (iii) A negative finding reached in accordance with 2.06.8(3)(c)(ii) is sufficient to satisfy the requirements of 2.06.8(3) when submitted as part of a permit application.
- (4) Application contents for operations affecting alluvial valley floors.
- (a) If land within the proposed permit area or adjacent area is identified as an alluvial valley floor and the proposed surface coal mining operation may affect an alluvial valley floor or waters that supply alluvial valley floors, the applicant shall submit a complete application for the proposed surface coal mining and reclamation operations, to be used by the Division or Board, together with other relevant information, including an appropriate combination of information required by 2.06.8(3), as a basis for approval or denial of the permit. The complete application shall include detailed surveys and baseline data required by the Division for the determination of:
 - (i) The essential hydrologic functions of the alluvial valley floor which might be affected by the mining and reclamation process. The information required by this subparagraph shall evaluate those factors which contribute to the collecting, storing, regulating and making the natural flow of water available for agricultural activities on the alluvial valley floor and shall include, but are not limited to:
 - (A) Factors contributing to the function of collecting water, such as amount, rate and frequency of rainfall and runoff, surface roughness, slope and vegetative cover, infiltration and evapotranspiration, relief, slope and density of drainage channels;
 - (B) Factors contributing to the function of storing water, such as permeability, infiltration, porosity, depth and direction of ground water flow and water holding capacity;

- (C) Factors contributing to the function of regulating the flow of surface and ground water, such as the longitudinal profile and slope of the valley and channels, the sinuosity and cross sections of the channels, interchange of water between streams and associated alluvial and bedrock aquifers and rates and amount of water supplied by these aquifers; and
 - (D) Factors contributing to water availability, such as the presence of flood plains and terraces suitable for agricultural activities.
- (ii) The significance to farming of the area to be affected;
 - (iii) Whether the operation will avoid during mining and reclamation the interruption, discontinuance, or preclusion of farming on flood irrigated or subirrigated alluvial valley floors;
 - (iv) Whether the operation will cause, or presents an unacceptable risk of causing, material damage to the quantity or quality of surface or ground waters that supply the alluvial valley floor;
 - (v) The effectiveness of proposed reclamation with respect to requirements of the Act and these Rules; and
 - (vi) Specific environmental monitoring required to measure compliance with 4.24 during and after mining and reclamation operations.
- (b) Certain information specified under 2.06.8(4)(a) is not required under the following circumstances:
 - (i) Information relating to 2.06.8(4)(a)(ii), (iii) and (iv) is not required for operations to which the statutory exclusions of 2.06.8(5)(b) apply; and
 - (ii) Information relating to 2.06.8(4)(a)(iii) and (iv) is not required if land use on the alluvial valley floor has been undeveloped rangeland which is not significant to farming or if the Division or Board finds that the farming which will be

interrupted, discontinued or precluded is of such small acreage as to be of negligible impact to the farm's agricultural production.

- (c) Information required under this paragraph shall include an appropriate combination of, but not be limited to:
 - (i) Geologic data, including geologic structure, and surficial geologic maps, and geologic cross-sections;
 - (ii) Soils and vegetation data, including a detailed soil survey and chemical and physical analyses of soils, a vegetation map and narrative descriptions of quantitative and qualitative surveys, and land use data, including an evaluation of crop yields;
 - (iii) Surveys and data required under this paragraph for areas designated as alluvial valley floors because of their flood irrigation characteristics shall also include, at a minimum, surface hydrologic data, including streamflow, runoff, sediment yield, and water quality analyses describing seasonal variations over at least one full year, field geomorphic surveys and other geomorphic studies;
 - (iv) Surveys and data required under this paragraph for areas designated as alluvial valley floors because of their subirrigation characteristics, shall also include, at a minimum, geohydrologic data including alluvium thickness observation well establishment for purposes of water level measurements, ground water contour maps, testing to determine aquifer characteristics that affect waters supplying the alluvial valley floors, well and spring inventories, and water quality analyses describing seasonal variations over at least one full year, and physical and chemical analysis of overburden to determine the effect of the proposed mining and reclamation operations on water quality and quantity;
 - (v) Plans showing the operation will avoid, during mining and reclamation, interruption, discontinuance or preclusion of farming on the subirrigated or flood irrigated alluvial valley floors and will not materially damage the quantity or quality

of water in surface and ground water systems that supply those alluvial valley floors;

- (vi) Maps showing farms that could be affected by the mining and statements of the type and quantity of farming performed on the alluvial valley floor and its relationship to the farm's total agricultural activity; and
 - (vii) Such other relevant data as the Division may require, for good cause shown.
- (d) Permit applications may comply with the requirements of 2.06.8(4)(c)(iii) and (iv) with data collected over a shorter period of time or extrapolated by an expert in the field from documented data on water quality and quantity of similar areas, provided that information provided is sufficient to make the determinations required under 2.06.8(5) and that the data used by the expert is included within the permit application, the expert opinion is approved by the Division, and all such data are made available to the public for review and comment.
- (e) The surveys required by 2.06.8(3) should identify those geologic, hydrologic, and biologic characteristics of the alluvial valley floor necessary to support the essential hydrologic functions of any alluvial valley floor. Such characteristics which must be evaluated in a complete application include, but are not limited to:
- (i) Characteristics supporting the function of collecting water which include, but are not limited to:
 - (A) The amount and rate of runoff and a water balance analysis, with respect to rainfall, evapotranspiration, infiltration and ground water recharge;
 - (B) The relief, slope, and density of the network of drainage channels;
 - (C) The infiltration, permeability, porosity and transmissivity of unconsolidated deposits of the valley floor that either constitute the aquifer associated with the stream or lie between the aquifer and the stream; and

- (D) Other factors that affect the interchange of water between surface and ground water systems, including the depth to ground water, the direction of ground water flow, the extent to which the stream and associated alluvial ground water aquifers provide recharge to, or are recharged by, bedrock aquifers.
- (ii) Characteristics supporting the function of storing water which include, but are not limited to:
 - (A) Surface roughness, and vegetation of the channel, flood plain, and low terraces that retard the flow of surface waters;
 - (B) Porosity, permeability, transmissivity, water-holding capacity, saturated thickness and volume of aquifers associated with streams, including alluvial aquifers, perched aquifers, and other water bearing zones found beneath valley floors; and
 - (C) Moisture held in soils or the plant growth medium within the alluvial valley floor, and the physical and chemical properties of the subsoil that provide for sustained vegetation growth or cover during extended periods of low precipitation.
 - (iii) Characteristics supporting the function of regulating the flow of water which include, but are not limited to:
 - (A) The geometry and physical character of the valley, expressed in terms of the longitudinal profile and slope of the valley and the channel, the sinuosity of the channel, the cross section, slopes and proportions of the channels, flood plains and low terraces, the nature and stability of the stream banks and the vegetation established in the channels and along the stream banks and floor plains;
 - (B) The nature of surface flows as shown by the frequency and duration of flows of representative magnitude including low flows and floods; and

- (C) The nature of interchange of water between streams, their associated alluvial aquifers and any bedrock aquifers as shown by the rate and amount of water supplied by the stream to associated alluvial and bedrock aquifers (i.e., recharge) and by the rates and amounts of water supplied by aquifers to the stream (i.e., baseflow); and
 - (iv) Characteristics which make water available and which include, but are not limited to, the presence of land forms including flood plains and terraces suitable for agricultural activities.
- 114(2)(e)(I),(II) (5) (a) No permit or permit revision application for surface coal mining and reclamation operations shall be approved by the Division or Board unless the application demonstrates and the Division or Board finds in writing, on the basis of information set forth in the application, that the proposed surface coal mining operation would:
- (i) Not interrupt, discontinue, or preclude farming on alluvial valley floors that are irrigated or naturally subirrigated, excluding undeveloped rangelands which are not significant to farming on said alluvial valley floors and those lands upon which the Division or Board finds that the farming which will be interrupted, discontinued, or precluded is of such small acreage as to be of negligible impact to the farm's agricultural production;
 - (ii) Not materially damage the quantity or quality of water in surface or ground water systems that supply those alluvial valley floors described in 2.06.8(5)(a)(i) above; and
 - (iii) Comply with the requirements of 4.24 and other applicable requirements of the Act and the regulations with respect to alluvial valley floors.
- 114(2)(e)(I)(A) (b) (i) The requirements of 2.06.8(5)(a)(i) and (ii) above shall not apply to any surface coal mining and reclamation operation which, in the year preceding August 3, 1977, either:

- (A) Produced coal in commercial quantities and was located within or adjacent to alluvial valley floors; or
 - (B) Obtained specific permit approval to conduct surface coal mining and reclamation operations within an alluvial valley floor.
- (ii) For surface coal mining and reclamation operations which satisfy the requirements of 2.06.8(5)(b)(i) above, the geographic extent of lands eligible for such exemption shall be limited to:
- (A) For surface coal mining activities, those lands which were identified in a reclamation plan approved by the Board prior to August 3, 1977; or

- (B) For underground mining activities, the actual extent of the mine workings on August 3, 1977 and adjacent lands for which there existed substantial demonstrable financial or regulatory commitment on August 3, 1977, as determined by the Division on a case-by-case basis using all available information.
- (c) Criteria for determining whether a surface coal mining operation will materially damage the quantity or quality of waters include, but are not limited to:
 - (i) Probable increases in specific conductance of waters supplied to an alluvial valley floor to levels above the threshold value at which crop yields on the alluvial valley floor decrease.
 - (A) Salt tolerance threshold values shall be based on applicable published research or testing specific to the situation, as approved by the Division.
 - (B) Probable increases in specific conductance of water supplied to an alluvial valley floor shall not exceed the salt tolerance threshold value of any crop grown on the alluvial valley floor, unless the applicant demonstrates that the projected decrease in productivity is negligible to the production of one or more farms.
 - (ii) Potential increases in the average depth to water saturated zones (during the growing season) located within the root zone of the alluvial valley floor that would reduce the amount of subirrigated agricultural land compared to premining conditions.
 - (iii) Potential decreases in surface flows that would reduce the amount of irrigable land compared to premining conditions.
 - (iv) Potential changes in the surface or ground water systems that reduce the area available to agriculture as a result of flooding or increased saturation of the root zone.

- (6) For the purposes of 2.06.8, a farm is one or more land units on which agricultural activities are conducted. A farm is generally considered to be the combination of land units with acreage and boundaries in existence prior to August 3, 1977, or if established after August 3, 1977, with those boundaries based on enhancement of the farm's agricultural productivity and not related to surface coal mining operations.

2.06.9 Augering.

- 120(2)(i)
- (1) Scope. 2.06.9 applies to any person who conducts or intends to conduct surface coal mining and reclamation operations utilizing augering operations.
 - (2) Any application for a permit for operations covered by 2.06.9 shall contain, in the mining and reclamation plan, a description of the augering methods to be used and the measures to be used to comply with 4.23.
 - (3) No permit shall be issued for any operations covered by 2.06.9 unless the Division or Board finds, in writing, that in addition to meeting all other applicable requirements of these Rules, the operation will be conducted in compliance with 4.23.

2.06.10 Coal Processing Plants and Support Facilities Not Located Within the Permit Area.

- 103(26)
109(1), 120
- (1) Scope. 2.06.10 applies to any person who conducts or intends to conduct surface coal mining and reclamation operations utilizing coal processing plants or support facilities as described in 4.04 not within a permit area of a specific mine. Any person who operates such a processing plant or support facility shall have obtained a permit from the Division or Board under the regulatory program in accordance with the requirements of 2.06.10.
 - (2) Any application for a permit for operations covered by 2.06.10 shall contain in the mining and reclamation plan, specific plans, including descriptions, maps, prepared to the standards of 2.10, and cross-sections of the construction, operation, maintenance, and removal of the processing plants and associated support facilities. The plan shall demonstrate that those operations will be conducted in compliance with 4.28.

- (3) No permit shall be issued for any operation covered by 2.06.10, unless the Division or Board finds, in writing, that, in addition to meeting all other applicable requirements of these Rules, the operations will be conducted in compliance with the requirements of 4.28.

2.06.11 In Situ Processing Activities.

- 103(26)
109(1), 120
- (1) Scope. 2.06.11 applies to any person who conducts or intends to conduct surface coal mining and reclamation operations utilizing in situ processing activities.
 - (2) Any application for a permit for operations covered by 2.06.11 shall be made according to all requirements of these Rules applicable to underground mining activities. In addition, the mining and reclamation operations plan for operations involving in situ processing activities shall contain information establishing how those operations will be conducted in compliance with the requirements of 4.29, including:
 - (a) Delineation of proposed holes and wells and production zone for approval of the Division;
 - (b) Specifications of drill holes and casings proposed to be used;
 - (c) A plan for treatment, confinement or disposal of all acid-forming, toxic-forming or radioactive gases, solids, or liquids constituting a fire, health, safety or environmental hazard caused by the mining and recovery process; and
 - (d) Plans for monitoring surface and ground water and air quality, as required by the Division.
 - (3) No permit shall be issued for operations covered by 2.06.11, unless the Division or Board first finds, in writing, upon the basis of a complete application made in accordance with 2.06.11(2), that the operation will be conducted in compliance with all requirements of these Rules relating to underground mining activities and 4.29.

2.06.12 Surface Coal Mining and Reclamation Operation Requirements Involving the Removal of Coal Refuse Piles.

- (1) Scope. The provisions of 2.06.12 shall apply to any person engaged in surface coal mining and reclamation operations who removes or intends

to remove more than 250 tons of coal from coal refuse piles within 12 consecutive calendar months in any one location. No person shall engage in operations subject to 2.06.12 except under a permit or approval of a revision to an existing permit issued by the Division in accordance with the requirements of 2.06.12.

- (2) Application contents. Each application for a permit or approval of a revision to an existing permit subject to the requirements of 2.06.12 shall contain that information required by 2.03, 2.04, 2.05, and 2.06 which is necessary for the Division to make a written determination of compliance with all requirements of the Act and these Rules in accordance with 2.07.6. The information necessary to satisfy this requirement shall be determined in consultation with the Division and consideration shall be given to the specific conditions of the site and scope of the proposed operation.

2.07 PUBLIC PARTICIPATION AND APPROVAL OF PERMIT APPLICATIONS

2.07.1 Scope.

This rule establishes the requirements for:

- (1) Public participation in the permit process;
- (2) The review of permit applications and decisions on these applications by the Division and Board; and
- (3) Approval or disapproval of permits to conduct surface coal mining and reclamation operations and for the terms and conditions of permits issued.

2.07.2 Objectives.

The objectives of 2.07 are to:

- (1) Provide for broad and effective public participation in the review of applications and the issuance or denial of permits;
- (2) Ensure prompt and effective review of each permit application by the Division or Board; and

- (3) Provide the minimum requirements for the terms and conditions of permits issued and the criteria for approval or denial of a permit.

2.07.3 Government Agency and Public Comments on Permit Applications.

- 118(1) (1) Upon submission of an application for permit or revision or renewal thereof, the Division shall, within 10 days of receipt of said application, review the submission and determine if it is complete. If the application is complete, the applicant shall be duly notified and the application shall be considered filed for purposes of the Act. If the application is incomplete, notice to that effect shall be mailed to the applicant within said 10-day period, and the applicant shall be given the opportunity to amend, review, or otherwise make said application complete.
- 108, 118(1),(2) (2) At the time of submission of an application for a permit, or for a permit revision, technical revision, or renewal of an existing permit, the applicant shall submit to the Division the proposed notice of publication of the ownership, precise location, and boundaries of the land to be affected by the proposed surface coal mining operation. Upon notification to the applicant that the application for permit or the application for a permit revision or renewal is complete, the applicant shall place the notice of ownership, precise location, and boundaries of land to be affected by the proposed surface coal mining operation in a local newspaper of general circulation in the locality of said operation. This publication shall be published at least once a week for four consecutive weeks. The publication shall contain, at a minimum, the following information:
 - (a) The name and business address of the applicant;
 - (b) A map or description which shall:
 - (i) Clearly show or describe towns, rivers, streams, or other bodies of water, local landmarks, and any other information, including routes, streets, or roads and accurate distance measurements, necessary to allow local residents to readily identify the proposed permit area;
 - (ii) Clearly show or describe the exact location and boundaries of the proposed permit area;

- (iii) State the name of the U.S. Geological Survey 7.5-minute quadrangle map(s) which contain(s) the area shown or described; and
 - (iv) If a map is used, indicate the north point.
- (c) The location where a copy of the application is available for public inspection under 2.07.3(4);
 - (d) The name and address of the Division to which written comments, objections, or requests for informal conference on the application may be submitted;
 - (e) If an applicant seeks a permit in which the affected area would be within 100 feet, measured horizontally, of the outside right-of-way of a public road except where mine access roads or haul roads join such right-of-way line, the notice shall include a concise statement describing that particular portion of the road which is located within 100 feet, measured horizontally, of the affected area. The notice shall also include a statement indicating that a public hearing, for the purpose of determining whether the interests of the public and affected landowners will be protected may be requested by contacting the Division in writing within 30 days after the last publication of the notice. The notice shall also state that any such hearing would be held in the locality of the proposed mining operation; and
 - (f) If an applicant seeks a permit involving relocation or closure of a public road, a concise statement identifying the road, describing the portion to be relocated or closed, the route of the proposed relocation and the duration and timing of the relocation or closure. The notice shall also include a statement indicating that a public hearing, for the purpose of determining whether the interests of the public and affected landowners will be protected may be requested by contacting the Division in writing within 30 days after the last publication of the notice. The notice shall also state that any such hearing would be held in the locality of the proposed mining operation; and
 - (g) If the application includes a request for an experimental practice, a statement indicating than an experimental practice is requested and

identifying the provisions of those rules for which a variance is requested.

- 118(3)
- (3) (a) Upon receipt of a complete application for a permit, a permit revision, technical revision, or permit renewal, the Division shall issue written notification of:
 - (i) The applicant's intention to conduct surface coal mining and reclamation operations on a legally described tract of land;
 - (ii) The application number;
 - (iii) Where a copy of the application may be inspected.
 - (iv) Where comments on the application may be submitted.
 - (b) The written notifications shall be sent to:
 - (i) Federal and State agencies and various local governmental bodies with jurisdiction over or an interest in the area of the proposed operations, including, but not limited to, the U. S. Department of Agriculture Natural Resource Conservation Service District Office, the local U. S. Army Corps of Engineers District Engineer, the National Park Service, municipalities, boards of county commissioners, State and Federal fish and wildlife agencies and the historic preservation officer;
 - (ii) Regional planning commissions, county planning agencies or other governmental planning agencies with jurisdiction to act with regard to land use, air or water quality in the area of the proposed operations;
 - (iii) Sewage and water treatment authorities, and water conservancy and water conservation districts, and water companies either providing sewage or water services to users in the area of the proposed operations, or having water sources or collection, treatment, or distribution facilities located in these areas; and the Federal or State government agencies with authority to issue all other permits and licenses needed by the applicant in connection with operations proposed in the application.

- 118(3) (c) These local bodies, agencies, or authorities may submit written comments to the Division, with respect to the effect of the proposed operation on the environment which is within their area of responsibility. Written comments regarding a permit, a permit revision or permit renewal may be submitted to the Division within 30 days of the last publication of the above notice. Written comments regarding technical revisions may be submitted to the Division within 10 days of the publication of the above notice. Such comments shall be immediately transmitted to the applicant by the Division and shall be made available to the public at the same locations as the permit application.
- 110(2)(g) (4) (a) The applicant shall make a full copy of his or her complete application for a permit, permit revision, technical revision, or permit renewal, except for data and/or other information if it is determined by the Division to be confidential according to 2.07.5, available for the public to inspect and copy. This shall be done by filing a copy of the application submitted to the Division with the recorder at the courthouse of the county where the mining is proposed to occur, or another equivalent public office if it is determined that that office will be more accessible to local residents than the county courthouse.
- 110(4), 118(3)
- 110(2)(g) (b) The applicant shall file the copy of the complete application less confidential matters, by the first date of newspaper advertisement of the application. The applicant shall file any subsequent revision of the application with the public office at the same time the revision is submitted to the Division.
- 110(4), 118(3)
- 118(4) (5) Any person having an interest which is or may be adversely affected by a decision of the Division regarding the proposed surface coal mining operation, or the officer or head of any Federal, State, or local government agency or authority, shall have the right to submit written objections to or comments upon the initial or revised application for a permit, permit revision or permit renewal, to the Division within 30 days after the last publication of the above notice. Such objections and comments shall immediately be transmitted to the applicant by the Division and shall be made available to the public, at the same locations as the application.
- 118(6) (6) Informal Conference.

- (a) Within 30 days after the last publication of the notice specified in 2.07.3(2), any person who files objections or comments pursuant to 2.07.3(3)(c), 2.07.3(5), or 3.03.2(3), may request an informal conference. The request shall:
 - (i) Briefly summarize the issues to be raised by the requestor at the conference; and
 - (ii) State whether the requestor desires to have the conference conducted in the locality of the proposed mining operations.
- 118(6) (b) Except as provided in 2.07.3(6)(c), if an informal conference is requested, the Division shall hold the informal conference within 60 days after the last publication of the newspaper advertisement. The informal conference shall be conducted according to the following:
 - (i) It shall be held in the locality of the proposed surface coal mining operation or release.
 - (ii) The date, time and location of the informal conference shall be advertised by the Division in a newspaper of general circulation in the locality of the proposed mine at least two weeks prior to the scheduled conference.
 - (iii) The Division may arrange with the applicant, upon written request by any person who has submitted objections, comments or a request for an informal conference, access to the proposed permit area for the purpose of gathering information relevant to the conference. The inspection shall be conducted at least 10 days prior to the informal conference and shall be subject to the condition that the visitor shall at all times be accompanied by the applicant, his agent or employee, be under their control, direction and supervision and agree in writing to comply with all applicable State and Federal safety rules and regulations. At no time shall the applicant, his agent or employee use this control to restrict the visitor's access to those portions of the proposed mine plan area necessary for the gathering of information relevant to the conference. The Division shall be in attendance if so requested.

- (iv) The requirements of the State Administrative Procedures shall not apply to the conduct of the informal conference. The conference shall be conducted by a representative of the Division, who may accept oral or written statements and any other relevant information from any party to the conference. An electronic or stenographic record shall be made of the conference proceeding, unless waived by all the parties. The record shall be maintained and shall be accessible to the parties of the conference until final release of the permittee's bond under Rule 3.
- 118(6) (c) If all parties requesting the informal conference stipulate agreement before the requested informal conference and withdraw their request, the informal conference need not be held.
- (d) Informal conferences held in accordance with 2.07.3 may be used by the Board as the public hearing required under 2.07.6(2)(d)(iv) on proposed uses or relocation of public roads.

2.07.4 Division and Board Procedures for Review of Permit Applications.

- 118(5) (1) Within 60 days of the filing of an application for a permit, permit revision or permit renewal, but no sooner than 30 days after such filing, the Division shall review said application and notify the applicant of preliminary findings as to the substantive adequacy or inadequacy of the application.
- 119(1) (2) Proposed Decision by the Division on an application for a permit, permit revision, or permit renewal.
- (a) If an informal conference has been held, any party thereto may submit additional information or comments to the Division for a period of 20 days following the conference. The Division shall issue a proposed decision, granting or denying the permit or permit revision in whole or in part, no earlier than 20 days and no later than 60 days after the informal conference. The Division may, for good cause shown, extend the time for the proposed decision up to an additional 60 days if the application is unusually complex or controversial or if significant snow cover prevents adequate on-site inspection.

- 119(2) (b) If there has been no informal conference, the Division shall issue a proposed decision, granting or denying the permit or permit revision in whole or in part, within 120 days of the filing of the application. The Division may, for good cause shown, extend the time for the proposed decision up to an additional 60 days if the application is unusually complex or controversial or if significant snow cover prevents adequate on-site inspection.
- 119(3) (c) The proposed decision of the Division shall be in writing, and a copy thereof shall be furnished to the applicant, all persons who have objected to or submitted comments on the application, and the Director of OSM. If the proposed decision is to deny the application in whole or in part, the Division shall set forth specific reasons for the proposed decision. If the proposed decision is to grant the application in whole or in part with modifications or stipulations, the modifications or stipulations and reason for the decisions shall accompany the notice of proposed decision. A copy of an approved permit shall be transmitted to the Director of OSM.
- 119(4) (d) The Division shall publish notice of the proposed decision in a newspaper of general circulation in the locality of the surface coal mining operations once a week for two weeks following issuance of the proposed decision.
- 113(1) (e) The applicant may file the required performance bond anytime after a proposed or final decision granting a permit. However, such performance bond must be filed and approved prior to the issuance of the permit.
- 119(4) (3) Formal hearing by the Board.
- (a) Any person with an interest which may be adversely affected by the proposed decision may request a formal hearing before the Board on the proposed decision. Such request must be made within 30 days of the first publication of the proposed decision of the Division, be in writing, and state with reasonable specificity the reasons for the request and the objections to the proposed decision.
- 113(1), 119(5) (b) If a formal hearing is requested, the Board shall hold such hearing in an appropriate location no later than 30 days after said request

and shall notify the applicant, any person requesting said hearing, and any interested parties to the specific hearing of the date, time and location of said hearing. The Board shall also publish the notice of the proposed hearing in a newspaper of general circulation in the locality of the hearing. The hearing shall be conducted pursuant to Section 24-4-105, C.R.S., and shall be adjudicatory in nature. No person who presided at an informal conference shall either preside at the hearing or participate in the decision thereon in any administrative appeal therefrom. The Board may render its decision at the close of the hearing, and must, in any event, render a decision within 30 days of the hearing. The Board shall issue and furnish the applicant and all persons who participated in the hearing with a copy of the written decision, reversing, affirming or modifying the proposed decision of the Division, and stating the reasons therefore. The decision of the Board shall be implemented by the Division within five days after the written decision of the Board. If the Board's decision approves the granting of the permit, the Division shall issue the permit upon filing and approval of the performance bond pursuant to 2.07.4(2)(e).

- 113(1), 119(6) (c) If no formal hearing is requested, the Division shall issue and implement the proposed decision as final within five days after the close of the 30-day period provided for the filing of a request for a formal hearing. However, no permit shall be issued until the applicant has filed a performance bond with the Division and the Division has approved it.
- 119(7) (d) When a formal hearing is requested, the Board may grant such temporary relief as it deems appropriate pending final determination of the proceedings if:
- 119(7)(a) (i) All parties to the proceedings have been notified and given an opportunity to be heard on a request for temporary relief;
- 119(7)(b) (ii) The person requesting such relief shows that there is substantial likelihood that he will prevail on the merits in the final determination of the proceeding;
- 119(7)(c) (iii) Such relief shall not adversely affect the public health or safety or cause significant environmental harm to land, air or water resources; and

- (iv) The relief sought is not the issuance of a permit where a permit has been denied, in whole or in part by the Division.
- 119(8)
- (e) For the purpose of the formal hearing, the Board may administer oaths, subpoena witnesses or written or printed materials, compel attendance of the witnesses or production of the materials, compel discovery and take evidence including, but not limited to, site inspections of the land to be affected and other surface coal mining operations carried on by the applicant in the general vicinity of the proposed operation. A verbatim record of each formal hearing shall be made, and a transcript shall be made available on request to any party or by order of the Board.
- 119(9)
- (f) Judicial appeal. If any applicant or any person with an interest which is or may be adversely affected who has participated in the administrative proceedings as an objector is aggrieved by the decision of the Board or if the Division or Board fails to act within the time limits specified in the Act, such applicant or person shall have the right to appeal in accordance with Section 34-33-128, C.R.S.
 - (g) Within ten days after the granting of a permit, including the filing of the performance bond which complies with Rule 3, the Division shall notify the local government officials in the local political subdivision in which the area of land to be affected is located, that a permit has been issued and shall describe the location of all the lands within the permit area.
 - (h) Notwithstanding any of the foregoing provisions of 2.07, no time limit under the Act or 2.07 requiring the Board or Division to act shall be considered expired from the time the Board or Division initiates a proceeding under 2.07.6(1)(c) until the final decision of the hearing body.

2.07.5 Public Availability of Information in Permit Applications on File with the Division.

- 102
- (1) Information contained in applications for permits, revisions, renewals, and transfers, assignments or sales of permit rights on file with the Division shall be open, upon written request, for public inspection and copying at a reasonable cost, at the expense of the requester during normal business hours.

- 110(7), 111(1)(1)
- (a) Information pertaining to coal seams, test borings, core samplings, or soil samples in permit applications shall be made available for inspection and copying to any person with an interest which is or may be adversely affected; and
 - (b) Information in permit applications which pertains to the quantity of the coal or stripping ratios, or the analysis of the chemical and physical properties of coal to be mined (excepting information which the Division reasonably believes to concern a mineral or elemental content which is potentially toxic in the environment) and information on the nature and location of archeological resources on public and Indian land (as required under the Archeological Resources Protection Act of 1971, PUB. L. 96-95, 93 Stat. 721, 16 U.S.C. 470) shall be kept confidential and not made a matter of public record; and
- 111(2)
- (c) Information in the reclamation plan portions of the application, which is required to be filed with the Division under Section 34-33-111(2), C.R.S. and which is not on public file pursuant to State law, shall be held in confidence by the Board and the Division provided that such information is clearly identified as being confidential or a specific written request is received from the applicant.
- (2)
- (a) Information required by 2.07.5(1)(b) and (c) to be kept confidential by the Division shall be submitted by the applicant in a binder or folder which is clearly identified as containing the confidential information.
 - (b) The Division shall, upon receipt of the confidential information, take appropriate measures to assure its confidentiality.
 - (c) Information requested to be held as confidential under 2.07.5(2) shall not be made publicly available until after notice and opportunity to be heard is afforded persons seeking disclosure and those persons opposing disclosure of information and such information is determined by the Board not to be confidential, proprietary information. Information for which disclosure is sought shall not be made available to those persons seeking disclosure prior to or during such opportunity to be heard. Such

information shall not be made available until a final decision is made by the Board allowing such disclosure.

2.07.6 Criteria for Review of Permit Applications for Permit Approval or Denial.

- (1) Review of permit applications.
 - 114(2),(3),(4) (a) (i) The Division shall review the complete application and written comments, written objections submitted, and records of any informal conference held under 2.07.
 - 114(2)(a) (ii) The Division shall determine the adequacy of the fish and wildlife plan submitted pursuant to 2.05.6(2), in consultation with State and Federal fish and wildlife management and conservation agencies having responsibilities for the management and protection of fish and wildlife or their habitats which may be affected or impacted by the proposed surface coal mining and reclamation operations.
 - 110(2)(f), 114(3) (b) Based on available information concerning Federal and State failure-to-abate cessation orders, unabated Federal and State imminent harm cessation orders, delinquent civil penalties issued pursuant to Section 518 of the Surface Mining Control and Reclamation Act, (30 U.S.C.1201 et. seq.), including delinquent civil penalties assessed under any State regulatory programs approved pursuant to SMCRA, bond forfeitures where violations upon which the forfeitures were based have not been corrected, delinquent abandoned mine reclamation fees, and unabated violations of Federal and State laws, rules, and regulations pertaining to air or water environmental protection incurred in connection with any surface coal mining operation, the Division shall not issue the permit if any surface coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant is currently in violation of the Act or any other law, rule or regulation referred to in this paragraph. In the absence of a failure-to-abate cessation order, the regulatory authority may presume that a notice of violation issued pursuant to 5.03.2(2) or under a Federal or State program has been or is being corrected to the satisfaction of the agency with jurisdiction over the violation, except where evidence to the contrary is set forth in the permit application, or where the

notice of violation is issued for nonpayment of abandoned mine reclamation fees or civil penalties. If a current violation exists, the Division shall require the applicant or person who owns or controls the applicant, to either:

- (i) Submit proof to the Division which is satisfactory to the regulatory authority, department or agency which has jurisdiction over such violation that the violation:
 - (A) Has been corrected, or
 - (B) Is in the process of being corrected; or
- 114(3) (ii) Establish to the Division that the applicant, any person who owns or control the applicant or any person owned or controlled by either, has filed and is presently pursuing, in good faith, a direct administrative or judicial appeal to contest the validity of that violation. If the administrative or judicial hearing authority either denies the appeal or affirms the violation, then any surface coal mining operations being conducted under a permit issued according to 2.07.6(1) shall be immediately terminated, unless and until the provisions of 2.07.6(1)(b)(i) are satisfied.
- (iii) Any permit that is issued on the basis of proof submitted under the provisions of 2.07.6(1)(b)(i) that a violation is in the process of being corrected, or pending the outcome of an appeal described in 2.07.6(1)(b)(ii), shall be conditionally issued.
- 114(3) (c) Before any final determination of approval or denial of the permit application by the Division or the Board, the applicant, or any person who owns or controls the applicant, or the operator specified in the application whom the Division finds controls or has controlled mining operations with a demonstrated pattern of willful violation of the Act of such nature, duration, and with such resulting irreparable damage to the environment that indicates an intent not to comply with the provisions of the Act, shall be afforded an opportunity for an adjudicatory hearing on the determination as provided for by 2.07.4(3)(b)-2.07.4(3)(f).

- (d) After a written decision is published, but before the permit is issued, the Division shall reconsider its decision to approve the application, based on the compliance review required by 2.07.6(1)(b) in light of any new information submitted under 2.03.4(5) and 2.03.5(4).
- (2) Criteria for permit approval or denial.
 - 114(2),(3),(4) No permit or permit revision application shall be approved, unless the application affirmatively demonstrates and the Division or Board finds, in writing, on the basis of information set forth in the application or from information otherwise available, which is documented in the approval and made available to the applicant, that:
 - 114(2)(a) (a) The permit application is accurate and complete and that all requirements of the Act and these Rules have been complied with.
 - 114(2)(b) (b) The applicant has demonstrated that surface coal mining and reclamation operations, as required by the Act and these Rules can be feasibly accomplished under the mining and reclamation operations plan contained in the application.
 - 114(2)(c) (c) The assessment of the probable cumulative impacts of all anticipated coal mining in the general and cumulative impact area on the hydrologic balance, has been made by the Division, and the operations proposed in the application have been designed to prevent material damage to the hydrologic balance outside the proposed permit area.
 - (d) The affected area is, subject to valid rights existing as of August 3, 1977, and with the further exception of those surface coal mining operations which were in existence on August 3, 1977:
 - (i) Not included within an area designated unsuitable for surface coal mining operations in an administrative proceeding begun under Rule 7 or 30 CFR 769 of the Federal Regulations;
 - 114(2)(d) (ii) Not within an area under study for designation as unsuitable for surface coal mining operations in an administrative proceeding begun under Rule 7 or 30 CFR 769 of the

Federal Regulations unless the applicant demonstrates that, before January 4, 1977, he or she has made substantial financial and legal commitments in the relation to the operation for which he or she is applying for a permit;

(iii) Not on any lands subject to the following prohibitions or limitations:

114(2)(g)(I) (A) On any lands within the boundaries of the National Park System, the National Wildlife Refuge System, the National System of Trails, the National Wilderness Preservation System, the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(a)), and National Recreation Areas designated by Act of Congress;

114(2)(g)(IV) (B) Lands within 300 feet measured horizontally or any public building, school, church, community or institutional building or public park; or

114(2)(g)(IV) (C) Within 100 feet measured horizontally of a cemetery; or

114(2)(g)(II) (D) On any Federal lands within the boundaries of any national forest; except that surface coal mining operations may be permitted on such lands if the Secretary finds that there are no significant recreational, timber, economic, or other values which may be incompatible with such surface mining operations, and:

(I) Surface operations and impacts are incident to an underground coal mine; or

(II) Where the Secretary of the United States Department of Agriculture determines, with respect to lands in national forests which do not have significant forest cover, that surface mining is in compliance with the "Multiple-Use Sustained-Yield Act of 1960," as amended, and the provisions of the Act;

(E) If the Division or Board is unable to determine whether the affected area of the proposed operation is within the boundaries of any lands in (A) or (D) or closer than the limits provided in (B) or (C) of this subsection, the Division shall transmit by certified mail, return receipt requested, the relevant portions of the permit application to any appropriate Federal, State, or local government agency with a request that it advise the Division or Board about the appropriate boundaries and respond within 30 days of receipt of the request. The National Park Service, the U.S. Fish and Wildlife Service, or the U.S. Forest Service shall be notified of any request for a determination of valid existing rights pertaining to areas within the boundaries of areas under their jurisdiction and shall have 30 days from receipt of the notification in which to respond. The Board or Division shall, upon request of the appropriate agency, grant an additional 30 days to respond. If no response is received within the period granted, the Division or Board shall presume that the affected area of the proposed operation is not within the boundaries of lands identified in (A), (B), (C) or (D). If the agency responds that there are lands within such boundaries, the Division or Board shall not grant a permit with respect to those lands until the dispute is resolved;

114(2)(g)(IV)

(iv) Not within 100 feet, measured horizontally, of the outside right-of-way line of any public road except where mine access roads or haul roads join such right-of-way line or where the applicant proposes to relocate or close any public road. The Division or Board shall only allow such relocation or closure or affected area within 100 feet, measured horizontally, of the public road if the Division, or the appropriate public road authority, pursuant to being designated as the responsible agency by the Division, allows the public road to be relocated, closed, or the affected area to be within 100 feet, measured horizontally, of such road, after public notice and an opportunity for a public hearing in accordance with 2.04.6(2)(d)(iv)(A) and (B).

- (A) The Division or designated responsible agency shall provide an opportunity for a public hearing in the locality of the proposed mining operation for the purpose of determining whether the interests of the public and affected landowners will be protected.
- (B) If a public hearing is requested, the Division or designated responsible agency shall conduct the requested hearing and shall provide notice in a newspaper of general circulation in the affected locale at least two weeks before the hearing.
- (C) If a public hearing is held, the Division or designated responsible agency shall make a written finding within 30 days of the close of the hearing as to whether the interests of the public and the affected landowners will be protected.
- (D) Whether a public hearing is held or not, no affected area shall be allowed within 100 feet, measured horizontally, of the outside right-of-way line of a public road, nor may a public road be relocated or closed, unless the applicant has obtained all necessary approvals of the authority with jurisdiction over the public road, and the Division or the public road authority have made a written finding that the interests of the public and the affected landowners will be protected.

114(2)(g)(V)

- (v) Not within 300 feet measured horizontally from any occupied dwelling, unless the owner thereof has provided a written waiver consenting to surface coal mining operations closer than 300 feet which states that the owner and signator had the legal right to deny mining and knowingly waived that right. Valid waivers existing as of August 3, 1977 shall be considered binding for purposes of 2.07.6(2)(d)(v) and binding subsequent owners of such valid waivers by prior owners. The waiver must be separate from a lease or deed unless the lease or deed contains an explicit waiver.

- (e) Subject to valid rights existing as of August 3, 1977, and with the further exception of those surface coal mining operations which were in existence on August 3, 1977;
- 114(2)
- (i) The proposed operations will not adversely affect any publicly owned park or place listed on or those places eligible for listing, as determined by the SHPO, on the National Register of Historic Places, unless approved jointly by the Board and the Federal, State, or local agency with jurisdiction over the park or place.
 - (ii) Where the proposed surface coal mining operation may adversely affect any publicly owned park or place listed on or those places eligible for listing, as determined by the SHPO, on the National Register of Historic Places, the Division or Board shall transmit to the Federal, State, or local agencies with jurisdiction over the park or historic site a copy of the complete application containing the following:
 - (A) A request for the agency's approval or disapproval of the operations;
 - (B) A notice to the appropriate agency that it must respond within 30 days from the receipt of the request.
- 114(2)(g)(III)
- (iii) A permit for the operation shall not be issued unless jointly approved by all affected agencies with jurisdiction over the park or historic site.
- 114(2)(a)
- (f) For operations involving the surface mining of coal where the private mineral estate to be mined has been severed from the private surface estate, the applicant has submitted to the Division the documentation required under 2.03.6(2).
- 114(3)
- (g) The applicant has either:
 - (i) Submitted the proof required by 2.07.6(1)(b)(i); or
 - (ii) Made the demonstration required by 2.07.6(1)(b)(ii).

- 114(3) (h) The applicant or the operator, if other than the applicant, and all persons who own or control the applicant, do not control and have not controlled mining operations with a demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act.
- (i) Surface coal mining and reclamation operations to be performed under the permit will not be inconsistent with other such operations anticipated to be performed in areas adjacent to the proposed permit area.
- 113(1) (j) The applicant will submit the performance bond required under the bond of Rule 3, prior to the issuance of permit.
- 114(2)(e)(I)(A) (k) The applicant has, with respect to both prime farmland and alluvial valley floors, obtained either a negative determination or satisfied the requirements of 2.06.6 and 2.06.8, excluding undeveloped range lands which are not significant to farming on said alluvial valley floors and those lands upon which the Board finds that the farming which will be interrupted, discontinued, or precluded is of such small acreage as to be of negligible impact on said land's agricultural production.
- (l) The proposed postmining land use of the permit area has been approved by the Division in accordance with the requirements of 4.16.
- (m) The Division has made all specific approvals required under Rule 4.
- (n) The Division has found that the activities would not affect the continued existence of endangered or threatened species or result in the destruction or adverse modification of their critical habitats as determined under the Endangered Species Act of 1973 (16 USC Sec. 1531 et seq.) or the Nongame, Endangered or Threatened Species Conservation Act (Section 33-2-101 et seq., C.R.S.).
- (o) The applicant has submitted proof that all reclamation fees required by 30 CFR Chapter VII, Subchapter R, have been paid for all coal mining operations.

2.07.7 Conditions of Permits.

Each permit issued by the Division or Board shall ensure and contain specific conditions requiring that the:

- (1) The permittee shall take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of the permit, including, but not limited to:
 - (a) Any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance;
 - (b) Immediate implementation of measures necessary to comply; and
 - (c) Warning as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.
- (2) The permittee shall dispose of solids, sludge, filter backwash, or pollutants removed in the course of treatment or control of waters or emissions to the air in the manner required by Rule 4 and which prevents violation of any other applicable State or Federal law.
- (3) The permittee shall conduct its operations:
 - (a) In accordance with any measures specified in the permit as necessary to prevent significant environmental harm to the health or safety of the public; and,
 - (b) Utilizing any methods specified in the permit by the Division in approving alternative methods of compliance with the Act and in accordance with the provisions of 2.07.6(2)(m) and Rule 4.
- (4) The operator shall pay all reclamation fees required by 30 CFR, Chapter VII, Subchapter R(1989), for coal produced under the permit for sale, transfer or use, in the manner required by that Subchapter.
- (5) Within thirty days after a cessation order is issued under 5.03.2(1), for operations conducted under the permit, except where a stay of the cessation order is granted and remains in effect, the permittee shall

either submit to the Division the following information, current to the date the cessation order was issued, or notify the Division in writing that there has been no change since the immediately preceding submittal of such information:

- (a) Any new information needed to correct or update the information previously submitted to the Division by the permittee under 2.03.4(3); or
 - (b) If not previously submitted, the information required from a permit applicant by 2.03.4(3).
- (6) The permittee shall conduct surface coal mining and reclamation operations only on those lands that are specifically designated as the permit area on the maps and in the legal description submitted with the application. Areas disturbed and affected by surface coal mining and reclamation operations shall be contained within the boundaries authorized on permit application maps for the term of the permit and shall be limited to those areas subject to the performance bond in effect pursuant to these rules.
 - (7) The permittee shall conduct all surface coal mining and reclamation operations only as described in the approved application, except as otherwise directed by the Division in the permit.
 - (8) The permittee shall comply with the terms and conditions of the permit, all applicable performance standards of the Act, and the requirements of these Rules.
 - (9) Continuous, uninterrupted bond coverage shall be in effect at all times, and an adequate bond amount shall be maintained pursuant to the requirements of Rule 3.02.2. Operating without a bond is a violation of a condition upon which the permit is issued.

2.08 PERMIT REVIEWS, REVISIONS AND RENEWALS AND TRANSFER, SALE AND ASSIGNMENT

109(5)
115, 118

2.08.1 Scope. 2.08 establishes the requirements for:

- (1) Revisions to and affirmative periodic review of permits previously issued by the Division,

- (2) Renewal of permits previously issued by the Division.
- (3) Transfer, sale, or assignment of rights granted under permits previously issued by the Division.

2.08.2 Objectives.

The objectives of 2.08 are to:

- (1) Provide procedures for the Division to review, revise, and renew permits; and
- (2) Provide procedures for transfer, sale, or assignment of rights granted in permits.

2.08.3 Division Review of Outstanding Permits.

- 115(3)
- (1) The Division shall review each permit issued and outstanding under these rules during the term of the permit. This review shall occur not later than the middle of the permit term and as required by 2.06.2 through 2.06.7, pertaining to experimental practices, mountaintop removal, steep slope, and combined surface and underground mining.
 - (2) For permits of longer than 5-year terms, a review of the permit shall be no less than the permit midterm or every 5 years, whichever is more frequent.
 - (3) After this review, the Division may, for good cause shown, by order, require reasonable revision or modification of the permit provisions to ensure compliance with the Act and these Rules.
 - (4) Copies of the decision of the Division shall be sent to the permittee.
 - (5) Any order of the Division requiring revision or modification of permits shall be based upon written findings and shall be subject to administrative and judicial review.

2.08.4 Revisions to a Permit.

- (1) General requirements. A permit revision shall be obtained:

- 103(19), 115, 116
- (a) For significant alterations in the surface coal mining or reclamation operations described in the original application and approved under the original permit;
 - (b) When required by an order issued under 2.08.3(3);
 - (c) For an alternate postmining land use if the permit is subject to the provisions of 2.05.5(2)(d); or
- 115(1)(c)
- (d) For any extensions to the area to be covered by a permit, except for incidental boundary revisions.
- 115(1)(c)
- (2) A technical revision shall be obtained:
 - (a) For minor permit modifications which meet the criteria of 1.04(136);
 - (b) When required by an order issued under 2.08.3(3); or
 - (c) For incidental permit boundary revisions.
 - (3) A minor revision shall be obtained:
 - (a) For minor permit modifications which meet the criteria of 1.04(73); or
 - (b) When requested by an order issued under 2.08.3(3).
- 115, 116
- (4) The operator may not implement any permit revision, technical revision, or minor revision before obtaining final approval.
- 115, 116(2)
- (5) Application requirements. An application for all types of revisions or a permit shall contain:
 - (a) An identification of the permit by permit number or other appropriate reference which is the subject of the revision;
 - (b) A specific description of the requested change in the terms of the permit;

- (c) A specific description of any changes in the mining and reclamation operation which may have an effect on performance bond requirements of Rule 3; and
 - (d) Such other information as may be necessary for the Division to determine if the proposed revision will comply with the Act and these Rules. The Board or Division may reasonably request additional information to evaluate the proposed revision.
 - (6) Hearing and notice requirements.
 - 115(1)(b) (a) Permit revision. An application for a permit revision shall be subject to the hearing and notice requirements of 2.07.
 - 116 (b) Technical Revision.
 - (i) An applicant for a technical revision shall place an advertisement in a local newspaper pursuant to the requirements of 2.07.3(2), except that the publication need only be once and no reference to an informal conference shall be made. The applicant shall make a copy of his or her complete application for the public to inspect and copy. This shall be done by filing a copy of the application with the recorder at the courthouse of the county closest to the operations, or if approved by the Division, at another equivalent public office, if it is determined that the office will be more accessible to local residents than the county courthouse. The public copy shall be filed at the same time as the advertisement.
 - 116(4) (ii) Any person having an interest which is or may be adversely affected by a decision of the Division regarding the proposed technical revision, or the officer or head of any Federal, State, or local government agency or authority, shall have the right to submit written objections to or comments upon the initial or revised application for a technical revision, to the Division within 10 days after the publication of the above notice. Such objections and comments shall immediately be transmitted to the applicant by the Division and shall be made available to the public, at the same locations as the application.

116(5)

- (iii) Within 60 days after the filing of a complete application for a technical revision, the Division shall issue a proposed decision approving or denying the application in whole or in part. A written copy of such decision shall be promptly provided to the permittee and shall be published once in a newspaper of general circulation in the locality of the surface coal mining operation. The applicant or any person with an interest which is or may be adversely affected may request a hearing by the Board. The request for a hearing must be received in writing by the Division within 10 days after such publication and shall contain a brief and plain statement of facts which indicate the requestor may be adversely affected, and briefly summarize the issues to be raised by the requestor at the hearing. If properly requested under the provisions of this subsection, a hearing shall be held at the next regularly scheduled Board meeting and a final decision shall be made at that hearing and become immediately effective with notice of the decision being mailed to the permittee. If no request for a hearing is received within such 10 day period the proposed decision of the Division shall immediately become final upon the expiration of said period.
- (c) Minor revision.
- (i) Immediately upon receipt of a complete application for a minor revision, the Division shall post a notice of the application in the office of the Division and make a copy of the application available for the public to inspect and copy at a reasonable cost.
 - (ii) Within 10 days after the filing of a complete application for a minor revision, the Division shall issue a decision approving or denying the application in whole or in part. A written copy of the decision shall be promptly provided to the permittee and shall be posted in the Division office.
 - (iii) Within 10 days after the notification required by 2.08.4(6)(c)(ii) above, any person which has an interest which is or may be adversely affected may request a formal hearing on the decision by the Division. Such request shall be in writing and state with reasonable specificity the

reasons for the request and objections to the Division. If so requested, the formal hearing shall be conducted in accordance with the requirements of 2.07.4(3).

2.08.5 Right of Successive Renewal.

- 109(7)(a),(d) (1) (a) Any valid, existing permit issued pursuant to this regulatory program shall carry with it the right of successive renewal upon expiration of the term of the permit, in accordance with the provisions of 2.08.5. Any permit renewal shall be for an additional term not to exceed the period of the original permit.
- (b) Permit renewal shall not be available for conducting surface coal mining and reclamation operations on lands beyond the boundaries of the permit area approved under the existing permit.
- 109(7)(c) (c) If a complete application for renewal of a permit includes a proposal to extend the mining and reclamation operation beyond the boundaries authorized in the existing permit, the portion of the complete application for renewal of a valid permit which addresses any new land areas shall be subject to the full standards applicable to the new permit applications under the Act and these Rules.
- 109(7)(c) (d) If the surface coal mining and reclamation operations authorized under the original permit were not subject to the standards contained in 34-33-114(2)(e)(I)(A) and (B) of the Act and 2.06.8, because the permittee complied with the exception provided in 34-33-114(2)(e)(II) of the Act (for surface coal mining operations located within or adjacent to alluvial valley floors and producing coal in commercial quantities in the year proceeding August 3, 1977, or operations that had obtained permit approval to mine within said alluvial valley floors), the portion of the application for renewal of the permit which addresses any new land areas previously identified in the reclamation plan submitted for the original permit shall not be subject to the standards contained in 34-33-114(2)(e)(I)(A) and (B) of the Act and 2.06.8.
- (2) Applications for permit renewals.
- 109(7)(d) (a) Complete applications for renewals of a permit shall be filed with the Division at least 180 days before the expiration of the existing permit. The Division shall mail to the operator notice of the need

to renew such permit at least 90 days prior to the final date for the filing of the permit renewal.

- (b) Renewal applications shall include, at a minimum, the following:
 - (i) A statement of the name and address of the permittee, the term of the requested renewal, the permit number, and a description of any changes to the matters set forth in the original application for a permit or prior permit renewal;
 - (ii) A copy of the newspaper notice to be placed in a local newspaper in accordance with the requirements of 2.07.3(2). Proof of publication of the advertisement shall be filed with the Division and made a part of the complete application not later than 4 weeks after the last date of publication; and
 - (iii) Evidence that a liability insurance policy or adequate self-insurance under 2.03.9 will be provided by the applicant for the proposed period of renewal.
- (c) Complete applications for renewal shall be subject to the requirements of public notification and participation contained in 2.07.3.

(3) Permit renewals: approval or denial, terms.

109(7)(a)

- (a) The Division shall, upon the basis of a complete application for renewal and completion of all public notice and hearing requirements under 2.07, issue renewal of a permit, unless it is established by a preponderance of the evidence and written findings by the Board that:
 - (i) The terms and conditions of the existing permit are not being satisfactorily met. Renewal may be granted to the holder of the permit on the condition that the holder demonstrates that he is meeting, and will continue to meet, a schedule agreed to by the holder and the Division for correcting any permit violation, consistent with Rule 5;
 - (ii) The present surface coal mining and reclamation operation is not in compliance with the Act and these Rules;

- (iii) The renewal requested substantially jeopardizes the permittee's continuing responsibility on existing permit areas;
 - (iv) The operator has not provided evidence that the performance bond in effect for said operation will continue in full force and effect for any renewal requested in such application as well as any additional bond the Board or Division might require pursuant to Rule 3; or
 - (v) Any additional revised or updated information required by the Division has not been provided.
- 109(7)(b) (b) Prior to approval of the application for renewal of a permit, the Division shall provide notice to the Office of Surface Mining, to the surface and mineral owners of record of the affected land, and to the board of county commissioners of the county in which the affected land is located.
- 109(7)(e) (c) In determining whether to approve or deny a renewal, the burden shall be on the opponent of the renewal.
- (d) The Board shall send copies of its decision to the applicant, any person who filed objections or comments to the renewal, the Director, and to any persons who were parties to any informal conference or formal hearing held on the permit renewal.
- 118, 119, 128 (e) Any person having an interest which is or may be adversely affected by the decision of the Division shall have the right to administrative and then to judicial review as set forth in 34-33-119 and 34-33-128 of the Act.
- 109(7)(f) (f) The holder of a valid permit may continue surface mining operations under said permit, subject to Section 34-33-123 of the Act and Rule 5, beyond the expiration date until a final administrative decision is rendered if a renewal application is received by the Division at least 180 days prior to the expiration date of the permit.

2.08.6 Transfer, Assignment or Sale of Permit Rights.

- 115(2) (1) No transfer, assignment, or sale of the rights granted under any permit issued pursuant to the Act shall be made without the prior written approval of the Division pursuant to 2.08.6(4).
- 115(1)(b) (2) The Division may not approve any transfer or assignment of any permit unless the potential transferee or assignee:
- (a) Obtains the performance bond coverage of the original permittee by:
 - (i) Obtaining transfer of the original bond; or
 - (ii) Obtaining a written agreement with the original permittee and all subsequent successors in interest (if any) that the bond posted by the original permittee and all successors shall continue in force on all areas affected by the original permittee and all successors, and supplementing such previous bonding with such additional bond as may be required by the Division. If such an agreement is reached, the Division may authorize for each previous successor and the original permittee and release of any remaining amount of bond in excess of that required by the agreement; or
 - (iii) Providing sufficient bond to cover the remaining bond liability under the original permit, from inception to completion of reclamation operations; or
 - (iv) Such other methods as would provide that reclamation of all areas affected by the original permittee is assured under bonding coverage at least equal to that of the original permittee; and
 - (b) Provides the Division with an application on a form approved by the Board for approval of such proposed transfer, assignment, or sale, including:
 - (i) The name and address of the existing permittee;
 - (ii) The name and address of the person proposing to succeed by such transfer, assignment, or sale and the name and address of that person's resident agent;

- (iii) For surface or underground mining activities, the same information as is required by 2.03.4, 2.03.5, 2.03.6, 2.03.7(3), 2.03.9, and 2.03.10, for applications for new permits.
- 115(1)(b) 115(3) (3) (a) The person applying for approval of such transfer, assignment or sale of rights granted by a permit shall advertise the filing of the application in a newspaper of general circulation in the locality of the operations involved, indicating the name and address of the applicant, the original permittee, and number and particular geographic location of the permit, and the address of the Division to which written comments may be sent.

(b) Any person whose interests are or may be adversely affected, including, but not limited to, the head of any local, State, or Federal government agency, may submit written comments on the application for approval to the Division, within 15 days of the newspaper notice.
- 115(2) (4) The Division may, upon the basis of the applicant's compliance with the requirements of 2.08.6(2) and 2.08.6(3); grant written approval for the transfer, sale, or assignment or rights under a permit, if it first finds, in writing, that:

(a) The person seeking approval is eligible to receive a permit in accordance with Rule 2.07.6(1)(b), (c) and (2)(h);

(b) The applicant has submitted a performance bond at least equivalent to the bond of the original permittee; and

(c) The applicant will conduct the operations involved in full compliance with the terms and conditions of the original permit, and in accordance with the requirements of the Act and these rules.
- 115(2), 108(5) Any successor in interest seeking to change the conditions of mining or reclamation operations, or any of the terms or conditions of the original permit shall;
- 115(1)(c) (a) Make application for a new permit, if the change involves conducting operations outside the original permit area; or

- (b) Make application for a revised permit, if the change does not involve conducting operations outside the original permit area.
- (6) The Division shall notify the applicant, the permittee, any commenter on the application, and the Director of its proposed decision to approve or deny the application, pursuant to 2.08.6(4) above. Within 30 days after such notification, any person with an interest which is or may be adversely affected may request a formal hearing on the decision by the Division. Such request shall be in writing and state with reasonable specificity the reasons for the request and objections to the decision. If so requested, the formal hearing shall be conducted in accordance with the requirements of 2.07.4(3). If no formal hearing is requested, the Division shall issue and implement the proposed decision as final within five days after the close of the 30-day period provided for the filing of a request for a formal hearing. However, no permit shall be transferred until the applicant has filed a performance bond with the Division and the Division has approved it.
- (7) Any application for a new permit required for a person succeeding by transfer, sale or assignment of rights granted under a permit shall be filed with the Division not later than thirty days after that succession is approved by the Division.
- (8) The successor shall immediately notify the Division of the consummation of the transfer, assignment, or sale of permit rights.

2.09 SMALL OPERATOR ASSISTANCE PROGRAM

2.09.1 Assistance Provided.

- 112 (1) To the extent possible with funding or services appropriated or otherwise provided for the specific purpose of 2.09, the Division shall for qualified small operators who request assistance;
- 112(1)(a) (a) Select and pay a qualified laboratory to determine for the operator the probable hydrologic consequences of the mining and reclamation operations both on and off the proposed permit area required by 2.09.5, and prepare a statement of test borings or core samplings required by 2.09.5; and

- 112(1)(b) (b) Provide additional necessary technical and administrative assistance to the operator in the preparation of permit applications and revisions.

2.09.2 Eligibility for Assistance.

108, 112(1)(1) An applicant is eligible for assistance if he or she:

- (a) Intends to apply for a permit pursuant to the Act;
- (b) Is not restricted in any manner from receiving a permit pursuant to the Act;
- (c) Has not organized or reorganized his or her company solely for the purpose of obtaining assistance under this rule; and
- (d) Establishes that the probable total production of the applicant for any consecutive twelve-month period of the permit will not exceed 100,000 tons.

Production from the following operations shall be attributed to the applicant:

- (i) All coal produced by operations entirely controlled, by reason of ownership, direction of the management or in any other manner, by the applicant;
- (ii) The pro rata share, based upon percentage of beneficial ownership, of coal produced by operations in which the applicant owns more than a 5 percent interest;
- (iii) The pro rata share of coal produced by operations owned or controlled by the person who owns or controls the applicant's operation;
- (iv) All coal produced by persons who own more than 5 percent of the applicant's operation and who directly or indirectly control the applicant's operation by reason of stock ownership, direction of the management or in any other manner, whatsoever; and

- (v) All coal produced by operations owned by members of the applicant's family and the applicant's relatives, unless it is established that there is no direct or indirect business relationship between or among them.

2.09.3 Filing for Assistance.

108, 112

- (1) Each applicant for small operator assistance shall submit the following information to the Division:
 - (a) A statement of intent to file a permit application;
 - (b) The names and addresses of:
 - (i) The potential permit applicant; and
 - (ii) The potential operator if different from the applicant.
 - (c) A schedule of the estimated total production of coal from the proposed permit area and all other locations from which production is attributed by the applicant under 2.09.2(1)(d). The schedule shall include for each location:
 - (i) The name under which the coal is or will be mined;
 - (ii) The permit number and Mining Enforcement and Safety Administration identification number if the mine is operating;
 - (iii) The actual coal production for the year preceding the application for assistance and that portion of the production attributed to the applicant; and
 - (iv) The estimated coal production for each year of the proposed permit and that portion attributed to the applicant;
 - (d) A description of:
 - (i) The method of surface coal mining operation proposed;
 - (ii) The anticipated starting and termination dates of mining operations;

- (iii) The number of acres of land to be affected by the proposed mining; and
 - (iv) A general statement on the probable depth and thickness of the coal resource, including the reserves in the permit area and the method by which they were calculated.
 - (e) A U.S. Geological Survey topographic map of 1:24,000 scale or larger or other topographic map of equivalent detail which clearly shows:
 - (i) The area of land to be affected and the natural drainage above and below the affected area;
 - (ii) The names of property owners within the area to be affected and of adjacent lands;
 - (iii) The location of existing structures and developed water sources within the area to be affected and on adjacent lands;
 - (iv) The location of existing and proposed test boring or core samplings; and
 - (v) The location and extent of known workings of any underground mines within the proposed permit or adjacent area.
 - (f) Copies of documents which show that:
 - (i) The applicant has legal right to enter and commence mining within the permit area; and
 - (ii) A legal right of entry has been obtained for the Division and laboratory personnel to inspect the lands to be mined and adjacent lands which may be affected to collect environmental data or install necessary instruments.
- (2) Applicants requesting any other necessary technical and administrative assistance shall submit the information required in 2.09.3(1)(a) through (f) and any other information required by the Division.

2.09.4 Application Approval and Notice.

108, 112

- (1) If the Division finds the applicant eligible for the services of a qualified laboratory, and it does not have information readily available which would preclude issuance of a permit to the applicant for mining in the area proposed, it shall:
 - (a) Determine the minimum data requirements necessary to meet the provisions of 2.09.5; and
 - (b) Select the services of one or more qualified laboratories to perform the required work. A copy of the contract or work order and the final approved report shall be provided to the applicant.
- (2) If the Division finds the applicant eligible for other necessary technical and administrative assistance and it does not have readily available information which would preclude issuance of a permit to the applicant for mining, then to the extent that funding or services are available for this purpose, it shall provide the minimum services necessary to meet the provisions in these Rules for which the applicant has requested assistance. The services or assistance may be provided by personnel of the Division or independent contractors selected by the Division. A copy of any contract or work order let to provide the assistance shall be provided to the applicant.
- (3) The Division shall inform the applicant in writing if the application is denied and shall state the reason for denial.
- (4) The granting of assistance under this part shall not be a factor in decisions by the Division in a subsequent permit application.

2.09.5 Minimum Data Requirements.

112

- (1) The Division shall determine the data needed for each applicant or group of applicants. The data collected and results provided to the Division shall be sufficient to satisfy the requirements for the following:
 - (a) The determination of the probable hydrologic consequences of the surface mining and reclamation operations in the proposed permit area and adjacent areas in accordance with rule 2.05.6(3)(b)(iii) and any other applicable provision of this rule;

- (b) The statement of the results of test borings, core samplings or samples obtained by other methods approved by the Division for the proposed permit area in accordance with rule 2.04.6 and any other applicable provisions of this rule; and
- (c) Data collection and analysis may proceed concurrently with the development of mining and reclamation plans by the operator.

- 110(2)(1) (2) Data collected under this program shall be made available to all interested persons, except information related to the chemical and physical properties of coal. Information regarding the mineral or elemental content of the coal which is potentially toxic in the environment shall be made available.

2.09.6 Qualified Laboratories.

- 112(1)(a) (1) The Division shall designate qualified laboratories. Persons who desire to be included in the list of qualified laboratories established by the Division shall apply to the Division and provide such information as is necessary to establish the qualifications required by 2.09.6.
- (2) To qualify for designation a laboratory shall demonstrate that it:
- (a) Is staffed with experienced, professional personnel in the fields of hydrology, mining engineering, aquatic biology, geology or chemistry applicable to the work to be performed;
 - (b) Is capable of collecting necessary field data and samples;
 - (c) Has adequate space for material preparation, cleaning and sterilizing necessary equipment, stationary equipment, storage, and space to accommodate period of peak work loads;
 - (d) Meets the requirements of the Occupational Safety and Health Act or the equivalent State safety and health program;
 - (e) Has the financial capability and business organization necessary to perform the work required;
 - (f) Has analytical, monitoring and measuring equipment capable of meeting the applicable standards of 2.03.3(4); and

- (g) Has the capability of making hydrologic field measurements and analytical laboratory determinations by acceptable hydrologic engineering or analytical methods, or by those appropriate methods or guidelines for data acquisition recommended by the Division.
- (3) To become qualified, a laboratory must be capable of performing either the determination or statement under 2.09.5(1)(a) or (b) and meeting the requirements of 2.09.6. Subcontractors may be used to provide the services required provided their use is defined in the application for designation and is approved by the Division.
- (4) The Division may, after reasonable inquiry, disqualify a previously qualified laboratory, as defined in 2.08, if the Division determines that the requirements of 2.09.6(2) and 2.09.5 are not being met.

112(1)

2.09.7 Assistance Funding.

- (1) Use of funds. Funds authorized for this program shall not be used to cover administrative costs or the costs of test boring or core sampling.
- (2) Allocation of Funds. The Division shall to the extent practicable establish a formula for allocating funds among eligible small operators if available funds are less than those required to provide the services. This formula shall include such factors as the applicant's:
 - (a) Anticipated date of filing a permit application;
 - (b) Anticipated date for commencing mining; and
 - (c) Performance history.

2.09.8 Applicant Liability.

108, 112

- (1) The applicant shall reimburse the Division for the cost of the laboratory services performed pursuant to 2.09 if the applicant:
 - (a) Submits false information;
 - (b) Fails to submit a permit application within 1 year from the date of receipt of the approved laboratory report;

- (c) Fails to mine after obtaining a permit;
 - (d) Produces coal, both actual and attributed production, in excess of 100,000 tons during any consecutive twelve-month period or mining under the permit for which the assistance is provided; or
 - (e) Sells, transfers, or assigns the permit to another person whose total actual and attributed production exceeds 100,000 tons during any consecutive twelve month period of the remaining permit term. In such a case, the applicant and its successor are jointly and severally obligated to reimburse the Division.
- (2) The Division may waive the reimbursement obligation if it finds that the applicant at all times acted in good faith.

2.10 MAPS AND PLANS

2.10.1 General Requirements.

110(2)(n) Maps submitted with applications shall be presented in a consolidated format and shall legibly detail all the information set forth on topographic maps of the U.S. Geologic Survey of the 1:24,000 scale series.

- (1) Maps of the disturbed area shall be at a scale of 1:6,000 or larger if requested by the Division for good cause shown or desired by the operator. In addition, the map shall include all roads and support facilities within the permit area.
- (2) Maps of the remainder of the area to be affected and the adjacent areas shall clearly show the lands and waters within those areas and be at a scale of 1:24,000 or larger if requested by the Division for good cause shown or desired by the operator.
- (3) All maps shall show the permit area boundaries where the area of the map covers the boundaries.

2.10.2 Permit and Adjacent Areas.

One map and plan submitted with the application shall distinguish among each of the phases during which surface coal mining operations were or will be conducted at any place within the permit area and adjacent area. At a minimum, distinctions shall be clearly shown among those portions of the permit area and adjacent areas in which surface coal mining operations occurred:

- (1) Prior to August 3, 1977;
- (2) After August 3, 1977, and prior to either:
 - (a) May 3, 1978, or
 - (b) In the case of an applicant or permittee which obtained a small operator's exemption in accordance with the interim Federal regulatory program, January 1, 1979;
- (3) After May 3, 1978 (or January 1, 1979, for persons who received a small operator's exemption) and prior to the approval of the applicable regulatory program.

2.10.3 Specific Information Requirements.

- (1) In addition to any other maps specifically required by Rule 2, the permit application shall include maps showing:
 - (a) All boundaries of lands and names of present owners of record of those lands, both surface and subsurface, included in or contiguous to the permit area;
 - (b) The boundaries of land within the proposed permit area upon which the applicant has the legal right to enter and begin surface or underground mining activities;
 - (c) The boundaries of all areas proposed to be affected over the estimated total life of the proposed surface or underground mining activities, with a description of size, sequence, and timing of the mining and subareas for which it is anticipated additional permits will be sought;
- 110(2)(j), 111(1)(a)

- 110(2)(h) (d) The location of all buildings on and within 1,000 feet of the proposed permit area, with identification of the current use of the buildings;
- (e) The location of surface and subsurface manmade features within, passing through, or passing over the proposed permit area, including, but not limited to major electric transmission lines, pipelines, and agricultural drainage tile fields;
- (f) Each public road located in, or within 100 feet of the proposed permit area;
- 114(2)(g)(V) (g) The boundaries of any National Natural Landmarks, Designated Natural Areas, public park and location of any cultural or historical resource listed on or eligible for listing, as determined by the SHPO, on the National Register of Historic Places and known archeological sites within the permit area or adjacent areas.
- 114(2)(g)(V) (h) Each public or private cemetery or Indian burial ground located in, or within 300 feet of, the proposed permit area;
- (i) Any land within the proposed permit area and adjacent area which is within the boundaries of any units of the National System of Trails or Wild and Scenic Rivers System, including study rivers designated under Section (5)(a) of the Wild and Scenic River Act; and
- (j) A map of the existing topography within the area to be affected during the estimated life of the operation and adjacent lands. This map shall be in sufficient detail so as to represent slopes and configuration of all surface features within the area to be affected.
- (k) The location and extent of known workings of active, inactive, or abandoned underground mines including mine openings to the surface within the proposed permit and adjacent areas and the location and extent of existing or previously surface mined areas within the proposed permit area.
- (l) Other relevant information required by the Division, for good cause shown, based on site-specific condition.

- 110(2)(o) (2) Maps, plans, and cross-sections included in the permit application which are required by 2.10 shall be prepared by or under the direction of, and certified by, a qualified registered professional engineer or professional geologist, with assistance from experts in related fields such as land surveying and landscape architecture and shall be updated by the permittee as required by the Division.

RULE 3 PERFORMANCE BOND REQUIREMENTS

3.01 INTRODUCTION

This Rule sets forth minimum requirements and responsibilities for filing and maintaining performance bonds for surface coal mining and reclamation operations, and coal exploration, in accordance with the Act. The Rule includes minimum requirements for determining the amounts and periods of liability for performance bonds; it establishes minimum standards for the form, conditions and terms of performance bonds; it sets forth minimum provisions for criteria, schedule and procedures for release of performance bonds; it establishes provisions to be applicable whenever a proceeding for the forfeiture of all or any part of a performance bond, as a result of a failure to meet the conditions upon the bond, is initiated; and it sets forth special requirements for construction of certain mine drainage control facilities.

3.02 PERFORMANCE BOND REQUIREMENTS FOR SURFACE COAL MINING AND RECLAMATION OPERATIONS

3.02.1 General Requirements.

- 113(1) (1) After an application for a permit, or for a revised permit, has been approved by the Division or the Board under Rule 2, but before such permit is issued, the applicant shall file with the Division, on a form prescribed and furnished by the Board, a performance bond payable to the State of Colorado.
- 113(1),(2),(3) The performance bond will be conditioned upon the faithful performance of all the requirements of the Act, these Rules, the reclamation plan and the permit. The amount, duration, form, conditions, and terms of the performance bond shall conform to 3.02.
- (2) An operator shall not disturb surface acreage or extend any underground shafts, tunnels or operations prior to approval of the permit and receipt of approval from the Division of a performance bond covering the surface acreage to be affected.
- 113(1) (3) The performance bond shall cover the area of land within the permit area upon which surface coal mining and reclamation operations are to be initiated and conducted.

- 113(1),(2)
- (4) Liability on the performance bond shall continue until the entire reclamation plan required under the Act, these Rules, and the provisions of the permit have been completed, and until the permittee is released from any further liability pursuant to 3.03. In any case, liability on a performance bond covering a permit area shall continue for a period not less than that specified in 3.02.3.
 - (5) After the amount of the bond has been determined for the permit area in accordance with 3.02.2, the applicant shall file either:
 - (a) The entire performance bond amount required during the term of the permit; or
 - (b) A cumulative bond schedule listing the areas to be covered by bond and the sequence of anticipated release of bond liability amount through phases of reclamation, as described in (6) below, and the bond amount required for the first increment of the schedule. The amount of bond required for the first increment, and therefore, to obtain the permit, shall include the full reclamation cost of the initial area being affected, but shall apply to the entire permit area.
 - (6) When the applicant elects to file a cumulative bond schedule, such schedule shall identify the initial and successive areas for bonding on the permit application map submitted for approval as provided in 2.05.2, and shall specify the proportion of the total bond amount, required for the entire permit area, which will be filed prior to commencing operations on each incremental area. This cumulative bond schedule must correspond to the increments of the mining schedule approved in the permit. Each scheduled incremental bond amount must be filed with the Division at least thirty (30) days prior to the commencement of surface coal mining and reclamation operations in the incremental area corresponding to that bond amount. The schedule shall be supported by a detailed estimated timetable for accomplishment of the reclamation plan, and a detailed estimate of the cost per acre of reclamation for each incremental area. Any permittee who mines an increment prior to submission and approval of bond for that increment shall be in violation of these Rules.
 - (7) The bond liability of the permittee shall include those actions which he is obliged to take under the permit, including completion of the reclamation plan in such a manner that the land will be capable of

supporting a postmining land use approved under 4.16.3. When an alternative land use of industrial or commercial, or residential is approved, the Division shall require a bond amount sufficient to insure that the land could be reclaimed to a condition capable of supporting the pre-mine land use, should the alternative land use prove to be infeasible in the event of bond forfeiture. Implementation of an alternative post-mining land use approved under 4.16.3, which is beyond the control of the permittee, need not be covered by the bond.

3.02.2 Determination of Bond Amount.

- 113(1) (1) The amount of the bond shall be sufficient to assure the completion of the reclamation plan if the work had to be performed by the Board, through independent contractors, in the event of forfeiture.
- 113(1), 114 The amount required for each bonded area shall depend upon the reclamation requirements of the approved permit and shall reflect the probable difficulty of reclamation, giving consideration to such factors as topography, geology of the site, hydrology, and revegetation potential. The amount of the performance bond shall be determined by the Division as part of the decision on permit approval as described in 2.07 and shall be subject to review by the Board as described in 2.07.
- (2) In order to assure sufficiency, the amount shall be based on, but not be limited to:
- 113(1) (a) The estimated costs submitted by the applicant in accordance with 2.05.4.
- 113(1) (b) The additional estimated costs to the Board which may arise from applicable public contracting requirements or the need to bring personnel and equipment to the permit area after its abandonment by the permittee to complete the reclamation plan.
- 113(1) (c) All additional estimated costs necessary, expedient, and incident to the satisfactory completion of the requirements identified in 3.02.
- 113(1) (d) Such other cost information as may be required by or available to the Division.
- 113(1) (3) In no case shall the bond for the entire area under one permit be less than \$10,000.

113(5)

- (4) The amount of the performance bond required shall be adjusted for good cause as affected land acreages are increased or decreased or when the cost of future reclamation changes including the cost of abating any violation for which a notice of violation has been issued. The Division shall review the amount of bond required for a permit area and the terms of acceptance of the bond at the time permit reviews are conducted under 2.08.3 or every two and one-half years, whichever is more frequent. The procedures for any adjustment shall include:
 - (a) Notification of the permittee of any proposed bond adjustment and provide the permittee with an opportunity for an informal conference on the adjustment;
 - (b) Issuance of a written proposed decision by the Division to adjust the bond amount, publication of notice of the proposed decision in a newspaper of general circulation in the locality of the mining operation once a week for two weeks following issuance of the decision, and notification of the permittee, the surety and any person with a property interest in the collateral who has requested notification;
 - (c) An opportunity for a formal hearing pursuant to Rule 2.07.4(3);
- (5) A permittee may request reduction of the required performance bond amount upon submission of evidence to the Division proving to the Division that the permittee's method of operation or other circumstances will reduce the maximum estimated cost to the Division to complete the reclamation responsibilities and therefore warrant a reduction of the bond amount. The request and demonstration shall be in the form of a permit revision application, or technical revision application, as appropriate. Bond adjustments which involve undisturbed land or revision of the cost estimate of reclamation are not considered bond release subject to procedures of 3.03.
- (6) The amount of bond, as determined under this Rule and as adjusted from time to time, is an estimate of the cost of completing the relevant reclamation plan. It does not operate to any extent as a limitation upon the obligation of the permittee to complete the reclamation plan, the cost of which may exceed or be less than the amount of bond.

3.02.3 Period of Liability for Performance Bond.

- 113(2) (1) Liability under the bond(s) applicable to a permit shall be for the duration of the surface coal mining and reclamation operations, for a period coincident with the permittee's responsibility for revegetation requirements in 4.15 and paragraph (2) below, and shall continue until release of the bond(s) in accordance with 3.03.
- 120(2)(t) (2) The permittee shall assume responsibility for successful revegetation under a performance bond for a minimum period beginning after the last year of augmented seeding, fertilizing, irrigation or other work.
- (a) In areas where the annual average precipitation is more than twenty-six (26) inches, this minimum period of liability shall continue for five years, with the exception of (c) below.
- (b) In areas where annual average precipitation is twenty-six (26) inches or less, the minimum period of liability shall continue for ten years, with the exception of (c) below.
- (c) For lands with approved industrial or commercial, or residential post-mining land use, the minimum period of liability shall continue until the permittee demonstrates that development of such land use has substantially commenced and is likely to be achieved, and until compliance with the revegetation requirement of 4.15.10(2) or alternative requirements of 4.15.10(3) is demonstrated.
- (d) The period of liability shall begin again whenever augmented seeding, fertilizing, irrigation or other work is required or conducted on the site prior to bond release, with the exceptions described in 4.15.7(5).
- (e) A portion of the bonded area requiring reinitiation of the extended liability period because of augmentation may be separated from the original area and bonded separately upon approval by the Division. Before approving such a separation, the Division shall determine the separated area:
- (i) Is not significant in extent in relation to the entire area under bond; and

- (ii) Is limited to a distinguishable contiguous portion of the bonded area.

120(2)(t) (3) If the Board approves a postmining cropland use, in accordance with 4.16.3(9), the applicable five-year or ten-year period of responsibility for revegetation shall commence at the date of initial planting for such postmining cropland use.

120(2)(t) (4) When the Board issues a written finding approving postmining cropland use under 4.16.3(9) as part of the mining and reclamation plan, the provisions of 4.15.9 shall apply, as shall the requirement for an extended period of responsibility as described in (2) and (3) above.

(5) For purposes of paragraph (2) above, the annual average precipitation can be determined either:

(a) By interpolation, using standard techniques, from 'Mean Annual Precipitations,' Map p. 97, The National Atlas of the United States, U.S. Department of the Interior, Geological Survey, 1970; or from 'Climatic Atlas of the United States,' U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, 1974; or from long-term precipitation averages from "Climatological Data," U.S. Department of Commerce, National Oceanic and Atmospheric Administration; or from other official records; or

(b) Based on 10 years of continuous and reliable precipitation records from stations located in or adjacent to the mine plan area.

3.02.4 Form, Conditions, and Terms of Performance Bonds.

113(2),(3),(4) (1) The Board shall allow for the following forms of performance bonds except that the Board may, in its discretion, allow for conditioned acceptance of performance bonds as described in 3.02.4(2)(c)(ix):

113(2) (a) A surety bond, in which case the bond shall be executed by the applicant and a corporate surety licensed to do business in this State pursuant to 3.02.4(2)(b);

113(2) (b) A collateral bond, in which case the applicant shall deposit cash, negotiable bonds of the United States government or any political subdivision of this State, negotiable certificates of deposit or an

irrevocable letter of credit of any bank or other savings institution organized or transacting business in the United States, pursuant to 3.02.4(2)(c) and (d).

- 113(3)
- (c) A self bond, which the Division may accept without separate surety when the applicant demonstrates to the satisfaction of the Division that he/she has the financial means sufficient to self bond for reclamation pursuant to 3.02.4(2)(e).
 - (d) An alternative bonding system approved by the Division pursuant to 3.02.4(2)(f); and
 - (e) Any combination of the above bond forms which shall, in the aggregate, conform to the requirements for bonding as specified in paragraph (2) below.

(2) Terms and conditions of the bond.

- 113(2),(3)
- (a) Replacement of bonds.
 - (i) The Division may allow the permittee to replace an approved performance bond with any form or forms of performance bond described in 3.02.4, if the liability which is accrued against the permittee on the permit area is transferred to such replacement bonds, and if the requirements described in this Rule are otherwise met.
 - (ii) The Division shall not release existing performance bonds until the permittee has submitted and the Division has approved acceptable replacement performance bonds. A replacement of performance bonds pursuant to 3.02 shall not constitute a release of bond under 3.03.

- 113(2)
- (b) Surety bonds shall be subject to the following conditions:
 - (i) (A) The Division shall not accept the bond of a surety company unless the bond shall not be cancelable by the surety company, for any disturbed lands within the permit area, at any time for any reason including, but not limited to, non-payment of premium or bankruptcy of the permittee during the period of liability. Surety bond coverage for permitted lands not disturbed may

be cancelled by the surety, with prior consent of the Division, provided the surety gives at least ninety (90) days notice to both the permittee and the Division of the surety's intent to cancel prior to cancellation. Such notice shall be by certified mail and the notice shall not be effective until received by both the permittee and the Division. The Division will advise the surety company, within 30 days after receipt of the notice of intent to cancel, whether the bond may be cancelled on an undisturbed area. Such cancellation shall not be effective for any lands subject to the respective bond coverage which are disturbed prior to the effective date of the cancellation.

- (B) Upon the effective date of cancellation, the surety company shall not be liable for any further surface land disturbance within the area of the permit area covered by the cancelled bond. However, the surety company shall still be liable for all reclamation work on the permitted land that was required by these Rules up to the date of the cancellation. If the permittee is unable to secure a replacement bond approved by the Division as described in (C) below, prior to the effective date of cancellation of the original bond, his permit shall be suspended, revoked or amended to include only those operations for which the remaining bond liability is sufficient.
 - (C) The Division may approve further surface disturbance in the permit area caused by the permittee, after the date of cancellation of the surety, only if a replacement bond is filed by the permittee and approved by the Division prior to the cancellation date. The permittee may elect to file a cumulative bond schedule for the replacement bond, and the form of the replacement bond shall comply with 3.02.4(1)(a)-(e).
- (ii) The Division shall not accept surety bonds in excess of 10 percent of the surety company's paid-up capital or guaranty fund and surplus on any one risk as set forth in 10-3-102 C.R.S.

- (iii) The Division shall not accept surety bonds from a surety company for any person, on all permits held by that person, in excess of three times the limit specified in (ii) above.
- (iv) The bond shall provide that the surety and the permittee shall be jointly and severally liable.
- (v) The bond shall provide that:
 - (A) The surety will give prompt notice to the permittee and the Division of any notice received or action filed alleging the insolvency or bankruptcy of the surety or permittee, or alleging any violations of regulatory requirements which could result in suspension or revocation of the surety's license to do business;
 - (B) In the event the surety becomes unable to fulfill its obligations under the bond for any reason, notice shall be given immediately to the permittee and the Division; and
 - (C) Upon the incapacity of a surety by reason of bankruptcy, insolvency or suspension or revocation of its license, the permittee shall be deemed to be without bond coverage in violation of 3.02.1(2). The Division shall issue a notice of violation against any permittee who is without bond coverage. The notice shall specify a reasonable period to replace bond coverage, not to exceed 90 days. During this period, the Division shall conduct additional inspections, as necessary, to ensure continuing compliance with other permit requirements. Such notice of violation, if abated within the period allowed, shall not be counted as such for purposes of determining "patterns of violations" under 5.03.3 and need not be reported as a past violation in permit applications under 2.03.5. If such a notice of violation is not abated in accordance with the schedule, a cessation order shall be issued; or the Division shall amend the relevant permit to include only those operations for which any other or remaining bond liability is sufficient.

113(2)

(c) Collateral bonds shall be subject to the following conditions:

- (i) The Division shall obtain possession of and keep in custody all collateral deposited by the applicant, until authorized for release or replacement as provided in this Rule.
- (ii) The Division shall value collateral at its current market value subject to adjustment for legal and liquidation fees, as well as value depreciation, marketability, and fluctuations which might affect the net cash available to complete reclamation. The value of the collateral may be evaluated at any time, but it shall be evaluated as part of permit renewal and, if necessary, adjusted.
- (iii) The Division shall require that certificates of deposit be assigned to the State of Colorado in writing, and upon the books of the bank issuing such certificates.
- (iv) The Division shall not accept an individual certificate for a denomination in excess of \$100,000, or maximum insurable amount as determined by F.D.I.C. and F.S.L.I.C.
- (v) The Division shall require the banks issuing these certificates to waive all rights of setoff or liens which it has or might have against those certificates.
- (vi) The Division shall only accept certificates of deposit which are automatically renewable.
- (vii) The Division shall require the applicant to deposit sufficient amounts of certificates of deposit to assure that the Division will be able to liquidate those certificates prior to maturity, upon forfeiture, for the amount of the bond required by this Rule.

113(4)

- (viii) Cash or securities posted as bond shall be deposited by the Treasurer of the State of Colorado in separate escrow accounts, to be known as reclamation surety accounts, and interest accruing on said funds shall be paid to the permittee annually as follows:

- (A) In the case of negotiable bonds and negotiable certificates of deposit, the interest rate paid on such collateral shall be that rate which accrues per the document submitted to the State.
 - (B) In the case of cash, the State retains the right to charge a nominal and reasonable fee against said accrued interest for administrative costs.
- 113(2)
- (ix) Real property posted as a collateral bond shall meet the following criteria:
 - (A) The applicant shall grant the State a mortgage or perfected first-lien security interest in real property located in the State.
 - (B) The instrument creating such mortgage or security interest shall grant to the State a lien sufficient to secure the right and power in the State to foreclose upon said property pursuant to Colorado law, concurrent with the issuance of a notice of forfeiture under 3.04, to sell or otherwise dispose of the property by a public or private transaction, and to establish the State as the first and prior secured creditor with respect to such property, so as to assure the State of a preferred claim over all other creditors in case of bankruptcy.

The property subject to the security interest shall not be subject to any conflicting or prior security interest.

The instrument creating the interest in real property shall be recorded as authorized for fee interests. In order for the Division to evaluate the adequacy of the property offered to satisfy this requirement, the applicant shall submit a schedule of the real property which will be pledged to secure the obligations under the collateral bond agreement. The schedule shall include:

- (I) A description of the property;

- (II) The value of the property. The property shall be valued at fair market value as determined by an appraisal conducted by appraisers appointed by the Division. The appraisal shall be expeditiously made, and a copy thereof furnished to the Division and the applicant. The reasonable expense of the appraisal shall be borne by the applicant; and

- (III) Proof of the applicant's possession of, and title to, the unencumbered real property within the State which is offered to secure the obligations under the bond. Such proof shall include:
 - 1. If the real property interest to be pledged arises under a Federal or State lease, a status report prepared by an attorney, satisfactory to the Division as disinterested and competent to so evaluate the asset, and an affidavit from the lessor establishing that the leasehold could be transferred to the State upon forfeiture;

 - 2. If the real property interest to be pledged is a fee estate, a current commitment for title insurance from a title insurance company licensed in this State, satisfactory to the Division, insuring title to said real property in the applicant; and

 - 3. The property may include land which is part of the permit area. Land pledged as security shall not be disturbed under a permit while it is serving as security under this section.

 - 4. Proof the person granting the security interest holds possession of, and title to, personal property within the State which is offered to secure the obligation of the applicant under the collateral bond. Evidence of such ownership shall be sub-

mitted in a form satisfactory to the Division. The personal property offered shall not include:

- a. Property in which a security interest is held by any person;
- b. Goods which the applicant sells in the ordinary course of his or her business;
- c. Fixtures;
- d. Securities which are not negotiable bonds of the U.S. Government or general revenue bonds of the State; or
- e. Certificates of deposit which are not federally insured or where the depository is unacceptable to the Division.

(C) The bond value of any real property shall be adjusted for any legal or liquidation fees or other costs or value uncertainties that might affect the net cash available to complete the reclamation work.

(x) Persons with an interest in collateral posted as bond, and who desire notification of actions pursuant to the bond, shall request the notification in writing to the Division at the time collateral is offered. However, the foregoing sentence shall not be in derogation of any such person's rights by law to notice of any such actions.

113(2)

(d) Irrevocable letters of credit shall be subject to the following conditions:

(i) The letter may be issued by a bank organized or authorized to do business in the U.S. and located in the state of Colorado, except that the bank need not be located in the state of Colorado if the letter of credit can be exercised at an affiliate or subsidiary located in the state of Colorado, or is confirmed by a bank located in the state of Colorado, or at the Board's discretion is determined to be an acceptable letter of credit;

- (ii) The letter shall be irrevocable, except prospectively, and then only upon the anniversary date of the letter and upon the giving, to the Division and the permittee, of at least ninety days prior notice of the intention to revoke. Letters of credit which have been prospectively revoked shall be forfeited and collected by the Division if not replaced by other suitable bond at least 30 days prior to the expiration date of the letter.
- (iii) The letter must be payable to the State of Colorado in part or in full upon demand and receipt from the Division of a notice of forfeiture issued in accordance with 3.04.
- (iv) The Division shall not accept a letter of credit in excess of 10 percent of the bank's capital surplus account as shown on a balance sheet certified by a Certified Public Accountant.
- (v) The Division shall not accept letters of credit from a bank for any person, on all permits held by that person, in excess of 30 percent of the bank's capital surplus account as shown on a balance sheet certified by a Certified Public Accountant.
- (vi) The letter shall provide that:
 - (A) The bank will give prompt notice to the permittee and the Division of any notice received or action filed alleging the insolvency or bankruptcy of the bank or permittee, or alleging any violations of regulatory requirements which could result in suspension or revocation of the bank's charter or license to do business;
 - (B) In the event the bank becomes unable to fulfill its obligations under the letter of credit for any reason, notice shall be given immediately to the permittee and the Division; and
 - (C) Upon the incapacity of a bank by reason of bankruptcy, insolvency or suspension or revocation of its charter or license, the permittee shall be deemed to be

without performance bond coverage in violation of 3.02.1(2). The Division shall issue a notice of violation against any permittee who is without bond coverage. The notice shall specify a reasonable period to replace bond coverage, not to exceed 90 days. During this period, the Division shall conduct additional inspections, as necessary, to ensure continuing compliance with other permit requirements.

Such notice of violation, if abated within the period allowed, shall not be counted as such for purposes of determining "patterns of violations" under 5.03.3 and need not be reported as a past violation in permit applications under 2.03.5. If such a notice of violation is not abated in accordance with the schedule, a cessation order shall be issued; or the Division shall amend the relevant permit to include only those operations for which any other or remaining bond liability is sufficient.

113(3)

- (vii) The letter shall be automatically renewable upon each anniversary date unless notice is given pursuant to Rule 3.02.4(2)(d)(ii).
- (e) Self-bonds shall be subject to the following conditions:
 - (i) The Division may accept a self-bond from an applicant for a permit if all of the following conditions are met by the applicant or its corporation guarantor:
 - (A) The applicant designates a suitable agent to receive service of process in the State where the proposed surface coal mining operation is to be conducted.
 - (B) The applicant has been in continuous operation as a business entity for a period of not less than 5 years. Continuous operation shall mean that business was conducted over a period of 5 years immediately preceding the time of application.
 - (I) The Division may allow a joint venture or syndicate with less than 5 years of continuous

operation to qualify under this requirement, if each member of the joint venture or syndicate has been in continuous operation for at least 5 years immediately preceding the time of application.

- (II) When calculating the period of continuous operation, the Division may exclude past periods of interruption to the operation of the business entity that were beyond the applicant's control and that do not affect the applicant's likelihood of remaining in business during the proposed surface coal mining and reclamation operations.
- (C) The applicant submits financial information in sufficient detail to show that the applicant meets one of the following criteria:
- (I) The applicant has a current rating for its most recent bond issuance of "A" or higher as issued by either Moody's Investor Service or Standard and Poor's Corporation;
 - (II) The applicant has a tangible net worth of at least \$10 million, a ratio of total liabilities to net worth of 2.5 times or less, and a ratio of current assets to current liabilities of 1.2 times or greater; or
 - (III) The applicant's fixed assets in the United States total at least \$20 million, and the applicant has a ratio of total liabilities to net worth of 2.5 times or less, and a ratio of current assets to current liabilities of 1.2 times or greater.
- (D) The applicant submits:
- (I) Financial statements for the most recently completed fiscal year accompanied by a report prepared by an independent certified public accountant in conformity with generally accepted accounting principles and containing the

accountant's audit opinion or review opinion of the financial statements with no adverse opinion;

(II) Unaudited financial statements for completed quarters in the current fiscal year; and

(III) Additional unaudited information as requested by the Division.

(ii) The Division may accept a written guarantee for an applicant's self-bond from a parent corporation guarantor, if the guarantor meets the conditions of paragraphs (i)(A) through (i)(D) of this section as if it were the applicant. Such a written guarantee shall be referred to as a "corporate guarantee." The terms of the corporate guarantee shall provide for the following:

(A) If the applicant fails to complete the reclamation plan, the guarantor shall do so or the guarantor shall be liable under the indemnity agreement to provide funds to the Division sufficient to complete the reclamation plan, but not to exceed the bond amount.

(B) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the applicant and to the Division at least 90 days in advance of the cancellation date, and the Division accepts the cancellation. The cancellation may be accepted by the Division if the applicant obtains suitable replacement bond before the cancellation date or if the lands for which the self-bond, or portion thereof, was accepted have not been disturbed.

(iii) The Division may accept a written guarantee for an applicant's self-bond from any corporate guarantor, whenever the applicant meets the conditions of paragraphs (i)(A), (i)(B), and (i)(D) of this section, and the guarantor meets the conditions of paragraphs (i)(A) through (i)(D) of this section. Such a written guarantee shall be referred to as a "non-parent corporate guarantee." The terms of this guarantee shall provide for compliance with the conditions

of paragraphs (ii)(A) and (ii)(B) of this section. The Division may require the applicant to submit any information specified in paragraph (i)(C) of this section in order to determine the financial capabilities of the applicant.

- (iv) For the Division to accept an applicant's self-bond, the total amount of the outstanding and proposed self-bonds of the applicant for surface coal mining and reclamation operations shall not exceed 25 percent of the applicant's tangible net worth in the United States. For the Division to accept a corporate guarantee, the total amount of the parent corporation guarantor's present and proposed self-bonds and guaranteed self-bonds for surface coal mining and reclamation operations shall not exceed 25 percent of the guarantor's tangible net worth in the United States. For the Division to accept a non-parent corporate guarantee, the total amount of the non-parent corporation guarantor's present and proposed self-bonds and guaranteed self-bonds for surface coal mining and reclamation operations shall not exceed 25 percent of the guarantor's tangible net worth in the United States.
- (v) If the Division accepts an applicant's self-bond, an indemnity agreement shall be submitted subject to the following requirements:
 - (A) The indemnity agreement shall be executed by all persons and parties who are to be bound by it, including the parent corporation guarantor, and shall bind each jointly and severally.
 - (B) Corporations applying for a self-bond, and parent and non-parent corporations guaranteeing an applicant's self bond shall submit an indemnity agreement signed by two corporate officers who are authorized to bind their corporations. A copy of such authorization shall be provided to the Division along with an affidavit certifying that such an agreement is valid under all applicable Federal and State laws. In addition, the guarantor shall provide a copy of the corporate authorization demonstrating that the corporation may

guarantee the self-bond and execute the indemnity agreement.

- (C) If the applicant is a partnership, joint venture, or syndicate, the agreement shall bind each partner or party who has a beneficial interest, directly or indirectly, to the applicant.
 - (D) Pursuant to Section 3.04, the applicant, parent or non-parent corporate guarantor shall be required to complete the approved reclamation plan for the lands in default or to pay the Division an amount necessary to complete the approved reclamation plan, not to exceed the bond amount. If permitted under State law, the indemnity agreement when under forfeiture shall operate as a judgment against those parties liable under the indemnity agreement.
- (vi) The Division may require self-bonded applicants, parent and non-parent corporate guarantors to submit an update of the information required under paragraphs (i)(C) and (i)(D) of this section within 90 days after the close of each fiscal year following the issuance of the self-bond or corporate guarantee.
 - (vii) If at any time during the period when a self-bond is posted, the financial conditions of the applicant, parent or non-parent corporate guarantors change so that the criteria of paragraph (i)(C) and (iv) of this section are not satisfied, the permittee shall notify the Division immediately and shall within 90 days post an alternate form of bond in the same amount as the self-bond. Should the permittee fail to post an adequate substitute bond, the provisions of Section 3.02.4(2)(b)(v) shall apply.
- (f) The Board, through rule-making, shall recommend to the Secretary for approval of an alternative bonding system when it has determined such a system achieves the following objectives:
 - (i) The alternative assures completion of the reclamation plan if it had to be performed by the Board, through independent

contractors, in the event of forfeiture or default of any permittee participating in the alternative at any time;

- (ii) The alternative assures the ready availability of sufficient economic resources to complete the reclamation plan for all permit areas which may be in default at any time; and
- (iii) The alternative provides a substantial economic incentive for the permittee participating in the alternative to comply with all the reclamation requirements of the permittee's permit.

3.03 RELEASE OF PERFORMANCE BONDS

125(9) 3.03.1 Criteria and Schedule for Release of Performance Bonds.

125(9) (1) The Division, or the Board where an adjudicatory hearing is held pursuant to 3.03.2(6), shall release a performance bond, in whole or in part, when it is satisfied the reclamation covered by the bond or portion thereof has been accomplished as required by these Rules and according to the schedule set forth in (2) below.

(2) The maximum amount under performance bonds applicable to an increment or a permit area which may be released shall be limited to the following schedule:

125(9)(a) (a) Up to sixty percent of the applicable bond amount shall be released when the permittee successfully completes backfilling, regrading, and drainage control in accordance with the approved reclamation plan;

125(9)(b) (b) Up to eighty-five percent of the applicable bond amount shall be released upon the establishment of vegetation which supports the approved postmining land use and which meets the approved success standard for cover, pursuant to 4.15.8, meets applicable productivity standards for prime farmlands or alluvial valley floors pursuant to 3.03.1(3)(b), or croplands pursuant to 4.15.9. With the exception of prime farmlands, evaluation of vegetation establishment pursuant to this paragraph is based on statistically valid data collected during a single year of the liability period; and

125(9)(c), 120(2)(t) (c) The remaining portion of the bond amount shall be released when the permittee has successfully completed all surface coal mining

reclamation operations in accordance with this approved reclamation plan, and the final inspection and procedures of 3.03.2 have been satisfied. This shall not be before the expiration of the period specified for revegetation responsibility in 3.02.3.

125(9)(b) (3) (a) When determining the amount of bond to be released, the Board or Division shall retain that amount of bond for the revegetated area which would be sufficient for a third party to cover the cost of reestablishing revegetation at any time during the period specified for permittee responsibility for revegetation described in 3.02.3.

125(9)(b), 110(2)(q)
114(2)(e)(I) (b) No more than sixty (60) percent of the bond shall be released so long as the lands to which the release would be applicable are contributing suspended solids to streamflow or runoff outside the permit area in excess of premining levels as determined by baseline data or in excess of levels determined on adjacent nonmined areas; until soil productivity for prime farmlands has returned to equivalent levels of yield as nonmined land of the same soil type on the surrounding area under equivalent management practices as determined from the soil survey performed under 2.04.12 and 2.06.6 and the success determination methodology of 4.25.5(3)(a); or, on alluvial valley floors, until the essential hydrologic functions and agricultural productivity have been reestablished.

125(9)(b), 120(2)(h) (c) Where a silt dam is to be retained as a permanent impoundment as described in 4.05.6 or 4.05.9, more than sixty (60) percent of the bond may be released only so long as provisions for sound future maintenance by the permittee or the landowner have been made with the Division.

(d) The Division shall not release any amount under performance bonds applicable to a permit if such release would reduce the total remaining amount under performance bonds to an amount less than that necessary for the Division to complete the approved reclamation plan.

(e) When the permit includes an alternative postmining land use plan for industrial or commercial, or residential use, approved pursuant to 4.16.3, the Division shall require the maintenance of bond coverage throughout the applicable liability period, sufficient for the Division to achieve compliance with the standards for

revegetation applicable to the pre-mining land use under 4.15, in the event the alternative postmining land use is not developed in the event of bond forfeiture.

- 125(9)(c) (4) No bond shall be fully released until all reclamation requirements of these Rules and the Act are fully met, and in no case shall the total bond amount applicable to a permit area be less than \$10,000, in accordance with 3.02.2(3), until bond for the entire permit area is fully released. No acreage shall be released from the permit area until all surface coal mining and reclamation operations on that acreage have been completed in accordance with the approved reclamation plan.
- (5) Release of bond coverage for liability associated with temporary drainage and sediment control facilities including impoundments and conveying systems shall be authorized only after final inspection, acceptance, and approval by the Division. Such approval shall be granted based on determination by the Division that backfilling and grading, topsoiling, and reseeding of such facilities have been completed in compliance with the approved plan. Vegetative cover must be adequate to control erosion and similar to the reclaimed area or surrounding undisturbed area. Reclaimed temporary drainage control facilities shall not be subject to the extended liability period of 3.02.3(2) or the bond release criteria of 3.03.1(2).

3.03.2 Procedures for Seeking Release of Performance Bond.

- 125(1) (1) Bond release application and contents.

The permittee may file a request with the Division for the release of all or part of a performance bond pursuant to the criteria and schedule described in 3.03.1. Prior to filing the request, the permittee shall send written notice of his intention to seek release from bond to adjoining property owners, surface owners, appropriate local government bodies, municipalities, regional planning commissions, boards of county commissioners, county planning agencies, sewage and water treatment authorities, and water conservancy and water conservation districts in the locality in which the surface coal mining operations took place.

Such a request shall include:

- 125(1) (a) Copies of the above written notices which must be submitted to the Division within (30) days of the filing of the request for release.

The permittee is encouraged, however, to file these copies with the request to avoid any unnecessary inspections under 3.03.2(2) and delay.

125(1)

- (b) As part of the bond release request, the permittee shall submit a copy of an advertisement to be placed by the permittee at least once a week for four successive weeks in a newspaper of general circulation in the locality of the surface coal mining operations. Such advertisement shall contain a notification of the precise location of the land affected, the number of acres of land for which the bond release is sought, the name of the permittee, permit number and date approved, the type and amount of the bond filed and the portion sought to be released, the type and appropriate dates of reclamation work performed, and a description of the results achieved as they relate to the permittee's approved reclamation plan. The advertisement shall also state that written comments, objections, and requests for a public hearing or informal conference may be submitted to the Division; provide the address of the Division; and give the date by which said comments, objections, and requests must be received.
- (c) Within thirty (30) days after the last publication required in (b) above, the permittee shall submit to the Division proof of such publications.
- (d) Upon submission of the proof of publication, the Division shall, within 10 days of receipt, review the application and determine if it is complete. The Division shall notify the operator of its decision within said 10 day period and if deemed incomplete, the operator shall be given the opportunity to amend, review, or otherwise make said application complete.
- (e) A notarized statement which certifies that all applicable reclamation activities have been accomplished in accordance with the requirements of the Act, the rules and the approved reclamation program. Such certification shall be submitted for each application or phase of bond release.

(2) Inspection and Evaluation by the Division.

125(2)

Upon receipt of a complete request for the release of a performance bond the Division shall, within thirty (30) days or as soon thereafter as

the Division determines weather conditions permit, conduct an inspection and evaluation of the reclamation work involved. Such evaluation shall consider, among other things, the results of inspections and monitoring conducted pursuant to 4.05.13 and 5.02, the degree of difficulty to complete any remaining reclamation, and whether pollution of surface or subsurface water is occurring, the probability of future occurrence of such pollution, and the estimated cost of abating such pollution. The written results of such inspection and evaluation shall be made immediately available for public inspection in the offices of the Division. "As soon thereafter as weather conditions permit" means that the Division must be able to evaluate properly the reclamation operations alleged to have been completed and, therefore, may be subject to seasonal limitations. The surface owner and agent or lessee, if any, shall be given reasonable notice of such inspection, and may participate with the Division in making the inspection. The Division may arrange with the permittee to allow access to the permit area, upon request by any person with an interest in bond release, for the purpose of gathering information relevant to the proceeding.

125(3) (3) Objections to Requested Release.

Any person with a valid legal interest which might be adversely affected by release of the bond, or any Federal, State, or local government agency which has jurisdiction by law or special expertise with respect to any environmental, social, or economic impact involved in the operation, or is authorized to develop and enforce environmental standards with respect to such operations, shall have the right to file written objections to or comments upon the requested release from bond and file a request for an informal conference with the Division within thirty (30) days of the last publication of the notice required in (1)(b) above, or within thirty (30) days of the completed inspection, whichever is later. Upon receipt of any such objection or comments, copies thereof shall be transmitted to the permittee.

125(8) (4) Informal Conference on Objections to Requested Release.

Without prejudice to the rights of any person who might be adversely affected, the permittee, or the responsibilities of the Division pursuant to this Rule, the Division shall hold an informal conference as provided in 2.07.3(6) to resolve any written comments or objections on the request for release, when such a conference is requested.

- (a) The purpose of an informal conference is to provide an opportunity to resolve disagreements prior to a proposed decision to release by the Division; and therefore, potentially avoid an adjudicatory hearing pursuant to 3.03.2(6).
- (b) Notice of an informal conference shall be published in a newspaper of general circulation in the locality of the conference, at least two weeks before the date of the conference.
- (c) The informal conference shall be held within thirty (30) days from the date of the notice; and shall conclude by the sixtieth day following the inspection and evaluation required in 3.03.2(2).
- (d) The requirements of 24-4-105(6) C.R.S. (Colorado Administrative Procedures Act) shall not apply to the conduct of the informal conference.
- (e) An electronic or stenographic record shall be made of the conference and the record maintained for access by the parties, until final release of the bond, unless recording is waived by all of the parties to the conference.

125(4)

(5) Decision by the Division.

- (a) The Division shall provide written notification to the permittee, the surety, any person with an interest in collateral who has previously requested notification and any other interested parties of its proposed decision to release or not release all or part of the performance bond, together with written reasons for such proposed decision, recommended corrective actions necessary to secure release, and of their right to request a public hearing as described in 3.03.2(6) within sixty (60) days after the date of completion of the inspection and evaluation required in 3.03.2(2). Further, the Division shall publish written notice of its proposed decision once a week for two consecutive weeks in a newspaper of general circulation in the locality of the surface coal mining operation and shall immediately provide written notification of its proposed decision by certified mail to the board of county commissioners of the county in which the surface coal mining operation is located. The Division shall publish its proposed decision in its monthly mailing under 1.03.3(2).

- 125(5) (b) If no request for an adjudicatory hearing as provided in (6) below is received within the time periods specified therefore, the proposed decision of the Division shall be final.
- 125(6) (6) Adjudicatory Hearing on Proposed Decision to Release.
- (a) The Board shall hold an adjudicatory hearing on the proposed decision of the Division upon the receipt of a written request for hearing from any person with a valid legal interest which might be adversely affected by the proposed decision of the Division or from the responsible officer or head of any Federal, State, or local government agency which has jurisdiction by law or special expertise with respect to any environmental, social, or economic impact involved in the operation or which is authorized to develop and enforce environmental standards with respect to such operations. The request for an adjudicatory hearing must state with specificity the reasons why the hearing is requested and must be received within thirty (30) days of the first publication of the proposed decision by the Division. Prior to the adjudicatory hearing, the Board shall give reasonable notice to all interested parties of the time and place of the hearing and shall publish the date, time, and location of such hearing in a newspaper of general circulation in the locality of the surface coal mining operation for two consecutive weeks after receipt of a request for hearing and twice a week for two consecutive weeks before the hearing. In addition, the Board shall place notice of such hearing in its monthly mailing under 1.03.2(2). The Board shall hold an adjudicatory hearing on the proposed decision of the Division within thirty (30) days of the receipt of any written request for such hearing and shall render a written decision affirming or reversing, in whole or in part, the decision of the Division within thirty (30) days following the conclusion of the adjudicatory hearing. The hearing shall be held in the locality of the permit area, or the State capitol, at the option of the objector.
- 125(7) (b) The adjudicatory hearing on the proposed decision of the Division shall be conducted pursuant to 24-4-105, C.R.S. For the purpose of such hearing, the Board shall have the authority and is hereby empowered to administer oaths, subpoena witnesses or written or printed materials, compel the attendance of witnesses and production of the materials, and take evidence, including, but not limited to, inspections of the land affected and other surface coal

mining operations carried on by the permittee in the general vicinity. A verbatim record of each adjudicatory hearing required by this Rule shall be made and a transcript made available on the request of any party to such hearing or by order of the Board. While the decision of the Board will be final, denial shall not preclude resubmission of an application for bond release.

3.03.3 Termination of Jurisdiction

- (1) The Division may terminate its jurisdiction over the reclaimed site of a completed surface coal mining and reclamation operation, or increment thereof, upon its determination in writing that all requirements of these Rules and the Act have been successfully completed and where a performance bond was required, the Division has made a final decision in accordance with Rule 3.03 to release the performance bond fully.
- (2) The Division shall reassert jurisdiction over a site as referenced in 3.03.3(1) if it is demonstrated that the bond release or written determination referenced in 3.03.3(1) was based upon fraud, collusion, or misrepresentation of a material fact.

3.04 FORFEITURE OF PERFORMANCE BONDS

124(4)

3.04.1 Criteria.

- (1) The Board shall declare all or an appropriate part of a performance bond for any permit as forfeited if the Board determines that any of the following circumstances exist:
 - (a) The permittee has violated any of the terms or conditions of the bond and has failed to take adequate corrective action;
 - (b) The permittee has failed to conduct the surface mining and reclamation operations in accordance with the Act, these Rules and the permit within the time required, and that it is necessary, in order to fulfill the requirements of the permit and the reclamation plan, to have someone other than the permittee correct or complete reclamation;
 - (c) The permit has been suspended or revoked, and neither the permittee nor the surety has assumed liability for completion of the

reclamation work under a compliance schedule approved under 3.04.1(2); or

- (d) The permittee or surety has failed to comply with a compliance schedule approved under 3.04.1(2).
- (2) The Board may withhold declaration of forfeiture if the permittee and the surety, if applicable, agree to a compliance schedule to correct the violations of the permit or to comply with the bond conditions. Such a compliance schedule shall provide for completion of reclamation within a reasonable time specified by the Board. The Board shall not agree to a compliance schedule if:
- (a) The permittee has become insolvent, failed in business, been adjudicated a bankrupt, filed a petition in bankruptcy or for a receiver, or had a receiver appointed by any court; or
 - (b) A creditor of the permittee has attached or executed a judgment against the permittee's equipment, materials, facilities at the permit area or on any collateral pledged to the State; and
 - (c) The permittee cannot demonstrate or prove the ability to continue to operate in compliance with the Act, these Rules and the permit.

3.04.2 Procedures.

- (1) In the event forfeiture of all or part of a bond is declared by the Board pursuant to 3.04, the Division shall:
 - (a) Send written notification by certified mail, return receipt requested, to the permittee, and the surety on the bond, if applicable, of the Board's determination to forfeit all or part of the bond and the reasons for the forfeiture, including a finding of the amount to be forfeited;
 - (b) Advise the permittee and the surety, if applicable, of any rights of appeal under State law that may be available from that determination; and
 - (c) Proceed in an action for collection of the amount forfeited on the bond as provided by the applicable laws for the collection of defaulted bonds or other debts; and

- (d) If an appeal is filed, defend the action.
- (2) The written determination to forfeit all or part of the bond including the reasons for forfeiture and the amount to be forfeited, shall be a final decision by the Board.
- (3) The Board may declare forfeited any or all of a bond for an entire permit area in order to satisfy the requirements of 3.04.
- 124(4) (4) Proceeds of forfeited bonds shall be deposited by the Division in a separate reclamation account available to the Division. Said proceeds shall be used by the Division for reclamation of the area covered by the bond. Said reclamation shall include all costs and administrative expenses associated with the conduct of reclamation activities required to complete the applicable approved reclamation plan. Forfeited amounts received by the Division in excess of such costs and expenses shall be refunded to the permittee or to the surety, whichever is appropriate.
- (5) Bond forfeiture may be avoided if the surety company can demonstrate the ability to complete the reclamation plan to the Division. No bond shall be totally released prior to successful completion of all reclamation under the terms of the permit, including the applicable liability periods of 3.02.3, and release in accordance with 3.03 has occurred.
- (6) If the amount of the bond is insufficient to pay for the full cost of reclamation, the permittee shall be liable for the balance. The Division may complete necessary reclamation to the extent the forfeited funds permit and recover from the permittee, by means of civil proceedings and remedies all reclamation costs in excess of the forfeited amount to complete the remaining reclamation.

3.04.3 Determination of the Forfeiture Amount.

- 124(4) The Board shall either:
 - (1) Determine the amount of the bond to be forfeited on the basis of the estimated cost to the Division or its contractor to complete the reclamation plan and other regulatory requirements in accordance with these Rules and the permit; or

- (2) Declare forfeited the entire amount of the bond for which liability is outstanding.

3.05 PERFORMANCE BOND REQUIREMENTS FOR COAL EXPLORATION

3.05.1 General Requirements.

- 117(1)(a)
113(1) (1) Exploration involving removal of 250 tons or less of coal.
 - (a) Upon a determination by the Division, as described in 2.02.2(3) and (4), that substantial disturbance of the natural land surface will occur by exploration involving the removal of 250 tons or less of coal, and before the initiation of that exploration, the applicant shall file with the Division, on a form prescribed and furnished by the Board, a performance bond payable to the State of Colorado. Coal exploration, as set forth in 1.04(22), includes disturbance resulting from the gathering of environmental data before beginning surface coal mining and reclamation operations.
 - (b) No person shall initiate or conduct coal exploration involving removal of 250 tons or less of coal prior to receipt of approval from the Division of a performance bond covering the surface acreage to be affected unless the Division has determined there will be no substantial disturbance of the natural land surface.
- 117(4),(5) (2) Exploration involving removal of more than 250 tons of coal.
 - 113(1) (a) After receipt of written approval from the Division of coal exploration involving removal of more than 250 tons of coal as described in 2.02.4, and before the initiation of that exploration, the applicant shall file with the Division, on a form prescribed and furnished by the Board, a performance bond payable to the State of Colorado.
 - (b) No person shall initiate or conduct coal exploration involving removal of more than 250 tons of coal prior to the receipt of written approval of the Board or Division, and receipt of approval from the Division of a performance bond covering the surface acreage to be affected.
- 113(1),(2) (3) The performance bond will be conditioned upon the faithful performance of an exploration operation in accordance with all the

requirements of 4.21. The amount, duration, form, conditions, and terms of the bond shall conform to 3.05.2, 3.05.3, and 3.05.4.

- (4) The performance bond shall cover the area of land surface affected by the coal exploration.
- (5) Liability on the performance bond shall continue until the requirements of 4.21 have been met and the person conducting the exploration operation is released from any further liability pursuant to 3.05.5.
- (6) After the amount of the bond has been determined by the Division in accordance with 3.05.2, the applicant shall file with the Division the entire performance bond amount required for the proposed exploration.
- (7) The Division, at its discretion, may allow for the filing of a statewide bond for coal exploration. Such a statewide bond must conform with 3.05.4 and would provide the State with the assurance of completion of the reclamation required by all the exploration activities carried out by that person in the State. The person filing such a statewide bond must otherwise comply with all the provisions of 3.05 and 2.02 for each area to be explored, including, but not limited to: filing a notice of intent or application for written approval, whichever is applicable; an activity report for each 180 day period; the final written report; and the certification of completion. The person filing such a bond must show the Division that his posted bond is sufficient to cover all the outstanding and proposed disturbance for which he is or will be liable.

3.05.2 Determination of Bond Amount.

- (1) The amount of the bond shall be sufficient to assure the satisfactory reclamation of the exploration disturbance if the work had to be performed by the Board, through independent contractors, in the event of forfeiture.

The amount required for each exploration operation shall depend upon the reclamation requirements set forth in the narrative description for exploration involving removal of 250 tons or less of coal as described in 2.02.2(2), or in the exploration and reclamation operation plan for exploration involving removal of more than 250 tons of coal as described in 2.02.3(1), whichever is relevant. This amount shall reflect the probable difficulty of reclamation, giving consideration to such

factors as topography, geology of the site, hydrology, and revegetation potential, as applicable.

- (2) The amount of the bond shall be determined by the Division as part of the decision (2.02.2) on whether the proposed exploration will substantially disturb the natural land surface, when 250 tons or less of coal are removed, or as part of the decision (2.02.4) on written approval, when more than 250 tons of coal are removed. The determined bond amount shall be subject to review by the Board as described in 2.07.
- (3) In order to assure an amount sufficient, the Division's determination shall be based on, but not be limited to:
 - (a) The estimated costs of the reclamation work described in (1) above;
 - 113(1) (b) The additional estimated costs to the Board which may arise from applicable public contracting requirements or the need to bring personnel and equipment to the exploration area after its abandonment in the case of forfeiture;
 - 113(1) (c) All additional estimated costs necessary, expedient, and incident to the satisfactory completion of the requirements of 4.21;
 - 113(1) (d) Such other cost information as may be required by or available to the Division.
- (4) The amount of the performance bond required shall be adjusted by the Division from time to time for good cause in accordance with 3.02.2(4).

3.05.3 Period of Liability for Bond.

Liability under the bond(s) applicable to an exploration operation shall be for the duration of that operation, for a period coincident with the responsibilities of 4.21 and 2.02.6, and shall continue until release of the bond(s) in accordance with 3.05.5.

3.05.4 Form, Conditions and Terms of Bond.

- (1) Form of the bond. The Board shall allow for the forms of bond described in 3.02.4.

- (2) General terms and conditions.
 - (a) The bond shall be in an amount determined by the Division as described in 3.05.2.
 - (b) The bond shall be payable to the State of Colorado.
 - (c) The bond shall be conditioned upon the faithful performance of the exploration operation in accordance with all the requirements of 4.21, and shall cover the area of land surface affected by the coal exploration.
 - (d) The duration of the bond shall be for the time period specified in 3.05.3.
 - (e) Replacement of existing approved bond shall be the same as that for a permittee as described in 3.02.4(2).

3.05.5 Release of Bonds.

- 125
- (1) Criteria for release of bonds. The Division, or the Board when an adjudicatory hearing is held pursuant to 3.05.5(2)(f), shall release a bond, in whole or in part, when it is satisfied the reclamation covered by the bond, or portion thereof, has been accomplished as required by 4.21, the additional performance standards and design requirements established by the Division pursuant to 4.21, and in the case of exploration involving removal of more than 250 tons of coal, the conditions of approval set by the Division pursuant to 2.02.4(3).
 - (2) Procedures for seeking release of bond.
 - (a) The person responsible for conducting the coal exploration operation may file a request with the Division for the release of all or part of a bond pursuant to the criteria described in (1) above.
 - (b) Upon the receipt of the request for release, the Division may, within thirty (30) days, or as soon thereafter as the Division determines weather conditions permit, conduct an inspection and evaluation of the reclamation work involved, similar in nature to that described in 3.03.2(2). "Weather conditions permit" means that the Division must be able to properly evaluate the reclamation

alleged to have been completed, and, therefore, may request any reasonable information it deems necessary regarding the operations under the bond.

- (c) The Division shall provide written notification to the person responsible for the exploration operation of its proposed decision to release or not release all or part of the bond together with a written explanation for such proposed decision within thirty (30) days of the request for release, the receipt of the information it has requested regarding the release, or within thirty (30) days of the inspection and evaluation, if any, as described in (b) above, whichever is later. Further, the Division shall publish written notice of its proposed decision once a week for two successive weeks in a newspaper of general circulation in the locality of the exploration operation and shall immediately provide written notification of its proposed decision by certified mail to the board of county commissioners of the county in which the operation is located.

If no request for an adjudicatory hearing as provided in (f) below is received within the specified time period, the proposed decision of the Division shall be final.

- (d) Objections to the requested release or the proposed decision may be filed by any person, as described in 3.03.2(3), within thirty (30) days of the last publication of notice required in (c) above. Upon receipt of any such objections, copies thereof shall be transmitted to the person responsible for the exploration operation.
- (e) Without prejudice to the rights of any person who might be adversely affected, the person responsible for the exploration operation, or the responsibilities of the Division pursuant to this Rule, the Division shall hold an informal conference as described in 3.03.2(4) when such a conference is requested.
- (f) The Board shall hold an adjudicatory hearing on the proposed decision of the Division, if a request for such hearing is received within thirty (30) days of the last publication of notice of the proposed decision by the Division or within thirty (30) days of the informal conference, if any, whichever is later, as set forth in 3.03.2(6), except that the notice of such hearing shall be published

in a newspaper of general circulation in the locality of the exploration operation.

117(5) **3.05.6 Forfeiture of Bonds.**

- (1) The Board shall declare all or part of a performance bond for any exploration operation as forfeited if the Board finds that the person responsible for the exploration operation has:
 - (a) Violated any of the terms and conditions of the bond; or
 - (b) Failed to comply with a compliance schedule approved under 3.05.6(2).
- (2) The Board may withhold declaration of forfeiture if the person responsible and the surety, if applicable, agree to a compliance schedule to correct the violation or to otherwise comply with the bond conditions. Such a compliance schedule shall provide for completion within a reasonable amount of time specified by the Board. The Board shall not agree to a compliance schedule if:
 - (a) The person responsible has become insolvent, failed in business, been adjudicated a bankrupt, filed a petition in bankruptcy or for a receiver, or had a receiver appointed by any court; or
 - (b) A creditor of the person responsible has attached or executed a judgment against his equipment, materials, exploration facilities or on any collateral pledged to the State; and
 - (c) The person responsible cannot demonstrate or prove the ability to continue to operate in compliance with the Act and these Rules.
- (3) Procedures.
 - (a) In the event forfeiture of all or part of a bond is declared by the Board pursuant to 3.05, the Division shall:
 - (i) Send written notification by certified mail, return receipt requested, to the person responsible for the exploration operation, and the surety on the bond, if applicable, of the Board's determination to forfeit all or part of the bond and

the reasons for the forfeiture, including a finding of the amount to be forfeited;

- (ii) Advise the person responsible and the surety, if applicable, of any rights of appeal under State law that may be available from that determination;
 - (iii) Proceed in an action for collection of the amount forfeited on the bond as provided by applicable laws for the collection of defaulted bonds or other debts; and
 - (iv) If an appeal is filed, defend the action.
- (b) The written determination to forfeit all or part of a bond, including the reasons for forfeiture and the amount to be forfeited, shall be a final decision by the Board.
- (c) The Board may declare forfeited any or all of a bond for the entire area affected by an exploration operation, in order to satisfy the requirements of 3.05.
- (d) Proceeds of forfeited bonds shall be deposited by the Division in a separate reclamation account available to the Division. Said proceeds shall be used by the Division for reclamation of the area covered by the bond. Said reclamation shall include all costs and administrative expenses associated with the conduct of the applicable reclamation activities required by 4.21. Forfeited amounts received by the Division in excess of such costs and expenses shall be refunded to the person responsible or to the surety, whichever is appropriate.
- (4) Determination of the forfeiture amount.

The Board shall either:

- (a) Determine the amount of the bond to be forfeited on the basis of the estimated cost to the Division or its contractor to complete the reclamation and other regulatory requirements in accordance with these Rules; or
- (b) Declare forfeited the entire amount of the bond for which liability is outstanding.

3.06 SPECIAL BONDING REQUIREMENTS FOR CONSTRUCTION OF MINE DRAINAGE CONTROL FACILITIES

3.06.1 Bond Requirements.

Performance bond liability shall include construction of impoundments, conveying systems, and treatment facilities for mine drainage planned in accordance with 4.05.2, 4.05.8, and 4.05.10. Bond liability with respect to mine drainage shall extend to the construction and ultimate removal of facilities described in the permit application or reclamation plan as associated with the treatment of mine drainage. The bond amount determination made under 3.02.2 shall not include continuous treatment, monitoring, or potential unpredictable expenses resulting from mine drainage.

3.06.2 Bond Release.

Release of bond coverage for the liabilities described in 3.06.1 shall be authorized only after final inspection, acceptance, and approval by the Division, and shall not be subject to the extended liability period of 3.02.3(2) or the bond release criteria of 3.03.1(2). Procedures for seeking bond release shall be conducted in accordance with 3.03.2.

3.06.3 Applicability of Other Sections.

Except to the extent that provisions of other sections of Rule 3 conflict with 3.06, all other portions of Rule 3 shall apply to the mine drainage control facilities subject to Rule 3.06.1.

RULE 4 PERFORMANCE STANDARDS

4.01 GENERAL PROVISIONS

4.01.1 Scope and Objectives.

- 120(1)
121(1) This Rule sets forth the minimum performance standards and design requirements to be used for coal exploration, surface coal mining and reclamation operations, surface coal mining and reclamation operations incident to underground mining activities and special categories of mining. These performance standards and design requirements will provide for:
- 120(2)(a) (1) Maximum use and conservation of the solid fuel resource being recovered so that re-affecting the land through future surface coal mining and reclamation operations can be minimized;
- 117 (2) Prevent degradation of environmental quality during and following coal exploration;
- 120(2)(b) (3) Reclamation of all affected areas to conditions that are capable of supporting the premining land uses or higher or better land uses;
- 120(2)(p) (4) Reclamation of land affected by surface coal mining operations as contemporaneously as practicable with mining operations;
- 120(2)(x) (5) Minimizing to the extent possible using the best technology currently available, disturbances and adverse impacts on fish, wildlife, and other related environmental values, and enhancement of such resources where practicable;
- 120(2)(s) (6) Revegetation to achieve prompt vegetation cover and recovery of productivity levels compatible with approved land uses;
- 120(2)(j) (7) Minimum disturbance to the prevailing hydrologic balance at the mine site and in associated off-site areas, and to quality and quantity of water in surface and ground water systems;
- 120(2)(u) (8) Confinement of surface coal mining and reclamation operations including, but not limited to, the location of spoil disposal areas to lands within the permit area; and

- 102 (9) Conducting surface coal mining and reclamation operations to insure that society and the environment are protected from the adverse effects of such operations and that the rights of surface landowners and other persons with a legal interest in the land or appurtenances thereto are fully protected.

108 **4.01.2 Authority.**

The Board has the authority to promulgate Rules pursuant to the Act which set forth minimum performance standards and design requirements for surface coal mining and reclamation operations.

104, 105 **4.01.3 Responsibility.**

- (1) It is the responsibility of the Board and the Division to insure that the provisions of this Rule pursuant to the Act are implemented and enforced.
- 120(1) (2) Any person conducting coal exploration or surface coal mining and reclamation operations under a permit issued in accordance with these Rules is responsible for meeting all applicable performance standards of this Rule.

4.02 SIGNS AND MARKERS

4.02.1 Specifications.

Signs and markers required by 4.02 shall:

- (1) Be posted and maintained by the permittee;
- (2) Be of uniform design throughout the operation that can be easily seen and read;
- (3) Be made of durable material; and
- (4) Conform to local ordinances and codes.

4.02.2 Mine and Permit Identification Signs.

- 122(5) (1) Identification signs shall be displayed at each entrance to the permit area from public roads.

- (2) Signs shall show the name, address, and telephone number of the person who conducts the surface coal mining operations and the identification number of the current permit authorizing mining activities.
- (3) Signs shall be retained and maintained until after the release of all bonds for the permit area.

4.02.3 Perimeter Markers.

103(18) The perimeter of a permit area for surface coal mining activities, or in the case of underground mining activities, the perimeter of all areas affected by surface operations or facilities, shall be clearly marked before the beginning of surface coal mining operations.

4.02.4 Duration of Maintenance.

Signs and markers shall be maintained during the conduct of all activities to which they pertain.

4.02.5 Stream Buffer Zone Markers.

120(2)(j)(II)(A) Buffer zones established under the provisions of 4.05.18 shall be clearly marked.

4.02.6 Blasting Signs.

120(2)(o)(I) If surface blasting is conducted incident to surface coal mining operations, the person who conducts these operations shall:

- (1) Conspicuously display signs reading "Blasting Area" along the edge of any blasting area that comes within 50 feet of any road within the permit area or within 100 feet of any public road right of way.
- (2) Conspicuously flag, or post within the blasting area, the immediate vicinity of charged holes.

- (3) Place at all entrances to the permit area from public roads or highways conspicuous signs which state "Warning! Explosives in Use" which clearly explain the blast warning and all clear signals that are in use and which explain the marking of blast areas and charged holes within the permit area.

120(e) **4.02.7 Topsoil Markers.**

Where topsoil or other vegetation-supporting material is segregated and stockpiled as required under 4.06.3, the stockpiled material shall be clearly marked.

4.03 ROADS

4.03.1 Haul Roads.

- (1) General Requirements.

120(2)(q)
121(2)(j) (a) Each person shall ensure that construction, maintenance, and post-mining conditions of haul roads into and across the site of operations will control or prevent erosion and siltation, pollution of air or water, and damage to public or private property.

120(2)(x)
120(2)(j) (b) To the extent possible using the best technology currently available, haul roads shall not cause damage to fish, wildlife, and related environmental values and shall not cause additional contributions of suspended solids to streamflow or to runoff outside the permit area. Any such contributions shall not be in excess of limitations of State or Federal law. Prudent dust control practices shall be used as necessary to comply with 4.17.

(c) The design for haul roads shall be based on geometric criteria appropriate for the anticipated volume of traffic and weight and speed of vehicles to be used.

(d) (i) The design and construction or reconstruction of haul roads not within the disturbed area in accordance with 4.05.2(4) shall be certified by a qualified registered professional engineer, except as provided for in Rule 4.03.1(1)(d)(ii). The certification report shall be submitted to the Division upon completion of any construction or reconstruction and

shall indicate that the road has been constructed or reconstructed as designed and in accordance with the approved plan.

(ii) In lieu of certification of the design and construction or reconstruction, for existing haul roads not within the disturbed area and for which the construction or reconstruction was complete prior to August 1, 1995, the applicant shall provide a relevant showing, on a case by case basis, which may include monitoring data or other evidence, whether the road meets the performance standards of Rule 4.03.1.

(e) Alternatives to the design criteria and specifications of 4.03.1(3) may be utilized after approval by the Division upon a thorough analytical demonstration by a qualified registered professional engineer that such alternatives will be as environmentally sound as those resulting from haul roads complying with the requirements of 4.03.1(3) and that the alternatives meet such other criteria as are necessary to achieve reclamation in accordance with the requirements of this rule, taking into consideration physical, climatological and other characteristics of the site. Alternatives to the design criteria and specifications of 4.03.1(3)(e) may not be utilized unless, in addition to the referenced demonstration, appropriate engineering tests establish compliance with a minimum static safety factor of 1.3.

120(2)(s) (f) All haul roads shall be removed and the land affected reclaimed in accordance with the requirements of 4.03.1(7) unless:

120(2)(b) (i) Retention of the road is approved as part of the approved postmining land use and the road complies with all applicable performance standards; and

(ii) The landowner requests to the Division in writing, that the road or certain parts thereof are to be left open for further use.

(2) Location.

120(2)(q) (a) Haul roads shall be located on ridges or on the most stable available slopes to minimize erosion.

120(2)(r) (b) No part of any haul road shall be located in the channel of an ephemeral stream draining a watershed of at least 1 square mile, or in the channel of an intermittent or perennial stream unless specifically approved by the Division in accordance with applicable sections of 4.05.1, 4.05.2, 4.05.4 and 4.05.18.

120(2)(r)
120(2)(j)(II) (c) Fords of ephemeral streams draining a watershed of at least 1 square mile above the diversion or intermittent streams are prohibited unless they are specifically approved by the Division as temporary routes during periods of construction. Fords of perennial streams shall not be approved. The fords shall not seriously alter the normal flow of water, contribute to stream sediment load or adversely affect fish, wildlife, and related environmental values. All other stream crossings shall be made using bridges, culverts, or other structures designed, constructed, and maintained to meet the requirements of 4.03.1(4).

120(2)(q) (d) Haul roads shall be located to minimize downstream sedimentation and flooding.

(e) Nothing in 4.03.1(2) shall prohibit an operator from diverting a stream channel in accordance with 4.05.4.

(3) Design and Construction.

Haul roads not within the disturbed area in accordance with 4.05.2(4) shall be designed and constructed or reconstructed in compliance with the following standards in order to control erosion and disturbance of the hydrologic balance:

(a) Vertical alignment. Maximum road grades shall be as follows:

(i) The overall grade shall not be steeper than 10h:1v (10 percent).

(ii) Maximum pitch grade shall not be steeper than 6.5h:1v (15 percent).

(iii) There shall not be more than 300 feet of pitch grade exceeding 10 percent within any consecutive 1,000 feet, but

in no case shall there be any pitch grade steeper than 6.5h:1v (15 percent).

- (b) Horizontal alignment. Haul roads shall have a horizontal alignment as consistent with the existing topography as possible, and shall provide the alignment required to meet the performance standards of 4.03.1. Horizontal and vertical alignment shall be coordinated to ensure that the road will not cause environmental damage.
- (c) Width. Road widths shall be appropriate for the anticipated volume of traffic and the nature and speed of vehicles to be used.
- (d) Road cuts.
 - (i) Cut slopes shall not be steeper than 1.5h:1v in unconsolidated materials or 0.25h:1v in rock, except that steeper slopes may be specifically authorized by the Division if geotechnical analysis demonstrates that a minimum safety factor of 1.5 can be maintained or if geotechnical analysis demonstrates that a safety factor less than 1.5 will not result in significant environmental harm or harm to the public health and safety.
 - (ii) Temporary erosion control measures shall be implemented during construction to minimize sedimentation and erosion until permanent control measures can be established. The entire road cut including the surrounding area disturbed by construction shall be stabilized with respect to erosion by a vegetation cover or other means approved by the Division immediately after construction is complete. Where a vegetation cover is used, consideration shall be given to providing an appropriate growth medium.
- (e) Road embankments.
 - (i) All vegetation material and topsoil shall be removed from the embankment foundation during construction to increase stability, and no vegetation material or topsoil shall be placed beneath or in any haul road embankment.

- (ii) Where an embankment is to be placed on side slopes steeper than 5h:1v (20 percent), the existing ground shall be plowed, stepped, or if in bedrock, keyed in a manner which increases the stability of the fill. The keyway shall be a minimum of 10 feet in width and shall extend a minimum of 2 feet below the toe of the fill.
- (iii) The material for embankments shall be reasonably free of organic material, coal or coal blossom, frozen materials, wet or peat material, natural soils containing organic matter, or any other material considered unsuitable for use in embankment construction by the Division. Excess or unsuitable material from excavations shall be disposed of in accordance with 4.09.1.
- (iv) Acid-producing materials shall be permitted for constructing embankments only for those haul roads constructed or reconstructed on coal processing waste banks and only if it has been demonstrated to the Division that no additional acid will leave the confines of the coal processing waste bank. In no case shall acid-bearing refuse material be used outside the confines of the coal processing waste bank. Acid- and toxic-forming materials shall be disposed of in accordance with 4.05.8, 4.10.1, and 4.14.3.
- (v) Material containing by volume less than 25 percent of rock larger than 6 inches in greatest dimension shall be spread in successive uniform layers not exceeding 12 inches in thickness before compaction.
- (vi) Where the material for an embankment consists of large-size rock, broken stone, or fragmented material that makes placing it in 12 inch layers impossible under 4.03.1(3)(d)(v), the embankment shall be constructed in uniform layers not exceeding in thickness the approximate average size of the rock used, but the layers shall not exceed 36 inches, rock shall be placed in a manner that will ensure proper placement in the embankment, so that voids, pockets, and bridging will be reduced to a minimum. The final layer of the embankment shall meet the requirements of 4.03.1(3)(d)(v).

- (vii) Each layer of the embankment shall be completed, leveled, and compacted before the succeeding layer is placed. Loads of material shall be leveled as placed and kept smooth. Embankment layers shall be compacted as necessary to ensure that the embankment is adequate to support the anticipated volume of traffic and weight and speed of vehicles to be used for the duration of the road. In selecting the method to be used for placing embankment material, consideration shall be given in the design to such factors as the foundation, geological structure, soils, type of construction and equipment to be used. If necessary to ensure stability structural and foundation analysis shall be performed to establish design standards for embankment stability appropriate to the site. The degree of compaction shall be determined on the basis of soil type and the anticipated volume of traffic and weight and speed of vehicles to be used for the duration of the road. No lift shall be placed on a layer until the design density is achieved throughout the layer. American Association of State Highway and Transportation Officials (AASHTO), specifications such as T-99, T-180, and the modified AASHTO test, 12th Edition, published July, 1978 or other comparable specifications approved by the Division may be used as guidelines for the determination of the maximum dry density for granular materials. Incorporation by reference of the above publication does not include future editions. Copies of the above specifications may be obtained by contacting the Director, Mined Land Reclamation Division, 1313 Sherman Street, Room 215, Denver, Colorado 80203-2273.
- (viii) Material shall be placed in an embankment only when its moisture content is within acceptable levels to achieve design compaction.
- (ix) Embankment slopes shall not be steeper than 2h:1v, except where embankment material is a minimum 85 percent rock, slopes shall not be steeper than 1.35h:1v. The specified slope gradients shall not be exceeded unless it has been demonstrated to the Division that a minimum safety factor of 1.3, or such higher factor as the Division may specify will be achieved.

- 120(2)(q) (x) Erosion control. Temporary erosion control measures shall be implemented during embankment construction to minimize sedimentation and erosion until permanent control measures can be established. Immediately upon completion, measures shall be taken to stabilize all embankments with vegetation cover or other means as approved by the Division to minimize erosion. Where a vegetation cover is used, consideration shall be given to providing an appropriate growth medium.
- 120(2)(e) (xi) Topsoil. Topsoil and other material as determined under 4.06.2 shall be removed from the design roadbed, shoulders, and surfaces where associated structures will be placed, and shall be stored in accordance with 4.06.3.
- 120(2)(j)(II) (4) Drainage. Each haul road shall be designed, constructed, or reconstructed, and maintained to have adequate drainage, using structures, such as, but not limited to, ditches, cross drains, ditch relief drains, culverts and bridges. The water-control system shall be designed to safely pass peak runoff from a 10-year, 24-hour precipitation event or a greater event if required by the Division.
- 120(2)(q) (a) General.
- 120(2)(r) (i) Natural drainage. Natural channel drainageways shall not be altered or relocated for haul road construction or reconstruction without the prior approval of the Division in accordance with 4.05.3 and 4.05.4. The Division may approve alterations and relocations only if:
- (A) The natural-channel drainage is not blocked;
 - (B) No significant damage occurs to the hydrological balance; and
 - (C) There is no adverse impact on adjoining landowners.
- 120(2)(r) (ii) Stream crossings. Drainage structures are required for all flowing stream channel crossings. Drainage structures shall not affect the normal flow or gradient of the stream, or

adversely affect fish migration and aquatic habitat or related environmental values.

- (iii) Haul roads within the disturbed area. Drainage from haul roads constructed within the disturbed area as described in 4.05.2(4), shall meet the requirements of 4.05.2 and such haul roads shall at a minimum be designed, constructed, reconstructed and maintained using the best technology currently available to minimize erosion as required by 4.03.1(4)(b).
 - (iv) Haul roads not within the disturbed area. Drainage from haul roads that are not constructed within the disturbed area as described in 4.05.2(4), shall meet the requirements of 4.03.1(4)(b)-(e) to minimize erosion, resultant siltation, and disturbance to the prevailing hydrological balance.
- (b) Measures to control erosion of the disturbed area. Erosion control measures used singly or in combination include but are not limited to:
- (i) Stabilizing all exposed surface areas to promote a reduction in the rate and volume of runoff;
 - (ii) Using straw dikes, riprap, check dams, mulches, vegetation sediment filters, and other measures that reduce overland flow velocity, reduce runoff volume, or trap sediment; and
 - (iii) Such other measures to minimize erosion, resultant siltation, and disturbance to the prevailing hydrological balance as required by the Division.
- (c) Ditches. Drainage ditches shall be placed at the toe of all cut slopes formed by the construction of haul roads with ditch relief cross drains constructed if necessary to meet the requirements of 4.03.1(1)(a)-(b). Water shall be intercepted before reaching a switchback or large fill and drained safely away in accordance with the requirements of 4.03.1. Water from a fill or switchback shall be released, through conduits or in riprapped channels, or other facilities to adequately protect the fill.

- (d) The road surface shall be designed and constructed to prevent ponding of water, to provide erosion control and to provide road surface stability.
- (e) Culverts and Bridges.
 - (i) Culverts with an end area of 35 square feet or less shall be designed to safely pass the 10-year, 24-hour precipitation event without a head of water at the entrance unless suitable protection against erosion or fill saturation is in place at the entrance and exit of the culvert. Culverts with an end area of greater than 35 square feet, and bridges with spans of 30 feet or less, shall be designed to safely pass the 20-year, 24-hour precipitation event. Bridges with spans of more than 30 feet shall be designed to safely pass the 100-year, 24-hour precipitation event or a larger event as specified by the Division.
 - (ii) Culverts shall be designed, constructed, and maintained to sustain the vertical soil pressure, the passive resistance of the foundation, and the weight of vehicles to be used.
 - (iii) Drainage pipes and culverts shall be constructed to avoid plugging or collapse and erosion at inlets and outlets.
 - (iv) All culverts shall be covered by compacted fill to a minimum depth of 1 foot.
 - (v) Culverts shall be installed to accommodate flow from intersecting drainages, and from road surface drainage as necessary to control erosion. Design for culverts shall be in accordance with 4.03.1(4)(e) except where alternative specifications are approved. Alternative specifications may be utilized upon approval by the Division after a finding that such specifications will not result in an increase of erosion. Such findings shall be based on a demonstration by the applicant based at a minimum on consideration of precipitation rates, percent of grade and soil properties appropriate to the site.

- (A) Culverts may be designed to carry less than the peak runoff from a 10-year, 24-hour precipitation event if the ditch will not overtop and will remain stable.
- (B) Culverts shall be designed to promote conveyance of design flow.
- (C) The inlet end shall be protected by a rock headwall or other material as adequate protection against erosion of the headwall as required by the Division.

(5) Surfacing.

120(2)(d) (a) Haul roads shall be surfaced with rock, crushed gravel, asphalt, or other material approved by the Division as sufficiently durable for the anticipated volume of traffic and weight and speed of vehicles to be used.

120(2)(n) (b) Acid- or toxic-forming substances shall not be used in haul road surfacing.

(6) Maintenance.

120(2)(q) (a) Haul roads shall be maintained in such a manner that the required or approved design standards are met throughout the life of the entire transportation facility including surface, shoulders, parking and side areas, approach structures, erosion control devices and cut-and-fill sections.

(b) Haul road maintenance shall include repairs to the road surface, blading, filling of potholes, and replacement of the road surface. It shall include revegetation, brush removal, watering for dust control, and minor reconstruction of road segments as necessary.

(c) A road damaged by a catastrophic event, such as a flood or earthquake, shall be repaired as soon as it is practicable after the damage has occurred.

(7) Reclamation.

(a) Unless the Division approves retention of haul roads as suitable for the approved postmining land use, immediately after the road is no longer needed for operations, reclamation, or monitoring:

- 120(2)(p) (i) The road shall be closed to vehicular traffic;
- 120(2)(c) (ii) The natural-drainage patterns shall be restored;
- 120(2)(b) (iii) All bridges and culverts shall be removed;
- (iv) Roadbeds shall be ripped, plowed, and scarified;
- 120(2)(c) (v) Fill slopes shall be rounded or reduced and shaped to conform the site to adjacent terrain and to meet natural-drainage restoration standards;
- 120(2)(c) (vi) Cut slopes shall be shaped to blend with the natural contour;
- 120(2)(v)(III) (vii) Terraces shall be constructed as necessary to prevent excessive erosion and to provide long-term stability in cut-and-fill slopes; and
- 120(2)(f) (viii) The regraded area shall be covered with topsoil in accordance with 4.06.4(2) and revegetated in accordance with 4.15.
- 120(2)(s) (ix) Road-surfacing materials that are incompatible with the postmining land use and revegetation requirements shall be removed and disposed of in appropriate disposal areas as authorized by the Division.

4.03.2 Access Roads.

(1) General Requirements.

- 120(2)(q) (a) Each person who conducts surface coal mining operations shall
- 121(2)(j) ensure that the construction, maintenance, and postmining conditions of access roads into and across the site of operations will control or prevent erosion and siltation, pollution of air or water, and damage to public or private property.

- 120(2)(q)
120(2)(x)
120(2)(j)
- (b) To the extent possible using the best technology currently available, access roads shall not cause damage to fish, wildlife, and related environmental values and shall not cause additional contributions of suspended solids to streamflow or to runoff outside the permit area. Any such contributions shall not be in excess of limitations of State or Federal law. Prudent dust control practices shall be used as necessary to comply with 4.17.
- (c) The design of access roads shall incorporate consideration of the needs of the specific uses of the road. To the extent that the anticipated volume of traffic or weight or speed of vehicles to be used requires higher standards than those set forth in 4.03.2, such higher standards shall be incorporated in the design construction or reconstruction and maintenance of access roads.
- 120(6)
- (d) Access roads shall be designed and constructed in accordance with 4.03.2 except where alternative specifications are used.
- (e) Alternatives to the design criteria and specifications of 4.03.2(3) may be utilized after approval by the Division upon a thorough analytical demonstration by a qualified registered professional engineer that such alternatives will be as environmentally sound as those resulting from access roads complying with the requirements of 4.03.2(3) and that the alternatives meet such other criteria as are necessary to achieve reclamation in accordance with the requirements of this Rule, taking into consideration the physical, climatological, and other characteristics of the site. Alternatives to the design criteria and specifications of 4.03.2(3)(e) may not be utilized unless, in addition to the referenced demonstration, appropriate engineering tests establish compliance with a minimum static safety factor of 1.3.
- (f) (i) The construction or reconstruction of access roads not within the disturbed area in accordance with 4.05.2(4) shall be certified in a report to the Division by a qualified registered professional engineer, except as provided for in Rule 4.03.2(1)(f)(ii). The certification report shall be submitted to the Division upon completion of any construction or reconstruction and shall indicate that the road has been constructed or reconstructed as designed and in accordance with the approved plan.

- (ii) In lieu of certification of the design and construction or reconstruction, for existing access roads not within the disturbed area and for which the construction or reconstruction was complete prior to August 1, 1995, the applicant shall provide a relevant showing, on a case by case basis, which may include monitoring data or other evidence, whether the road meets the performance standards of Rule 4.03.2.
- 120(2)(c)
120(2)(q), 120(2)(s) (g) All access roads shall be removed and the land affected reclaimed in accordance with the requirements of 4.03.2(7) unless:
 - 120(2)(b) (i) Retention of the road is approved as part of the approved postmining land use and complies with all applicable performance standards; and
 - (ii) The landowner requests to the Division in writing, that the road or certain parts thereof are to be left open for further use.
- (2) Location.
 - 120(2)(q) (a) Access roads shall be located on ridges or on the most stable available slopes to minimize erosion.
 - 120(2)(r) (b) No part of any access road shall be located in the channel of an ephemeral stream where the upstream watershed is at least 1 square mile, or in the channel of an intermittent or perennial stream unless specifically approved by the Division in accordance with applicable sections of 4.05.1, 4.05.2, 4.05.4, and 4.05.18.
 - 120(2)(q) (c) Fords of ephemeral streams draining a watershed of at least one square mile above the diversion or intermittent streams are prohibited unless they are approved by the Division. Fords of perennial streams shall not be approved. The fords shall not seriously alter the normal flow of water, contribute to stream sediment load or adversely affect fish, wildlife, and related environmental values. All other stream crossings shall be made using bridges, culverts, or other structures, designed, constructed, and maintained to meet the requirements of 4.03.2(4).

120(2)(q)

- (d) Access roads shall be located to minimize downstream sedimentation and flooding.
- (e) Nothing in 4.03.2(2) shall prohibit an operator from diverting a stream channel in accordance with 4.05.4.

(3) Design and Construction.

Access roads not within the disturbed area in accordance with 4.05.2(4) shall be designed and constructed or reconstructed in compliance with the following standards in order to control erosion and disturbance of the hydrologic balance:

- (a) Vertical alignment. A continuous grade with excessive cuts or embankments shall be avoided. Changes of grade shall be made to conform as closely as possible to the existing terrain, and maximum road grades shall be as follows:
 - (i) The overall grade shall not be steeper than 10h:1v (10 percent).
 - (ii) The pitch grade shall not be steeper than 6.5h:1v (15 percent), for any consecutive 1,000 feet.
 - (iii) The pitch grade exceeding 15 percent shall not be longer than 300 feet within any consecutive 1,000 feet.
- (b) Horizontal alignment. Access roads shall have horizontal alignment as consistent with the existing natural topography as possible, and shall provide the alignment required to meet the performance standards of 4.03.2. Horizontal and vertical alignment shall be coordinated to ensure that the road will not cause environmental damage.
- (c) Width. Road widths shall be appropriate for the anticipated volume of traffic and the nature and speed of vehicles to be used.
- (d) Road cuts.
 - (i) Cut slopes shall not be steeper than 1.5h:1v in unconsolidated materials or 0.25h:1v in rock, except that steeper slopes may be specifically authorized by the Division if

geotechnical analysis demonstrates that a minimum safety factor of 1.5 can be maintained or if geotechnical analysis demonstrates that a safety factor less than 1.5 will not result in significant environmental harm or harm to the public health and safety.

- (ii) Temporary erosion control measures shall be implemented during construction to minimize sedimentation and erosion until permanent control measures can be established. The entire road cut including the surrounding area disturbed by construction shall be stabilized with respect to erosion by a vegetation cover or other means approved by the Division immediately after construction is complete. Where a vegetation cover is used, consideration shall be given to providing an appropriate growth medium.
- (e) Road embankments.
- (i) All vegetation material and topsoil shall be removed from the embankment foundation during construction to increase stability, and no vegetation material or topsoil shall be placed beneath or in any access road embankment.
 - (ii) Where an embankment is to be placed on side slopes steeper than 3h:1v (33 percent), the existing ground shall be plowed, stepped, or if in bedrock, keyed in a manner which increases the stability of the fill. The keyway shall be a minimum of 10 feet in width and shall begin at the toe of fill. No material shall be placed below the toe or be allowed to slide below the toe. For slopes flatter than 3h:1v (33 percent), the slopes shall be scarified to ensure bonding of the embankment and natural material.
 - (iii) The material for embankments shall be reasonably free of organic material, coal or coal blossom, frozen materials, wet or peat material, natural soils containing organic matter, or any other material considered unsuitable for use in embankment construction by the Division. Excess or unsuitable material from excavations shall be disposed of in accordance with 4.09.1. Acid- and toxic-forming material shall be disposed of in accordance with 4.05.8, 4.10.1, and 4.14.3.

- (iv) Material containing by volume less than 25 percent of rock larger than 6 inches in greatest dimension shall be spread in successive uniform layers not exceeding 12 inches in thickness before compaction.
- (v) Where the material for an embankment consists of large-size rock, broken stone, or fragmented material that makes placing in 12-inch layers impossible under 4.03.2(3)(d)(iv), the embankment shall be constructed in uniform layers not exceeding in thickness the approximate average size of the rock used, but the layers shall not exceed 36 inches in thickness. Rock shall be placed in a manner that will ensure proper placement in the embankment, so that voids, pockets, and bridging will be reduced to a minimum. The final layer of the embankment shall meet the requirements of 4.03.2(3)(d)(iv).
- (vi) Each layer of the embankment shall be completed, leveled, and compacted before the succeeding layer is placed. Embankment material shall be leveled as placed and kept smooth. Compaction shall be performed to the extent necessary to ensure stability.
- (vii) Material shall be placed in an embankment under moisture content conditions which will permit compaction and ensure proper soil cohesion.
- (viii) Embankment slopes shall not be steeper than 1.5h:1v, except that if the embankment material is a minimum of 85 percent rock, slopes shall not be steeper than 1.35h:1v if it has been demonstrated to the Division that embankment stability will result.
- (ix) The minimum safety factor for embankments which exceed the slope gradients specified in (viii) above shall be 1.3, or such higher factor as the Division may specify.
- (x) Erosion control. Temporary erosion control measures shall be implemented during embankment construction to control sedimentation and minimize erosion until permanent control measures can be established. Immediately upon completion,

120(2)(q)

measures shall be taken to stabilize all embankments with a vegetation cover or other means as approved by the Division to minimize erosion. Where a vegetation cover is used, consideration shall be given to providing an appropriate growth medium.

120(2)(e) (xi) Topsoil. Topsoil and other materials as determined under 4.06.2 shall be removed from the design roadbed, shoulders, and surfaces where associated structures will be placed, and shall be stored in accordance with 4.06.3.

120(2)(j)(II) (4) Drainage. Each access road shall be designed, constructed, or reconstructed, and maintained to have adequate drainage, using structures, such as, but not limited to, ditches, cross drains, ditch relief drains, culverts and bridges. The water-control system shall be designed to safely pass peak runoff from a 10-year, 24-hour precipitation event or a greater event if required by the Division.
120(2)(q)

(a) General.

120(2)(r) (i) Natural drainage. Natural channel drainageways shall not be altered or relocated for access road construction or reconstruction without the prior approval of the Division in accordance with 4.05.3 and 4.05.4. The Division may approve alterations and relocations only if:

(A) The natural-channel drainage is not blocked;

(B) No significant damage occurs to the hydrological balance; and

(C) There is no adverse impact on adjoining landowners.

120(2)(r) (ii) Stream crossings. Drainage structures are required for all flowing stream channel crossings. Drainage structures shall not affect the normal flow or gradient of the stream, or adversely affect fish migration and aquatic habitat or related environmental values.

(iii) Access roads within the disturbed area. Drainage from access roads constructed within the disturbed area as described in 4.05.2(4), shall meet the requirements of 4.05.2

and such access roads shall at a minimum be designed, constructed, reconstructed and maintained using the best technology currently available to minimize erosion as required by 4.03.2(4)(b).

- (iv) Access roads not within the disturbed area. Drainage from access roads that are not constructed within the disturbed area as described in 4.05.2(4), shall meet the requirements of 4.03.2(4)(b)-(e) to minimize erosion, resultant siltation, and disturbance to the prevailing hydrological balance.
- (b) Measures to control erosion within the disturbed area. Erosion control measures used alone or in combination include, but are not limited to:
- (i) Stabilizing all exposed surface areas to promote a reduction in the rate and volume of runoff;
 - (ii) Using straw dikes, riprap, check dams, mulches, vegetation sediment filters, and other measures that reduce overland flow velocity, reduce runoff volume, or trap sediment; and
 - (iii) Such other measures to minimize erosion, resultant siltation, and disturbance to the prevailing hydrological balance as required by the Division.
- (c) Ditches and alternative measures for roadbed erosion control. Drainage ditches shall be constructed at the toe of all cut slopes formed by the construction of access roads with ditch relief cross drains spaced according to grade. Water shall be intercepted before reaching a switchback or large fill and discharged below the switchback or fill through conduits or riprapped channels. For every segment of an access road without drainage ditches where required to minimize erosion on the roadbed, drainage shall be provided by surface dips. These drainage dips shall be constructed as undulations in the roadway of sufficient height from the hydraulic bottom to the top of the dip to allow for adequate drainage of the road surface; dip spacing shall be sufficient to minimize erosion of the road surface. Insloped dips shall discharge either into a culvert or drop inlet. Outslope dips shall discharge either onto natural ground or onto embankments if adequate surface protection is provided to minimize erosion.

- (d) The road surface shall be sloped as sufficient to prevent ponding of water and erosion of the road surface.
- (e) Culverts and Bridges.
 - (i) Culverts with an end area of 35 square feet or less shall be designed to safely pass the 10-year, 24-hour precipitation event without a head of water at the entrance unless suitable protection against erosion or fill saturation is in place at the entrance and exit of the culvert. Culverts with an end area of greater than 35 square feet, and bridges with spans of 30 feet or less, shall be designed to safely pass the 20-year, 24-hour precipitation event. Bridges with spans of more than 30 feet shall be designed to safely pass the 100-year, 24-hour precipitation event or a larger event as specified by the Division.
 - (ii) Culverts shall be designed, constructed, and maintained to sustain the vertical soil pressure, the passive resistance of the foundation, and the weight of vehicles to be used.
 - (iii) Drainage pipes and culverts shall be constructed to avoid plugging or collapse and erosion at inlets and outlets.
 - (iv) Trash racks and debris basins shall be installed in the drainage area wherever debris from the drainage area could impair the functions of drainage and sediment control structures.
 - (v) Culverts shall be installed to accommodate flow from small intersecting drainages and from road surface drainage as necessary to control erosion. Design for culverts shall be in accordance with 4.03.2(4)(e) except where alternative specifications are utilized. Alternative specifications may be utilized upon approval by the Division after a finding that such specifications will not result in an increase of erosion. Such finding shall be based on a demonstration by the applicant based at a minimum on consideration of precipitation rates, percent of grade and soil properties appropriate to the site.

(A) Culverts may be designed to carry less than the peak runoff from a 10-year, 24-hour precipitation event if the ditch will not overtop and will remain stable.

(B) Culverts shall be placed in a manner to promote conveyance of the design flow.

(vi) All culverts shall be covered by compacted fill to a depth of 1 foot.

(5) Surfacing.

120(2)(d) (a) Access roads shall be surfaced with rock, crushed gravel, asphalt, or other material approved by the Division as sufficiently durable for the anticipated volume of traffic and weight and speed of vehicles to be used.

120(2)(n) (b) Acid- or toxic-forming substances shall not be used in road surfacing.

(c) Vegetation shall not be cleared for more than the width necessary for road and associated ditch construction to serve traffic needs and for utilities.

(6) Maintenance.

120(2)(q) (a) Access roads shall be maintained in such a manner that the required or approved design standards are met throughout the life of the entire transportation facility including surface, shoulders, parking and side areas, approach structures, and erosion control devices.

(b) Access road maintenance shall include basic custodial care as required to prevent damage to adjacent resources. This includes maintenance to control erosion, repair of structures and drainage systems, removal of rocks and debris, replacement of surface, and restoration of the road prism.

(c) A road damaged by a catastrophic event, such as a flood or earthquake, shall be repaired as soon as it is practicable after the damage has occurred.

(7) Reclamation.

- (a) Unless the Division approves retention of access roads as suitable for the approved postmining land use, immediately after the road is no longer needed for operations, reclamation, or monitoring:
- 120(2)(p) (i) The road shall be closed to vehicular traffic;
 - 120(2)(c) (ii) The natural-drainage patterns shall be restored;
 - 120(2)(b) (iii) All bridges and culverts shall be removed;
 - 120(2)(p) (iv) Roadbeds shall be ripped, plowed, and scarified;
 - 120(2)(c) (v) Fill slopes shall be rounded or reduced and shaped to conform the site to adjacent terrain and to meet natural-drainage restoration standards;
 - 120(2)(c) (vi) Cut slopes shall be shaped to blend with the natural contour;
 - 120(2)(v)(III) (vii) Terraces shall be constructed as necessary to prevent excessive erosion and to provide long-term stability in cut-and-fill slopes; and
 - 120(2)(f), 120(2)(s) (viii) The regraded area shall be covered with topsoil in accordance with 4.06.4(2) and revegetated in accordance with 4.15.
 - (ix) Road-surfacing materials that are incompatible with the post-mining land use and revegetation requirements shall be removed and disposed of in appropriate disposal areas as authorized by the Division.

4.03.3 Light-Use Roads.

(1) General Requirements.

- 120(2)(q)
121(2)(j) (a) Each person who conducts surface coal mining operations shall design, construct or reconstruct, utilize, and maintain light-use roads to control or prevent erosion and siltation, air and water pollution, and damage to public or private property.

- 120(2)(x)
120(2)(j)
- (b) To the extent possible using the best technology currently available, light-use roads shall not cause damage to fish, wildlife, and related environmental values and shall not cause additional contributions of suspended solids to streamflow or to runoff outside the permit area. Any such contributions shall not be in excess of limitations of State or Federal law. Prudent dust control practices shall be used as necessary to comply with 4.17.
- (c) To the extent that the anticipated volume or weight or speed of vehicles to be used requires higher standards than those set forth in 4.03.3, such higher standards shall be incorporated in the design, construction, and reconstruction or maintenance of light-use roads.
- 120(2)(c)
120(2)(q)
120(2)(s)
- (d) All light-use roads shall be completely removed and the land affected regraded to the approximate original contour and revegetated in accordance with the requirements of 4.03.3(7) except where 4.03.3(2)(e) shall apply.
- (2) Location.
- 120(2)(q)
- (a) Light-use roads shall be located on ridges or on the most stable available slopes to minimize erosion.
- 120(2)(r)
- (b) No part of any light-use road shall be located in the channel of an ephemeral stream where the upstream watershed is at least 1 square mile, or in the channel of an intermittent or perennial stream unless specifically approved by the Division in accordance with applicable sections of 4.05.1, 4.05.2, 4.05.4, and 4.05.18.
- 120(2)(r)
- (c) Stream fords of an ephemeral stream where the upstream watershed is at least 1 square mile, intermittent or perennial streams are prohibited unless they are approved by the Division and will not adversely affect stream sedimentation or fish, wildlife, and related environmental values. All other stream crossings shall be made using bridges, culverts, or other structures designed, constructed, and maintained to meet the requirements of 4.03.3(4).
- 120(2)(q)
- (d) Light-use roads shall be located to minimize down-stream sedimentation and flooding.
- (e) A light-use road may be constructed in the same alignment as a haul or access road that is to be constructed on the same location

at a later date. This may be permitted if the requirements for the location of the haul or access road are met, and the construction begins within 6 months from the time the light-use road is constructed.

- (f) Light-use roads shall not be located in wet, steep, or unstable areas where complete reclamation under 4.03.3(7) cannot be accomplished.

(3) Design and construction.

Field-design methods may be utilized for light-use roads.

- (a) Vertical Alignment. Except for pre-existing roads, roads within the disturbed area in accordance with 4.05.2(4), or where lesser grades are necessary to control site-specific conditions as approved by the Division maximum road grades shall be as follows:
 - (i) The overall grade shall not be steeper than 10h:1v (10 percent).
 - (ii) The pitch grade shall not be steeper than 5h:1v (20 percent) for any consecutive 1,000 feet.
 - (iii) The pitch grade exceeding 20 percent shall not be longer than 300 feet within any consecutive 1,000 feet.
- (b) Horizontal alignment. Light-use roads may meander so as to avoid large growths of vegetation and other natural obstructions.
- (c) Width. Road widths shall be appropriate for the anticipated volume of traffic and the nature and speed of vehicles to be used.
- (d) Road cuts. Sidecast construction may be used.
- (e) Road embankments. Compaction on embankments shall be required only to the extent necessary to control erosion and maintain the road.
- (f) Topsoil removal. Topsoil shall be removed and stockpiled where required by the Division or where excavation would require

replacement of material and redistribution of topsoil for proper revegetation.

- (g) Vegetation shall not be cleared for more than the width necessary to serve traffic and utility needs.

(4) Drainage.

120(2)(j)(II)
120(2)(r)

- (a) (i) Light-use road drainage shall consist of culverts in flowing streams, wet areas, and in ephemeral channels as necessary to protect the facility during its life and to minimize disturbance of the hydrologic balance.

- (ii) Sediment control shall comply with 4.05.2 and 4.05.5.

- (b) Culverts and bridges. Culverts or bridges shall be installed for crossings of all flowing drainages and streams. Light-use roads planned to be used for a period of less than 6-months shall utilize temporary culverts or bridges designed to safely pass the 1-year, 6-hour precipitation event, or larger event as specified by the Division. Light-use roads planned to be used for a period of more than 6 months shall utilize culverts and bridges designed to safely pass the 10-year, 24-hour precipitation event or longer as specified by the Division.

120(2)(d)

- (c) Ditches, cross drains, road surface drainage culverts, and ditch relief drains shall be installed as required by the Division to control erosion for light-use roads.

120(2)(r)

- (d) Natural drainage. Natural-channel drainageways shall not be altered or relocated for the purposes of light-use road construction.

120(2)(r)

- (e) Stream crossings. Drainage structures required for crossing streams shall not affect the normal flow or gradient of the stream, adversely affect the fish migration and aquatic habitat or related environmental values.

(5) Surfacing.

120(2)(d)

- (a) Light-use road surfaces shall be adequate for the use of the road.

- 120(2)(n) (b) Acid- or toxic-forming substances shall not be used in road surfacing.
- (6) Maintenance.
- 120(2)(q) (a) Light-use road maintenance shall be sufficient to ensure minimization of erosion for the life of the road.
- (b) Light-use roads shall not be used if climatic conditions are such that usage may cause degradation of water quality.
- (c) A road damaged by a catastrophic event such as a flood or earthquake, shall be repaired as soon as is practicable after the damage has occurred.
- (7) Reclamation.
- Immediately after a light-use road is no longer needed for operations, reclamation, monitoring or the postmining land use as approved by the Division:
- 120(2)(p) (a) The road shall be closed to vehicular traffic;
- 120(2)(c) (b) The natural drainage patterns shall be restored;
- 120(2)(b) (c) All bridges and culverts shall be removed;
- 120(2)(p) (d) Roadbeds shall be ripped, plowed, and scarified;
- 120(2)(c) (e) Fill slopes shall be rounded or reduced and shaped to conform to the site, to adjacent terrain and to meet natural-drainage restoration standards;
- 120(2)(c) (f) Cut slopes shall be reshaped to blend with the natural contour;
- (g) Cross drains, dikes, and water bars shall be constructed to control erosion; and
- 120(2)(f) (h) Road surfaces from which topsoil has been removed shall be covered with topsoil in accordance with 4.06.4(2), and the surface shall be revegetated in accordance with 4.15.

- (i) Road-surfacing materials that are incompatible with the post-mining land use and revegetation requirements shall be removed and disposed of in appropriate disposal areas as authorized by the Division.

4.04 SUPPORT FACILITIES

- 103(26) Support facilities required for, or used incidental to surface or underground mining activities, including, but not limited to, mine buildings, coal loading facilities at or near the mine site, coal storage facilities, equipment storage facilities, fan buildings, hoist buildings, preparation plants, sheds, shops, other buildings, railroad loops, spurs, sidings, surface conveyor systems, chutes, aerial tramways, or other transportation facilities shall be designed, constructed or reconstructed, and maintained, and the area restored, to:
- (1) Prevent, to the extent possible using the best technology currently available;
- 120(2)(x) (a) Damage to fish, wildlife, and related environmental values; and
- 120(2)(j)(II)(A) (b) Additional contributions of suspended solids to streamflow or runoff outside the permit area. Any such contributions shall not be in excess of limitations of State or Federal law.
- 120(2)(j) (2) Control and minimize diminution or degradation of water quality and quantity;
- 120(2)(d) (3) Control and minimize erosion and siltation;
- 120(2)(d) (4) Control and minimize air pollution;
- 111(1)(k) (5) Prevent damage to public or private property; and
- (6) Minimize damage, destruction, or disruption of services provided by oil, gas, and water wells; oil, gas, and coal slurry pipelines; railroads, electric and telephone lines; water and sewage lines which pass over, under, or through the permit area, unless otherwise approved by the owner of those facilities and the Division.

4.05 HYDROLOGIC BALANCE

4.05.1 General Requirements.

- 111(1)(m) (1) Surface and underground mining activities shall be planned and conducted to minimize disturbance of the prevailing hydrologic balance in both the mine plan and adjacent areas, and to prevent material damage to the hydrologic balance outside the permit area in order to prevent long-term adverse changes in the hydrologic balance.
- 120(2)(j) (2) Changes in water quality and quantity, in the depth to ground water, and in the location of surface water drainage channels shall be minimized so that the approved postmining land use of the permit area is not adversely affected.
- 120(2)(j)(II)(A) (3) In no case shall Federal and State water quality statutes, regulations, standards, or effluent limitations be violated.
- 120(2)(j) (4) Operations shall be conducted to minimize water pollution and, where necessary, treatment methods shall be used to control water pollution.
- (a) Each person who conducts surface or underground mining activities shall emphasize mining and reclamation practices that prevent or minimize water pollution. Changes in flow or drainage shall be used in preference to use of water treatment facilities.
- (b) Acceptable practices to control and minimize water pollution for surface coal mining operations include, but are not limited to:
- 120(2)(c) (i) Stabilizing disturbed areas through land shaping;
- 120(2)(j) (ii) Diverting runoff;
- 120(2)(d) (iii) Achieving quickly growing stands of temporary vegetation;
- (iv) Regulating channel velocity of water;
- (v) Lining drainage channels with rock or vegetation;
- (vi) Mulching;
- 120(2)(n) (vii) Selectively placing and sealing acid-forming and toxic-forming materials; and
- 120(2)(n) (viii) Selectively placing waste materials in backfill areas.

- (c) Additional practices to control and minimize water pollution for underground mining activities include, but are not limited to:
- 121(2)(i)(I)(C) (i) Sealing;
 - 121(2)(a) (ii) Controlling subsidence;
 - 121(2)(i)(I) (iii) Preventing acid mine drainage; and
 - 121(2)(l) (iv) Designing mines to prevent gravity drainage of water.
- 120(2)(j) (d) If the practices listed in 4.05.1(4)(b) and (c) are not adequate to meet the performance standard requirements, the person who conducts surface or underground mining activities shall operate and maintain the necessary water treatment facilities for as long as treatment is required under the requirements of this Rule.

4.05.2 Water Quality Standards and Effluent Limitations.

- 120(2)(j)(II)(A) (1) All surface drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted, shall be passed through a sedimentation pond, a series of sedimentation ponds, or other treatment facilities before leaving the permit area. Any discharge of water from underground workings to surface waters which does not meet the effluent limitations of 4.05.2 shall also be passed through a sedimentation pond, a series of sedimentation ponds, or other treatment facilities before leaving the permit area.
- 121(2)(i)(II)
- 120(2)(j) (2) Sedimentation ponds and other treatment facilities for surface drainage from the disturbed area shall be maintained until removal is authorized by the Division and the disturbed area has been revegetated and stabilized, the untreated drainage from the disturbed area ceases to contribute additional suspended solids above natural conditions, and the quality of untreated drainage from the disturbed area meets the State and Federal water quality standard requirements applicable after the sedimentation ponds and treatment facilities are removed, if any, for receiving streams. Sedimentation ponds and other treatment facilities for discharges from underground workings shall be maintained until either the discharge continuously meets the effluent limitations without treatment or until the discharge has permanently ceased. In no case shall the sedimentation ponds and treatment facilities be removed sooner

than 2 years after the last seeding within the affected contributing watershed. When the sedimentation pond is removed, the affected land shall be regraded and revegetated in accordance with 4.13, 4.14, and 4.15.1-4.15.4, unless the pond or other treatment facility has been approved by the Division for retention as compatible with the approved postmining land use in accordance with 4.16. If the Division approved retention, the sedimentation pond or other treatment facilities shall meet all the requirements for permanent impoundments of 4.05.9 and 4.05.17.

- (3) The Division may grant exemptions from these requirements only in accordance with the following:
 - (a) The person who conducts the surface or underground mining activities demonstrates that sedimentation ponds and other treatment facilities are not necessary for the drainage to meet the effluent limitations of 4.05.2 and the applicable State and Federal water quality requirements for downstream receiving waters; and
 - (b)
 - (i) For drainage from areas affected by surface coal mining operations, an exemption may be authorized only if the disturbed surface drainage area within the total disturbed surface area is small and there is no mixture of surface drainage with a discharge from underground mine workings; or
 - (ii) For drainage from underground mine workings, an exemption may be authorized only if there is no mixture of that drainage with drainage from surface areas.
- (4) For the purposes of 4.05.2, "disturbed area" shall not include those areas in which only diversion ditches, sedimentation ponds, other treatment facilities, or roads are installed in accordance with the performance standard requirements of this Rule and those areas in which the upstream area is not otherwise disturbed by the person who conducts the surface coal mining operations.
- 120(2)(j)(II)(B) (5) Sedimentation ponds or other treatment facilities required by 4.05.2 shall be constructed in accordance with 4.05.6 in appropriate locations before beginning any surface or underground mining activities in the drainage area to be affected.

- (6) Surface coal mining operations shall be conducted to meet the applicable State or Federal effluent limitations for all of the mixed drainage in cases where the sedimentation pond, series of sedimentation ponds or other treatment facilities is used so as to result in mixing of drainage from the disturbed areas with drainage from other areas not disturbed by current surface coal mining operations.
- (7) Discharges of water from areas disturbed by surface coal mining and reclamation operations shall be made in compliance with the Colorado Water Quality Control Act, 25-8-101 to 703, C.R.S. as amended and regulations promulgated pursuant thereto, and with the effluent limitations for coal mining promulgated by the United States Environmental Protection Agency set forth in 40 CFR Part 434, (July 1, 1993). 40 CFR Part 434 is hereby incorporated by reference as it exists on the date of these regulations. This rule does not include later amendments to or editions of the incorporated material. Certified copies of the 40 CFR Part 434 Rules are available at cost upon request from the Division and are available for inspection at the Division's Denver Office. The Division Director can provide further information regarding how the incorporated material may be obtained or examined..
- (8) Adequate facilities shall be installed, operated, and maintained for surface coal mining operations to treat any water discharged from the disturbed area or in the case of underground mining activity, discharged from the underground mine, so that it complies with all Federal and State laws and regulations and limitations of 4.05.2. If the pH of water to be discharged from the disturbed area or mine is less than 6.0, an automatic lime feeder or other automatic neutralization approved by the Division shall be installed, operated, and maintained. The Division may authorize the use of a manual system, if it finds that:
 - (a) Flow is infrequent and presents small and infrequent treatment requirements to meet applicable standards which do not require use of an automatic neutralization process; and
 - (b) Timely and consistent treatment is ensured.

4.05.3 Diversions and Conveyance of Overland Flow and Shallow Ground Water Flow, and Ephemeral Streams Draining a Watershed Less Than One Square Mile.

- 120(2)(j) (l) Overland flow, including flow through litter, and shallow ground water

121(2)(i)

flow from undisturbed areas, and flow in ephemeral streams draining a watershed less than one square mile above the diversion, may be diverted away from disturbed areas by means of temporary or permanent diversions, if required or approved by the Division as necessary to minimize erosion, to reduce the volume of water to be treated, and to prevent or remove water contact with acid-forming or toxic-forming materials. Diversions and collection drains that are used to transport water into water-treatment facilities and for all diversions of overland and shallow ground water flow and ephemeral streams draining a watershed of less than one square mile above the diversion must:

- (a) Comply with the other requirements of this rule;
 - (b) Be approved by the Division after making the findings required by Rule 4.05.18;
 - (c) Be designed, located, constructed, maintained and used to comply with applicable local, State and Federal statutes and regulations;
 - (d) Be designed, located, constructed, maintained and used so as not to increase the potential for downstream flooding, or otherwise endanger property or public safety;
 - (e) Be designed, located, constructed, maintained and used to minimize adverse impacts to the hydrologic balance, and to be stable; and,
 - (f) Not be constructed or operated to divert water into underground mines without the approval of the Division in accordance with Rule 4.05.16.
- (2) Temporary diversions shall be constructed to pass safely the peak runoff from a precipitation event with a 2-year, recurrence interval, or a larger event as specified by the Division for good cause shown.
 - (3) To protect fills and property and to avoid danger to public health and safety, permanent diversions shall be constructed to pass safely the peak runoff from a precipitation event with a 10-year, recurrent interval, or a larger event as specified by the Division for good cause shown. Permanent diversions shall be constructed with gently sloping banks that are stabilized by vegetation. Asphalt, concrete, or other similar linings

shall be used only when approved by the Division to prevent seepage or to provide stability.

- (4) Diversions shall be designed, constructed, and maintained in a manner which prevents additional contributions of suspended solids to streamflow and to runoff outside the permit area, to the extent possible using the best technology currently available. Appropriate sediment control measures for these diversions may include, but not be limited to, maintenance of appropriate gradients, channel lining, revegetation, roughness structures, and detention basins.
- 120(2)(u) (5) When constructed, diversions shall be designed and located in a manner that minimizes the potential for landslides. No diversion shall be constructed on existing landslides, unless approved by the Division.
- (6) When no longer needed, each temporary diversion shall be removed and the affected land regraded, topsoiled and revegetated in accordance with 4.06, 4.14, and 4.15. Before diversions are removed, downstream treatment facilities previously protected by the diversion shall be modified or removed, as necessary, to prevent overtopping or failure of the facilities. Removal of any sedimentation pond will be accomplished in accordance with 4.05.6(12). If the temporary diversion were for an ephemeral stream, the channel shall be reestablished to functionally blend with the undisturbed drainage above and below the area to be reclaimed.
- (7) Diversion design shall incorporate the following:
 - (a) Channel linings, including channel riprap, shall be designed using standard engineering practices to pass safely the design velocities.
 - (b) Freeboard shall be no less than 0.3 feet. Protection shall be provided for transition of flows and for critical areas such as swales and curves. Where the area protected is a critical area as determined by the Division, the design freeboard may be increased.
 - (c) Energy dissipators shall be installed when necessary at discharge points, where diversions intersect with natural streams and exit velocity of the diversion flow is greater than that of the receiving stream.

- (d) Excess excavated material not necessary for diversion channel geometry or regrading of the channel shall be disposed of in a manner approved by the Division.
- (e) Topsoil shall be handled in compliance with 4.06.

4.05.4 Stream Channel Diversions (Relocation of Streams) and Stream Channel Reconstruction.

- 120(2)(j)
121(2)(i) (1) Diversions of flow from ephemeral streams draining a watershed of at least one square mile above the diversion, intermittent, or perennial streams within the permit area must:
 - (a) Comply with the other requirements of this rule;
 - (b) Comply with the requirements of rules 4.05.3(1)(b) through (f).
- (2) When streamflow is allowed to be diverted, the design and construction shall be certified by a qualified registered professional engineer as meeting all applicable performance standards and design criteria. The design, construction, and removal of stream channel diversions shall be in accordance with the following:
 - (a) The longitudinal profile of the stream, the channel, and the floodplain shall be designed and constructed to remain stable and to prevent, to the extent possible, using the best technology currently available, additional contributions of suspended solids to streamflow or to runoff outside the permit area. These contributions shall not be in excess of requirements of State or Federal law. Erosion control structures such as channel lining structures, retention basins, and artificial channel roughness structures shall be used in diversions only when approved by the Division as being necessary to control erosion. These structures shall be approved for permanent diversions only where they are stable and will require infrequent maintenance.
 - (b) The combination channel, bank, and floodplain configurations shall be adequate to pass safely the peak runoff of a 10-year, 24-hour precipitation event for temporary diversions, a 100-year, 24-hour precipitation event for permanent diversions, or larger event specified by the Division. However, the capacity of the channel itself shall be at least equal to the capacity of the unmodified

hydraulic stream channel immediately upstream and downstream of the diversion.

- (3) When no longer needed to achieve the purpose for which they were authorized, all temporary stream channel diversions shall be removed and the affected land regraded, topsoiled, and revegetated, in accordance with 4.06, 4.14, and 4.15. At the time diversions are removed, downstream treatment facilities previously protected by the diversion shall be modified or removed to prevent overtopping or failure of the facilities. This requirement shall not relieve the person who conducts the surface or underground mining activities from maintenance of a water treatment facility otherwise required under this Rule.
- (4) Permanent stream channel diversions may be constructed with the approval of the Division if such diversions are consistent with applicable state law, would not diminish downstream water rights and meet the requirements of 4.05.4. When permanent diversions are constructed or stream channels restored after temporary diversions, the drainage design shall emphasize channel and floodplain dimensions that approximate the premining configuration and that will blend with the undisturbed drainage above and below the area to be reclaimed. The average stream gradient shall be maintained with a stable longitudinal profile and the channel and floodplain shall be designed and constructed to the extent possible, using the best technology currently available to:
 - (a) Establish or restore the channel to approximate its natural meandering pattern with a geomorphically acceptable gradient as approved by the Division;
 - (b) Allow the drainage channel to remain in dynamic equilibrium with the drainage basin system without the use of artificial structural controls unless approved by the Division;
 - (c) Establish or restore the stream to include a diversity of aquatic habitats (generally a series of riffles and pools) where appropriate, that approximates the premining characteristics; and
 - (d) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks of the stream in accordance with the requirements of 4.15.

4.05.5 Sediment Control Measures.

- 120(2)(j)(II)
121(2)(i)(II)
- (1) Appropriate sediment control measures shall be designed, constructed, and maintained using the best technology currently available to:
 - (a) Prevent, to the extent possible, additional contributions of sediment to streamflow or to runoff outside the permit area;
 - (b) Meet the applicable State or Federal effluent limitations; and
 - (c) Minimize erosion as necessary to provide protection for topsoil, vegetation, fish and wildlife, and the hydrologic balance.
 - (2) The sedimentation storage capacity of practices in and downstream from the disturbed area shall reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of proper mining and reclamation methods and sediment control practices, singly or in combination. Sediment control methods include but are not limited to:
 - (a) Disturbing the smallest practicable area at any one time during the mining operation through progressive backfilling, grading, and prompt revegetation as required in 4.15;
 - (b) Stabilizing the backfill material to promote a reduction in the rate and volume of runoff, in accordance with the requirements of 4.14;
 - (c) Retaining sediment within disturbed areas;
 - (d) Diverting runoff away from disturbed areas;
 - (e) Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;
 - (f) Using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds, and other measures that reduce overland flow velocity, reduce runoff volume, or trap sediment;

- (g) Treating with chemicals, provided that such treatment does not adversely affect fish and wildlife and related environmental values; and
- (h) Treating mine drainage in underground sumps.

4.05.6 Sedimentation Ponds.

120(2)(j)(II)
121(2)(i)(II)

- (1) General Requirements. Sedimentation ponds and other treatment facilities shall be used individually or in series and shall:
 - (a) Be constructed before any disturbance of the undisturbed area to be drained into the pond and prior to any discharge of water to surface waters from underground mine workings; and
 - (b) Be located as near as practicable to the disturbed area and out of perennial streams, unless approved by the Division.
- (2) Sedimentation ponds and other treatment facilities shall be designed, constructed and maintained in compliance with 4.05.6 and 4.05.9.
- (3) Sedimentation ponds and other treatment facilities shall be designed, constructed and maintained to:
 - (a) Provide adequate capacity to contain or treat the runoff or inflow entering the pond as a result of 10-year, 24-hour precipitation event, any additional storage resulting from the inflow from any underground mine, and the inflow from any water to be pumped from the pit into the sedimentation pond to effect compliance with 4.05.2(7). In determining the runoff volume, the characteristics of the mine site and reclamation procedures, and on-site sediment control practices shall be considered. Runoff diverted from the undisturbed drainage areas and not passed through the sedimentation pond, in accordance with 4.05.3 and 4.05.4, need not be considered in sedimentation pond design;
 - (b) Provide for an adequate sediment storage volume and periodic sediment removal to effect compliance with 4.05.2(7); and,
 - (c) Provide a nonclogging dewatering device or conduit spillway to remove water storage resulting from inflow. The dewatering device shall not be located at a lower elevation than the maximum

sediment storage volume. Dewatering shall be achieved in accordance with applicable State law.

- (4) All sedimentation pond and other treatment facility spillway systems shall comply with the requirements of 4.05.9(2).
- (5) All supporting calculations, documents and drawings used to establish the requirements of 4.05.6 and 4.05.9, shall be included in the permit application, and any revisions to the permit application.
- (6) Any person who conducts surface or underground mining activities shall design, construct, and maintain sedimentation ponds to prevent short-circuiting to the extent possible.
- (7) Sedimentation ponds or other treatment facilities shall not be removed until the disturbed area is reclaimed and it is demonstrated to the Division that the requirements of 4.05.2(2) are met. For sedimentation ponds or other treatment facilities proposed to remain as permanent structures, it must be demonstrated to the Division that the requirements of 4.05.9 are met.

4.05.7 Discharge Structures.

120(2)(d)
120(2)(j)(V)
121(2)(i)(II)

Discharge from sedimentation ponds, other treatment facilities, permanent and temporary impoundments, coal processing waste dams and embankments, and diversions shall be controlled by energy dissipators, riprap channels and other means or devices, where necessary, to reduce erosion, to prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance. Discharge structures shall be designed according to standard engineering design procedures.

4.05.8 Acid-forming and Toxic-forming Spoil.

120(2)(j)(I)
1121(2)(i)(I)

Drainage from acid-forming and toxic-forming spoil or underground development waste into ground or surface water shall be avoided by:

- (1) Identifying, burying, and treating, where necessary, spoil and waste which may be detrimental to vegetation, public health or safety or may adversely affect water quality if not treated or buried.
- (2) Preventing water coming into contact with acid-forming and toxic-forming underground development waste or spoil in accordance

with 4.14.3 and other measures as required by the Division where such contact may adversely impact aquifers or surface water; and

- 120(2)(n)
121(2)(d)
- (3) Burying or otherwise treating all acid-forming or toxic-forming spoil or underground development waste within 30 days after it is first exposed on the mine site, or within a lesser period required by the Division. Temporary storage of the spoil or waste may be approved by the Division upon finding that burial or treatment within 30 days is not feasible and will not result in any material risk of water pollution or other environmental damage. Storage shall be limited to the period until burial or treatment first becomes feasible. Acid-forming or toxic-forming spoil or underground development waste to be stored shall be protected from erosion, shall minimize impacts to surface water and, when deemed necessary by the Division, shall be placed on impermeable material.

4.05.9 Impoundments.

- (1) The design, construction and maintenance of all impoundments, including sedimentation ponds, or other treatment facilities shall be in compliance with 4.05.9. Compliance with 4.05.9 shall not relieve the person from compliance with all applicable Federal and State water quality standards.
- (2) All impoundment spillway systems shall provide for either a combination of principal and emergency spillways, or a single spillway configured as required by 4.05.9(2)(a), designed to safely pass the applicable design precipitation event specified in 4.05.9(2)(c), plus inflow from any underground mine water or water pumped from the pit. Appropriate barriers shall be provided to control piping along conduits that extend through the embankment, unless otherwise approved by the Division. Emergency spillway grades and allowable velocities shall be approved by the Division. Impoundment spillways shall meet the following requirements, as applicable.
- (a) Impoundments may be designed to provide for a single open-channel spillway, in lieu of a combination of principal and emergency spillways, if the spillway:
- (i) Is of non-erodible construction and designed to carry sustained flows; or,

- (ii) Is earth-lined or grass-lined and designed to carry short-term infrequent flows at non- erosive velocities where sustained flows are not expected.
- (b) If the impoundment is designed and constructed with a combination of a principal and emergency spillways, there shall be no out-flow through the emergency spillway during the passage of runoff resulting from the 10-year 24-hour precipitation event, regardless of the volume of water and sediment directed to the impoundment from any underground workings or surface pit.
- (c) Except as specified in 4.05.9(2)(d), 4.05.9(2)(e)(i), and 4.05.9(2)(e)(ii) the applicable design precipitation event used to size impoundment spillway systems shall be:
 - (i) The 100-year, 24-hour precipitation event, or a larger event specified by the division, for good cause shown, for ponds which meet the size or other criteria of 4.05.9(4); or,
 - (ii) the 25-year, 24-hour precipitation event, or a larger event specified by the Division, for good cause shown, for ponds not meeting the size or other criteria of 4.05.9(4).
- (d) Impoundments meeting the Class B or Class C criteria for dams in the U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October, 1985), “Earth Dams and Reservoirs” (TR60), shall comply with the “Minimum Emergency Spillway Hydrologic Criteria” table in TR60, or greater event as specified by the Division. TR60 is hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
- (e) The Division may approve a temporary impoundment that relies primarily on storage to control the runoff from the design event specified in 4.05.9(2)(c), when it is demonstrated by the operator and certified by a qualified registered professional engineer, that the temporary impoundment will safely control the design precipitation event, the water from which shall be safely removed in accordance with current, prudent, engineering practices. Such an impoundment shall be located where failure would not be expected to cause loss of life or serious property damage, except where:

- (i) In the case of a temporary impoundment that meets the size or other criteria of 4.05.9(4), or meets the Class B or Class C criteria for dams in U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October, 1985), “Earth Dams and Reservoirs” (TR60), it is designed to control the probable maximum precipitation of a 24-hour event, or greater event specified by the Division, for good cause shown. TR60 is hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9); or,
 - (ii) In the case of a temporary impoundment that does not meet the size or other criteria of 4.05.9(4), it is designed to control the 100-year 24-hour event, or greater event specified by the Division, for good cause shown.
- (3) Impoundments with a capacity in excess of 100 acre-feet, or having a dam or embankment in excess of 10 feet in vertical height, from the bottom of the channel to the bottom of the spillway, or having a surface area at high waterline in excess of 20 acres shall also be designed and constructed in accordance with C.R.S. 37-87-105. C.R.S. 37-87-105 is hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
- (4) Where an impoundment meets the size or other criteria of 30 CFR 77.216(a) (has an embankment that is greater than 20 feet in height, as measured from the upstream toe of the embankment to the crest of the emergency spillway; or has an embankment that is greater than 5 feet and has a storage volume of 20 acre feet or more; or any impounding structures determined by the District Manager of MSHA to present a hazard to coal miners), then the permittee shall meet the criteria of 30 CFR 77.216(a). 30 CFR 77.216(a) is hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(a).
- (5) Any person who impounds water for a beneficial use for or during surface coal mining and reclamation operations shall meet all applicable State laws.
- (6) All impoundment embankments, foundations and abutments shall be stable during all phases of construction and operation and shall be

designed based on accurate information on the foundation conditions. For impoundments meeting the size or other criteria of 30 CFR 77.216(a), or meeting the Class B or Class C criteria for dams in U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60), October 1985, "Earth Dams and Reservoirs" (TR-60), or having embankments in excess of 10 feet in vertical height measured from the bottom of the channel to the bottom of the spillway at the centerline of the dam, or a surface area of 20 acres, a foundation investigation, and any necessary laboratory testing of foundation material, shall be performed to determine the design requirements for foundation stability. 30 CFR 77.216(a) and TR60 are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).

- (7) The following requirements shall apply for all impoundment embankments:
 - (a) All vegetative and organic materials shall be removed and foundations excavated and prepared to resist failure. All foundation base areas shall be sloped no steeper than 1H:1V, and the entire foundation base shall be scarified. Cutoff trenches shall be installed if necessary to ensure stability.
 - (b) Any fill material shall be free of sod, large roots, other large vegetation matter, and frozen soil, and in no case shall coal-processing waste be used in embankment construction.
 - (c) The placing and spreading of any fill material shall be started at the lowest point of the foundation. The fill shall be brought up in horizontal layers of such thickness as is required to facilitate compaction. Compaction shall be conducted as specified in the design approved by the Division.
 - (d) The minimum elevation of the top of the settled embankment shall be 1.0 foot above the water surface in the pond with the emergency spillway flowing at design depth. For embankments subject to settlement, this 1.0 foot minimum elevation requirement shall apply at all times, including the period after settlement.
 - (e) The combined upstream and downstream side slopes of the settled embankment shall not be steeper than 5h:1v, with neither slope

steeper than 2h:1v. Slopes shall be designed to be stable in all cases, even if flatter side slopes are required. The combined side slopes may be steeper than 5H:1V if the applicant demonstrates, through appropriate analysis, that the embankment is stable.

- (8)
 - (a) Any impoundment meeting the size or other criteria of 30 CFR 77.216(a), or meeting the Class B or Class C criteria for dams in U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October, 1985), “Earth Dams and Reservoirs” (TR60), or located where failure would be expected to cause loss of life or serious property damage shall have a minimum safety factor of 1.5 for a normal pool with steady state seepage saturation conditions, and a seismic safety factor of at least 1.2, or a higher safety factor as designated by the Division to ensure stability. 30 CFR 77.216(a) and TR60 are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
 - (b) Any impoundment not meeting the size or other criteria of 30 CFR 77.216(a), and located where failure would not be expected to cause loss of life or serious property damage, shall have a minimum static safety factor of 1.3 for a normal pool with steady state seepage saturation conditions. 30 CFR 77.216(a) is hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).
- (9) Faces of all embankments and the surrounding areas shall be vegetated or stabilized by other means to protect against erosion. Where water will be impounded, the upstream face of the embankment shall be riprapped or otherwise stabilized, in accordance with accepted design practices if necessary to protect against erosion from water or wind action, or sudden drawdown. If the chosen stabilization method is vegetation, seeding will occur in accordance with the approved seeding plan.
- (10) All impoundments shall be designed, constructed, and maintained with adequate freeboard to prevent overtopping by waves or by sudden increases in volume. Impoundments meeting the Class B or Class C criteria for dams in U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October, 1985), “Earth Dams and Reservoirs” (TR60), shall comply with the freeboard hydrograph criteria in the “Minimum Emergency Spillway Hydrologic

Criteria” in TR60. TR60 is hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).

- (11) All dams and embankments shall be routinely maintained during the mining operations. Vegetation growth shall be cut where necessary to facilitate inspection and repairs. Ditches and spillways shall be cleaned. Any combustible material present on the surface, other than material such as mulch or dry vegetation used for surface stability, shall be removed and all other appropriate maintenance procedures followed.
- (12) The vertical portion of any remaining highwall shall be located far enough below the low-water line, along the full extent of the highwall, to provide adequate safety and access for the proposed water users.
- (13) Permanent Impoundments.

120(2)(n) Permanent impoundments for beneficial use of stored water may only be authorized in accordance with applicable State law and upon the basis of the following demonstration:

120(2)(h)(III) (a) The quality of the impounded water shall be suitable on a permanent basis for its intended use, shall meet applicable state and federal water quality standards and discharge of water from the impoundment shall meet applicable State and Federal effluent limitations and shall not degrade the quality of receiving water below applicable stream standards;

120(2)(h)(IV) (b) The level of water shall be sufficiently stable, and the configuration of the pond shall be adequate, to support the intended use;

120(2)(h)(V) (c) Adequate safety and access to impounded water shall be provided for proposed water users;

120(2)(h)(VI) (d) Water impoundments shall not result in the diminution of the quality or quantity of water available to water right holders for agricultural, industrial, recreational, or domestic uses except in accordance with applicable state law;

120(2)(h)(I) (e) The size of the impoundment shall be adequate for its intended purposes;

- (f) The impoundment shall be suitable for the approved post-mining land use.
- (14) All impoundments shall be inspected by a qualified registered professional engineer or other qualified professional specialist under the direction of a professional engineer. The professional engineer or specialist shall be experienced in the construction of impoundments.
- (a) Such inspections shall be made regularly during construction, upon completion of construction, and at least yearly until removal of the structure or release of the performance bond.
 - (b) The qualified registered professional engineer shall, promptly after each inspection required by 4.05.9(14), provide to the Division, a certified report that the impoundment has been constructed and/or maintained as designed, and in accordance with the approved plan and the applicable regulations.
 - (c) A copy of each certified report shall also be retained at or near the mine site.
- (15) Certified inspection reports required by 4.05.9(14) for all impoundments shall include discussion of:
- (a) Any appearance of erosion, instability, structural weakness or other hazardous conditions;
 - (b) Existing and required monitoring procedures and instrumentation;
 - (c) The depth and elevation of any impounded waters at the time of the certified report;
 - (d) Existing storage capacity of the impoundment; and
 - (e) Any other aspects of the structure affecting stability, or requiring maintenance.
- (16) Plans for an enlargement, reduction in size, reconstruction, or other modification of dams or impoundments shall be submitted to the Division and shall comply with the requirements of 4.05.9. Except where a modification is required to eliminate an emergency condition

constituting a hazard to public health, safety or environment, the Division shall approve the plans before modification begins.

- (17) All impoundments shall be examined at least quarterly, by a qualified person designated by the operator, for appearance of structural weakness and other hazardous conditions. The reports shall be retained at or near the mine site, and a copy of the report shall be submitted to the Division on a quarterly basis, or other approved submittal frequency.
- (18) The Division may waive the requirements of 4.05.9(17) for certain impoundments if the permittee adequately demonstrates, in writing, that failure of the impoundment(s) will not create a threat to public health and safety or threaten significant environmental harm. The following provisions apply to the review and approval of any waiver from the requirements of Rule 4.05.9(17).
 - (a) The waiver must be approved by the Division, and may only be applied to impoundments which are not the primary sediment control structure for a particular area; are constructed in reclaimed areas of the mine to enhance the approved postmining land use; which are completely incised, or which have a storage capacity no greater than two-acre feet and an embankment no greater than five feet in height, as measured vertically from the upstream toe of the embankment to the bottom of the spillway.
 - (b) The written safety demonstration must be submitted by a professional engineer, as part of the permit application.
 - (c) If a waiver is approved, then the waiver shall include a provision that the yearly inspection referenced in 4.05.9(14), may be conducted by a qualified person other than, and not under the direction of, a professional engineer.
 - (d) Prior to approving a waiver, the Division must conduct a field inspection to verify the adequacy of the safety demonstration.
 - (e) The Division shall also periodically inspect the impoundment(s) for which any waiver is approved, and areas downstream from the impoundment(s), to verify that the safety demonstration remains adequate. The Division may terminate an approved waiver, for good cause, if the condition of the impoundment(s), or conditions

downstream from the impoundment(s), is such that failure of the impoundment(s) will create a threat to public health and safety or threaten significant environmental harm.

- (19) If any examination or inspection indicates that a potential hazard exists, the person who examined or inspected the impoundment shall promptly inform the Division of the finding and of the emergency procedures formulated for public protection and remedial action. If adequate procedures cannot be formulated or implemented, the Division shall be notified immediately. The Division shall then notify the appropriate agencies that other emergency procedures are required to protect the public.
- (20) For an impoundment with a capacity in excess of 100 acre-feet, or with a dam or embankment in excess of 10 feet in vertical height, from the bottom of the channel to the bottom of the spillway, or with a surface area at high waterline in excess of 20 acres, examination shall also be in accordance with the applicable requirements of the State Engineer. The operator shall promptly submit to the Division, proof of compliance with this requirement.
- (21) For an impoundment meeting the size or the other criteria of 4.05.9(4), or meeting the Class B or Class C criteria for dams in U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 60 (210-VI-TR60, October, 1985), "Earth Dams and Reservoirs" (TR60), the examination shall also be in accordance with 30 CFR 77.216-3. The examination report shall be maintained at or near the mine site. TR60 and 30 CFR 77.216-3 are hereby incorporated by reference, and can be viewed and copies can be obtained at the Division as set forth in Rule 1.01(9).

4.05.10 Underground Mine Entry and Access Discharges.

- 121(2)(l)
- (1) Surface entries and accesses to underground workings, including adits and slopes, shall be located, designed, constructed, and utilized to prevent or control gravity discharge of water from the mine.
 - (2) Gravity discharge of water from an underground mine, other than drift mine subject to 4.05.10, may be allowed by the Division, if it is demonstrated that:

- (a) (i) The discharge, without treatment, satisfies the water effluent limitations of 4.05.2 and all applicable State and Federal water quality standards; and
 - (ii) That discharge will result in changes in the prevailing hydrologic balance that are minimal and approved post-mining land uses will not be adversely affected; or
 - (b) (i) The discharge is conveyed to a treatment facility in the permit area in accordance with 4.05.2(1);
 - (ii) All water from the underground mine discharged from the treatment facility meets the effluent limitations of 4.05.2 and all other applicable State and Federal statutes and regulations; and
 - (iii) Consistent maintenance of the treatment facility will occur throughout the anticipated period of gravity discharge.
- (3) Notwithstanding anything to the contrary in 4.05.10(1) and (2), for a drift mine first used after the implementation of local, State, or Federal lands program and located in acid-producing or iron-producing coal seams, surface entries and accesses shall be located in such a manner as to prevent any gravity discharge from the mine.

4.05.11 Ground Water Protection.

- 120(2)(c)
120(2)(j)
- (1) Backfilled materials shall be placed so as to minimize contamination of ground water systems with acid, toxic, or otherwise harmful mine drainage, to minimize adverse effects of mining on ground water systems outside the permit area, and to support approved postmining land uses.
 - (2) Pits, cuts, and other mine excavation or disturbances shall be located, designed, constructed, and utilized to control the effect of mine drainage, in such a manner as to prevent or control discharge of acid, toxic, or otherwise harmful mine drainage waters into ground water systems and to prevent adverse impacts on such ground water systems or on approved postmining land uses.

4.05.12 Protection of Ground Water Recharge Capacity.

120(2)(j)(IV) Surface coal mining operations shall be conducted in a manner that facilitates reclamation which will restore approximate premining recharge capacity, through restoration of the capability of the reclaimed areas as a whole, excluding coal processing waste and underground development waste disposal areas and fills, to transmit water to the ground water system. The recharge capacity shall be restored to a condition which:

- (1) Supports the approved postmining land use;
- (2) Minimizes disturbances to the prevailing hydrologic balance in the permit area and in adjacent areas; and
- (3) Provides a rate of recharge that approximates the premining recharge rate.

4.05.13 Surface and Ground Water Monitoring.

- 122(2), 122(3)
- (1) Ground Water.
 - (a) Ground water levels infiltration rates, subsurface flow and storage characteristics, and the quality of ground water shall be monitored in a manner approved by the Division, including, but not limited to, specific points of compliance, after consultation with the Division of Water Resources to determine:
 - (i) The effects of surface or underground mining activities on the quantity and quality of water in ground water systems in the permit area and adjacent areas;
 - (ii) The effect of surface mining activities on the recharge capacity of reclaimed lands; and
 - (iii) Compliance with applicable ground water standards at established points of compliance.
 - (b) One or more points of compliance shall be established for any coal operation which, in the judgment of the Division, has the potential to negatively impact the quality of groundwater for which quality standards have been established by the Water Quality Control Commission. These points of compliance shall be monitoring

locations in addition to any other monitoring points required by the Division.

- (i) The criteria for establishing points of compliance for a specific coal operation are:
 - (A) Points of compliance shall be established for all potentially impacted groundwater for which quality standards have been established by the Water Quality Control Commission.
 - (B) The points of compliance shall be located down hydraulic gradient from the affected area, and shall be located within the area permitted for the operation, or other appropriate location as agreed by the Division and the permittee.
 - (C) The points of compliance shall be located where acceptable modeling or analyses indicate that water quality monitoring of the aquifer is feasible and such monitoring may be reasonably expected to detect evidence of any subsequent violation of applicable ground water standards by the operation.
- (ii) Considerations in establishing points of compliance shall also include, but not necessarily be limited to, protection of human health and the environment, potential for vertical migration of contamination, the number, quantity and nature of the contaminants present, technological feasibility, economic reasonableness, up gradient levels of contamination, geohydrological data and features, and other environmental data or relevant information as determined by the Division.
- (iii) When feasible, additional monitoring points shall be located between the affected area and the point of compliance to allow for timely detection and remediation of contaminant levels which may result in exceedances at the point of compliance. Monitoring points established under 4.05.13(1)(c) may be utilized for this purpose, when appropriate.

- (c) When surface or underground mining activities may effect ground water systems on or off the permit area, ground water levels and ground water quality shall be periodically monitored. Monitoring shall include measurements from a sufficient number of wells or other ground water sources as approved by the Division and mineralogical and chemical analyses of aquifer, overburden, and spoil that are adequate to reflect changes in ground water quantity and quality resulting from those activities. Monitoring shall be adequate to plan for modification of surface or underground mining activities, if necessary to minimize disturbance of the prevailing hydrologic balance.
 - (i) The person who conducts surface or underground coal mining activities shall promptly notify the Division of analytical results of a ground water sample analysis which indicates an exceedance of a permit condition or applicable standard has occurred. These analytical results shall be forwarded to the Division concurrently with a written notification.
 - (ii) When exceedances from applicable ground water standards occur, the person who conducts surface or underground coal mining activities must take appropriate mitigative measures as required in section 2.05.6(3)(b)(i) and (ii).
 - (iii) The person who conducts surface or underground coal mining activities shall immediately notify any person whose health and safety is in imminent danger as a result of the exceedance.
- (d) As specified and approved by the Division, the person who conducts surface or underground mining activities shall conduct additional hydrologic tests, including drilling, infiltration tests and aquifer tests and shall submit the results to the Division to demonstrate compliance with 4.05.11-4.05.13.
- (e) All piezometers, observation wells, monitoring wells and other observation points used to fulfill the requirements of 2.04, 2.05 and 4.05, shall be drilled, cased and completed in a manner designed to achieve the isolation of the aquifer of interest, the integrity of the well or piezometer, and the accuracy of all monitoring data collected.

- (i) All equipment, including wells, piezometers, structures, instruments and other devices used to measure, observe and sample the quality and elevation of ground water in accordance with the approved monitoring plan, shall be properly maintained and operated so that the data collected accurately represents the aquifer or stratum being observed.
- (ii) All ground water monitoring equipment, structures and devices shall be removed in accordance with 4.07, when no longer required.

(2) Surface Water

122(2)

- (a) Surface water monitoring shall be conducted in accordance with the monitoring program submitted under 2.05.6(3)(b)(iv) and approved by the Division. The Division in consultation with the Division of Water Resources, shall determine the nature of data, frequency of collection, and reporting requirements. Monitoring shall:
 - (i) Be adequate to measure accurately and record water quantity and quality of the discharges from the permit area;
 - (ii) Result in the person who conducts the surface or underground mining activities notifying the Division within 5 days after analytical results of the sample collections indicate that noncompliance with a permit condition or applicable standard has occurred. Where a National Pollutant Discharge Elimination System (NPDES) permit effluent limitation noncompliance has occurred, the person who conducts surface or underground mining activities shall forward the analytic results concurrently with the written notice of noncompliance; and
 - (iii) Result in reports to the Division, to include analytical results from each sample taken during the quarter. Any sample results which indicate a permit violation will be reported immediately to the Division. In those cases where the discharge for which water monitoring reports are required is also subject to regulation by a NPDES permit issued under the Clean Water Act of 1977(30 U.S.C. Sec. 1251-1378)

and where such permit includes provisions for equivalent reporting requirements and requires filing of the water monitoring reports within 90 days or less of sample collection, the following alternative procedure shall be used.

The person who conducts the surface or underground mining activities shall submit to the Division on the same time schedule as required by the NPDES permit or within 90 days following sample collection, whichever is earlier, either:

- (A) A copy of the completed reporting form filed to meet NPDES permit requirements; or
- (B) A letter identifying the State or Federal government official with whom the reporting form was filed to meet NPDES permit requirements and the date of filing.

(3) Monitoring Liability Period

- (a) Equipment, structures, and other devices necessary to measure and sample accurately the quality and quantity of surface and ground water shall be properly installed, maintained, and operated and shall be removed when no longer required.
- (b) After disturbed areas have been regraded and stabilized according to this rule, and after cessation of use of underground mine workings, the person who conducts surface or underground mining activities shall continue to monitor surface water and ground water quality and quantity in accordance with the approved plan. Data from this monitoring may be used to demonstrate that these qualities and quantities of runoff without treatment are consistent with the requirements of 4.05; that the operation has minimized disturbance to the hydrologic balance in the permit and adjacent areas; that the operation has prevented material damage to the hydrologic balance outside the permit area; and that the water rights of other users have been protected or replaced. Based on this demonstration, the operator may request reduction or deletion of the monitoring program or control system.

(4) Monitoring Report Requirements

- (a) The data collected, including analytical results, shall be tabulated on a site by site basis and kept on file at the mine office for inspection by the Division. These data shall be submitted to the Division as required in 4.05.13(4)(c).
- (b) Ground water and surface water data collection shall be based upon a water year (October 1 through September 30), unless otherwise approved by the Division.
- (c) A hydrologic report shall be submitted to the Division annually with the date of submittal determined in consultation with the permittee. The annual hydrologic report shall contain at a minimum:
 - (i) Water quantity data obtained from each monitoring site during the water year;
 - (ii) Water quality data obtained from each monitoring site during the water year; and
 - (iii) If required by the Division, a written interpretation of the data and identification of mining related impacts to the hydrologic balance.

4.05.14 Transfer of Wells.

An exploratory or monitoring well may only be transferred by the person who conducts surface or underground mining activities for further use as a water well in accordance with the following requirements:

- (1) A well permit must be obtained from the State Engineer in accordance with C.R.S. 37-90-138, 37-90-137 or 37-92-602 prior to any beneficial use of water from the transferred well.
- (2) Subsequently, the operator and the surface owner of the lands where the well is to be located shall jointly submit a written request for approval of transfer to the Division.
- (3) Upon an approved transfer of a well by the State Engineer and the Division in accordance with 4.05.14(1) and (2) above, the transferee shall:

- (a) Assume primary liability for damages to persons or property from the well in compliance with 4.05.15;
 - (b) Plug the well when necessary, but in no case later than abandonment of the well; and
 - (c) Assume primary responsibility for compliance with 4.07.1, 4.07.2 and 4.07.3 with respect to the well.
- (4) Upon an approved transfer of a well, the transferor shall be secondarily liable for the transferee's obligations under 4.05.14(2) above until release of the bond.

4.05.15 Water Rights and Replacement.

111(1)(m) Any person who conducts surface or underground mining activities shall replace the water supply of any owner of a vested water right which is proximately injured as a result of the mining activities in a manner consistent with applicable State law.

4.05.16 Discharge of Water into an Underground Mine.

Water from the surface or from an underground mine shall not be diverted or otherwise discharged into underground mine workings, unless the person who conducts the surface or underground mining activities demonstrates to the Division that such diversion or discharges will:

- 120(2)(1)
- (1) Abate water pollution or otherwise eliminate public hazards resulting from surface or underground mining activities; and
 - (2) Be discharged as a controlled and identifiable flow, meeting the effluent limitations of 4.05.2 for pH and total suspended solids, except that the pH and total suspended solid limitations may be exceeded, if approved by the Division, when such flow consists of:
 - (a) Coal processing waste;
 - (b) Fly ash from a coal-fired facility;
 - (c) Sludge from an acid mine drainage treatment facility;
 - (d) Flue gas desulfurization sludge;

- (e) Inert materials used for stabilizing underground mines; or
 - (f) Underground mine development wastes.
- (3) In the case of underground mining activities, continue as a controlled and identifiable flow and is ultimately treated by an existing treatment facility;
 - (4) In any event, the discharge from an underground mine to surface waters will not cause, result in or contribute to a violation of applicable water quality standards or effluent limitations;
 - (5) Minimize disturbance to the hydrologic balance, prevent material damage outside the permit area, and does not injure vested water rights; and
 - (6) Meets with the approval of the Mine Safety and Health Administration.

4.05.17 Postmining and Rehabilitation of Sedimentation Ponds, Diversions, Impoundments, and Treatment Facilities.

120(2)(j)(III) Before abandoning the permit area, the person who conducts the surface or underground mining activities shall renovate all permanent sedimentation ponds, diversions, impoundments, and treatment facilities to meet criteria specified in the detailed design plan for the permanent structures and impoundments.

4.05.18 Stream Buffer Zones.

120(2)(j)
120(2)(x) (1) No land within 100 feet, or greater distance if required by the Division, of a perennial stream, an intermittent stream, or an ephemeral stream with a drainage area greater than one square mile, shall be disturbed by surface and underground coal mining operations unless the Division specifically authorizes surface or underground mining operations closer to, or through such a stream upon finding:

- (a) That surface coal mining operations will not cause or contribute to the violation of applicable water quality standards;

- (b) That during and after mining, the water quantity and quality, and other environmental resources of the stream shall not be adversely affected; and
 - (c) If there will be a temporary or permanent stream-channel diversion, the diversion will comply with 4.05.3 and 4.05.4.
- (2) The area not to be disturbed shall be designated a stream buffer zone and marked as specified in 4.02.

4.06 TOPSOIL

4.06.1 General Requirements.

- 120(2)(e)
121(2)(j)
- (1) Before disturbance of areas affected by surface coal mining operations, topsoil and subsoils to be saved under 4.06.2 shall be separately removed and segregated from other material.
 - (2) After removal, topsoil shall be immediately redistributed in accordance with 4.06.4, or stockpiled pending redistribution in accordance with 4.06.3.

4.06.2 Removal.

- (1) **Timing.** Topsoil shall be removed from areas to be affected by surface coal mining operations after vegetation cover that would interfere with the use of the topsoil is cleared but before any drilling, blasting, mining, or any other surface disturbance. Vegetation cover shall be cleared only from areas to be affected, to the extent necessary to minimize the removal of topsoil along with large vegetation material. Vegetation cover may not be required to be cleared upon demonstration to and approval by the Division that such vegetation cover is necessary or desirable to ensure soil productivity consistent with the postmining land use.
- (2) (a) **Materials to be removed.** Topsoil, as determined in 4.06.2.(2)(b), shall be removed in a separate layer from the areas to be disturbed, unless the use of substitute or supplemental materials is approved by the Division in accordance with 4.06.2(4). A variance from topsoil removal may be granted by the Division for good cause shown. Areas which may qualify for a variance are:

- (i) Areas where light traffic does not destroy existing vegetation or cause erosion; or
 - (ii) areas where removal would result in needless damage to soil characteristics; or
 - (iii) areas of construction of small structures such as power poles, signs or fence lines.
 - (b) For the purposes of these regulations, topsoil is defined as soil horizons on the surface prior to mining that will support plant life. The depth of topsoil to be salvaged shall be determined from the site specific soils information required in 2.04.9 as approved by the Division.
- (3) Subsoil Segregation. The B horizon and portions of the C horizon, or other underlying layers demonstrated to have qualities for comparable root development shall be segregated and replaced as subsoil, only if the Division determines that such material is necessary to ensure soil productivity consistent with the approved postmining land use.
- (4) (a) Selected overburden materials may be substituted for, or used as a supplement to topsoil, if the Division determines that the resulting soil medium is equal to or more suitable for sustaining the vegetation than is the available topsoil and the resulting soil medium is the best available in the permit area to support revegetation. This determination shall be based on:
- (i) The results of chemical and physical analyses of overburden and topsoil. These analyses shall include thickness of soil horizons, total depth, texture, percent coarse fragments, areal extent of the different soils and materials, determinations of pH, net acidity or alkalinity, phosphorus, potassium, texture class, electrical conductivity, sodium absorption ratio, and other analyses as required by the Division. The Division may also require that results of field-site trials or greenhouse tests be used to demonstrate the feasibility of using these overburden materials.
 - (ii) The trials and tests shall be conducted using standard procedures approved by the Division.

- (b) Substitute or supplement material shall be removed, segregated, and replaced in compliance with the requirements of 4.06.
- (5) To the extent practicable, the surface soil layer shall be removed at a time when the physical and chemical properties of topsoil can be protected and erosion can be minimized; and
- (6) Such measures shall be taken as the Division may approve or require to control erosion of topsoil.

4.06.3 Storage.

- 120(2)(e)
- (1) Topsoil and other materials approved for use under 4.06.2 shall be stockpiled only if it is impractical to promptly redistribute such material on regraded areas.
 - (2) Stockpiled materials shall be selectively placed on a stable surface area within the permit area, where they will not be disturbed by mining operations and will be protected from wind and water erosion, unnecessary compaction, and contamination which would lessen the capability of the material to support vegetation when redistributed in accordance with 4.06.4.
 - (a) Protection measures shall be accomplished by:
 - (i) An effective cover of non-noxious, quick-growing annual and perennial plants, seeded or planted during the first appropriate growing season after removal for favorable planting conditions; or
 - (ii) Other methods demonstrated to and approved by the Division to provide equal protection.
 - (b) Stockpiled topsoil and other materials shall not be moved until required for redistribution on a regraded area unless approved by the Division.

4.06.4 Redistribution.

- (1) Where necessary to eliminate slippage surfaces, relieve compaction and to provide for root penetration, regraded land shall be loosened by

mechanical means to a sufficient depth or otherwise treated as approved by the Division.

- (2) Topsoil and other materials shall be redistributed in a manner that:
 - (a) Achieves an approximate uniform, stable thickness consistent with approved postmining land uses, contours, surface water drainage systems and requirements of the vegetation proposed to be established;
 - (b) Prevents excess compaction and contamination of topsoil and spoil or subsoil;
 - (c) Minimizes deterioration of the biological, chemical, and physical properties of the topsoil; and
 - (d) Protects the topsoil from wind and water erosion during redistribution and before and after it is seeded and planted.

4.06.5 Reconditioning.

120(2)(f) Nutrients or other soil amendments shall be applied to the redistributed topsoil if shown to be required by soil tests based upon known plant nutrient requirements and such application supports the approved postmining land use and meets the revegetation requirements of 4.15. Rates of application shall be determined by soil tests of the topsoil prior to seeding. All soil tests shall be performed by a qualified laboratory using standard soil test procedures approved by the Division.

4.07 SEALING OF DRILLED HOLES AND UNDERGROUND OPENINGS

4.07.1 General Requirements.

- 120(2)(j)(I)(C)
121(2)(b)
121(2)(i)(I)(C)
- (1) Each exploration hole, other drill or borehole, well, or other exposed underground opening except those used solely for surface blasting shall be plugged, sealed, or otherwise managed, as approved by the Division to:
 - (a) Prevent acid or other toxic drainage from entering ground or surface waters;
 - (b) Minimize disturbance to the prevailing hydrologic balance; and

(c) Ensure the safety of people, livestock, fish and wildlife, and machinery in the permit and adjacent areas.

- 121(2)(c)
- (2) Each exploration hole, other drill hole or borehole, well or other underground opening that is uncovered or exposed during the mining operations within the permit area shall be managed in accordance with 4.07.3 as applicable, unless approved for water monitoring in accordance with 4.05.13, or otherwise managed in a manner approved by the Division.
 - (3) Development holes drilled within the permit area immediately in advance of the active operation for the purpose of further delineating the economic limits of the coal need not be immediately plugged provided that such holes will be mined through in the normal course of the approved operation. Such holes shall be managed in a manner approved by the Division giving consideration to the geologic, hydrologic and other appropriate characteristics of the site.

4.07.2 Temporary Sealing.

Each exploration hole, other drill or borehole, well, or other underground opening which is temporarily inactive, but has further intended useful service or will be mined through under the approved permit applications, shall be temporarily sealed before use and protected during use by barricades, fences, or other protective devices approved by the Division. These devices shall be periodically inspected and maintained in good operating conditions by the person conducting the surface coal mining operations. Boreholes or other underground openings extending deeper than the stratigraphic section mined through will be sealed below the stratigraphic section to be mined through.

4.07.3 Permanent Sealing.

When no longer needed for its intended use and upon a finding by the Division of no adverse environmental or health and safety effect, each exploration hole, other drilled hole or borehole, wells, or other exposed underground opening including but not limited to shaft, drift, adit, tunnel, or entryway shall be capped, sealed, backfilled, or otherwise properly managed, as required by the Division and consistent with 30 CFR 75.1711. Permanent closure measures shall be designed to prevent access to the mine workings by people, livestock, fish and wildlife, machinery and to keep acid or other toxic drainage from entering ground or surface waters.

- (1) Exploration holes, drill holes or boreholes, wells or other exposed underground openings not completed to aquifers shall be sealed by replacing cuttings or other suitable media in the hole and placing a suitable plug 10 feet below the ground surface to support a cement plug or other media approved by the Division to within 3 feet of the ground surface. Sealing by a surface plug only may be approved by the Division on a case by case basis where both physical and chemical properties of the formation allow. The hole will be marked.
- (2) Exploration holes, drill holes or boreholes, wells, or other underground openings completed in aquifers shall be sealed using cement or other suitable sealant by placing the sealant in the hole from the bottom to within 10 feet of the surface. Holes which have multiple aquifers or bedrock aquifers not exhibiting artesian flow at the surface may be sealed using a solid cement plug or other suitable media approved by the Division extending 20 feet above and below the water bearing zone. A surface plug shall be placed in accordance with 4.07.3(1) and the hole shall be marked.
- (3) Proof of compliance. Within 60 days after abandoning a drill hole, specific drilling program approved by the Division, or when requested by the Division, the operator shall submit a report detailing the following information:
 - (a) Location of the drill hole as spotted accurately on a topographic map;
 - (b) Depth of drill hole;
 - (c) Surface elevation of drill hole;
 - (d) Intervals where water was encountered during drilling activities;
 - (e) Diameter of drill hole;
 - (f) Type of cement or other approved sealant used;
 - (g) Amount of cement and volume of slurry mixture or other sealant used in plugging drill hole;

- (h) Name of drilling contractor and license number of drill and rig;
and
- (i) How the hole was worked.

4.07.4 Abandonment in Designated Ground Water Basins.

When exploration holes, other drilled holes and boreholes, wells, or other underground openings occur in designated Ground Water Basins, as identified in accordance with C.R.S. 37-90-106, the operator shall consult the applicable drill hole abandonment regulations administered by the State Engineer.

4.08 USE OF EXPLOSIVES

4.08.1 General Requirements.

- 120(2)(o)
121(2)(j) (1) Each person who conducts surface blasting activities shall comply with all applicable State and Federal laws in the use of explosives and requirements of 4.08 in consultation with appropriate State agencies.
- (2) Blasts that use more than 5 pounds of explosives or blasting agent shall be conducted according to the schedule required by 4.08.3.
- 120(2)(o)(IV) (3) All surface blasting activities shall be conducted by experienced, trained, and competent persons who understand the hazards involved. Persons responsible for blasting operations at a blasting site shall be familiar with the blasting plan and any site-specific performance standards. The blaster and at least one other person must be present at the firing of a blast. Each person responsible for blasting operations shall possess a valid certification in accordance with appropriate Federal and State law.
- (4) (a) An anticipated blast design, prepared and signed by a certified blaster, shall be submitted, either as part of a permit application or at a time before the blast approved by the Division, if blasting operations will be conducted within:
 - (i) 1,000 feet of any building used as a dwelling, public building, school, church or community or institutional building outside the permit area; or
 - (ii) 500 feet of an active or abandoned underground mine.

- (b) The blast design shall contain sketches of typical drill patterns, delay periods, and decking and shall indicate the type and amount of explosives to be used, critical dimensions, and the location and general description of structures to be protected, as well as a discussion of design factors to be used which protect the public and meet the applicable airblast, flyrock and ground vibration standards of this rule.
- (c) The Division may require changes in the design submitted.

4.08.2 Pre-blasting Survey.

- 120(2)(o)(V)
- (1) At least 30 days before initiation of blasting, the operator shall provide written notification to all residents or owners of dwellings or other structures located within one-half mile of the permit area which explains how to request a preblasting survey. Upon request to the Division by a resident or owner of a dwelling or structure that is located within one-half mile of any part of the permit area for surface mining activities, or in the case of surface blasting activities incident to underground mining activities, within one-half mile of such blasting activity, the person who conducts surface or underground mining activities shall promptly conduct a pre-blasting survey of the dwelling or structure and promptly submit a report of the survey to the Division and to the person requesting the survey. If a structure is renovated or added to, subsequent to a pre-blasting survey, then upon request to the Division a survey of such additions and renovations shall be performed in accordance with 4.08.2.
 - (2) The survey shall determine the condition of the dwelling or structure and document any pre-blasting damage and other physical factors that could reasonably be affected by the blasting. Assessments of structures such as pipes, cables, transmission lines, and wells and other water systems shall be limited to surface conditions and readily available data. Special attention shall be given to the pre-blasting condition of well and other water systems used for human, animal, or agricultural purposes and to the quantity and quality of the water.
 - (3) A written report of the survey shall be prepared and signed by the person who conducted the survey. The report may include recommendations of any special conditions or proposed adjustments to the blasting procedure which should be incorporated into the blasting

plan to prevent damage. Copies of the report shall be provided to the person requesting the survey and the Division. If the person requesting the survey disagrees with the results of the survey, he or she may notify, in writing, both the permittee and the Division of specific areas of disagreement.

4.08.3 Public Notice of Blasting Schedule.

- (1) Blasting Schedule Publication.
 - 120(2)(o)(I) (a) Each person who conducts surface blasting incident to surface mining activities shall publish a blasting schedule at least 10 days, but no more than 20 days, before beginning a blasting program in which blasts that use more than 5 pounds of explosives or blasting agent are detonated. The blasting schedule shall be published in a newspaper of general circulation in the locality of the blasting site.
 - (b) Copies of the schedule shall be distributed by mail to local governments and public utilities and by mail or delivered to each residence within one-half mile of the blasting site described in the schedule. For the purposes of 4.08.3, the permit area does not include coal preparation and loading facilities, and transportation facilities between coal excavation areas and coal preparation or loading facilities if blasting is not conducted in these areas. Copies sent to residences shall be accompanied by information advising the owner or resident how to request a pre-blasting survey.
 - (c) The blasting schedule shall be republished and redistributed by mail at least every 12 months.
- (2) Blasting Schedule Contents.
 - (a) A blasting schedule shall identify as accurately as possible the location of the blasting sites and the time periods when blasting will occur.
 - (b) The blasting schedule shall contain at a minimum:
 - (i) Identification of the specific areas in which blasting will take place.

- (ii) Dates and time periods when explosives are to be detonated.
 - (iii) Methods to be used to control access to the blasting area;
 - (iv) Types of audible warnings and all-clear signals to be used before and after blasting; and
 - (v) A description of unavoidable hazardous situations referred to in 4.08.4(2) which have been approved by the Division for blasting at times other than those described in the schedule.
- (3) Public Notice of Changes in Blasting Schedules.
- (a) Before blasting in areas or at times not in a previous schedule, the person who conducts the surface mining activities shall prepare a revised blasting schedule according to the procedures in 4.08.3(1) and (2). Where notice has previously been mailed to the owner or residents under 4.08.3(1)(b) with advice on requesting a pre-blast survey, the notice of change need not include information regarding pre-blast surveys.
 - (b) If there is a substantial pattern of non-adherence to the published blasting schedule as evidenced by the absence of blasting during scheduled periods, the Division may require that the person who conducts the surface mining activities prepare a revised blasting schedule according to the procedures in 4.08.3(3)(a).

4.08.4 Surface Blasting Requirements.

- 120(2)(o)(III) (1) All surface blasting shall be conducted between sunrise and sunset.
- (a) The Division may specify more restrictive time periods, based on public requests or other relevant information, according to the need to adequately protect the public from adverse noise.
 - (b) Blasting may, however, be conducted between sunset and sunrise if:
 - (i) A blast that has been prepared during the afternoon must be delayed due to the occurrence of an unavoidable hazardous condition and cannot be delayed until the next day because a

potential safety hazard could result that cannot be adequately mitigated;

- (ii) In addition to the required warning signals, oral notices are provided to all persons within one-half mile of the blasting site other than the employees of the mining operation; and
 - (iii) A complete written report of blasting at night is filed by the person conducting the surface or underground mining activities with the Division not later than 3 days after the night blasting. The report shall include a description in detail of the reasons for delay in blasting including why the blast could not be held over to the next day, when the blast was actually conducted, the warning notices given, and a copy of the blast report required by 4.08.5.
- (2) Blasting shall be conducted at times announced in the blasting schedule, except in those unavoidable hazardous situations, previously approved by the Division in the permit application, where operator or public safety require unscheduled detonation.
- (3) Warning and all-clear signals of different character that are audible within a range of one-half mile from the point of the blast shall be given. Each person within the permit area and each person who resides or regularly works within one-half mile of the blasting site shall be notified of the meaning of the signals through appropriate instructions. These instructions shall be periodically delivered or otherwise communicated in a manner which can be reasonably expected to inform such persons of the meaning of the signals. Each person who conducts surface coal mining operations shall maintain signs in accordance with 4.02.
- 120(2)(o)(I)(4) A resident or owner of a dwelling or structure that is located within one-half mile of any area affected by surface blasting activities shall be notified no less than 24 hours prior to any surface blasting or less frequency as each resident occupant in such areas shall approve in writing to the Division.
- (5) Access to an area possibly subject to flyrock from blasting shall be regulated to protect the public and livestock. Access to the area shall be controlled to prevent the presence of livestock or unauthorized personnel during blasting and until an authorized representative of the

person who conducts the surface coal mining operations has reasonably determined:

- (a) That no unusual circumstances, such as imminent slides or undetonated charges, exist; and
 - (b) That access to and travel in or through the area can be safely resumed.
- (6) (a) Airblast shall be controlled so that it does not exceed the values specified below at any dwelling, public building, school, church, or community or institutional structure, outside the permit area, unless such structure is owned by the person who conducts the surface coal mining operations and is not leased to any other person. If a building owned by the person conducting surface coal mining operations is leased to another person, the lessee may sign a waiver relieving the operator from meeting the airblast limitations of 4.08.4(6)(a).

Lower Frequency Limit of Measuring System, Hz (3dB)	Maximum Level in dB
0.1 Hz or lower – flat response ¹	134 peak
2 Hz or lower -- flat response.....	133 peak
6 Hz or lower -- flat response.....	129 peak
C-weighted, slow response	105 C

¹ Only when approved by the Division

- (b) If necessary to prevent damage, the Division shall specify lower maximum allowable airblast levels than those of rule 4.08.4(6)(a), for use in the vicinity of a blasting operation.
 - (c) The operator shall conduct periodic monitoring to ensure compliance with the airblast standards. The Division may require an airblast measurement of any or all airblasts, and may specify the location of such measurements. The measuring systems used shall have an upper-end flat-frequency response of at least 200 Hz.
- (7) Except where lesser distances are approved by the Division, based upon a pre-blasting survey, seismic investigation, or other appropriate investigation, blasting shall not be conducted within:

- (a) 1,000 feet of any building used as a dwelling, school, church, hospital, or nursing facility; and
 - (b) 500 feet of facilities including, but not limited to, disposal wells, petroleum or gas-storage facilities, municipal water-storage facilities, fluid-transmission pipelines, gas or oil-collection lines, or water and sewage lines.
- (8) Flyrock, including blasted material traveling along the ground, shall not be cast from the blasting vicinity more than half the distance to the nearest dwelling or other occupied structure and in no case beyond the line of property owned or leased by the permittee, or beyond the area of regulated access required under 4.08.4(5).
- (9) Blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts to underground mine workings and change in the course, channel, or availability of surface or ground waters outside the permit area. Blasting operations within 500 feet of active underground mines require approval of the State and Federal agencies concerned with the health and safety of underground miners.
- (10) Except as provided in 4.08.4(10)(b), the maximum peak particle velocity in blasting operations shall not exceed the following limits at the location of any dwelling, public building, school, church, or community or institutional building, outside the permit area:

Distance (D) from the Blasting Site (in feet)	Maximum Allowable Peak Particle Velocity (V max) for Ground Vibration (in inches/secondH)	Scaled-Distance Factor to be Applied without Seismic Monitoring (Dsl)
0 to 300	1.25	50
301 to 5000	1.00	55
5001 and beyond	0.75	65

H Ground velocity shall be measured as the particle velocity. Peak particle velocities shall be recorded in three mutually perpendicular directions from the blasting site. The maximum peak particle velocity shall be the largest of any of the three measurements.

I Applicable to the scaled-distance equation of paragraph 4.08.4(10)(c)(i)

- (a) The Division will reduce the maximum peak particle velocity allowed, if it determines that a lower velocity is required by density of population or land-use, age or type of structure, geology or hydrology of the area, frequency of blasts, or other factors.
- (b) The Division may allow a variance from the maximum peak particle velocity limits if it determines that the structure is owned by the person conducting the surface coal mining operation, and the structure is not leased to another party, or if leased to another party, that a written waiver by the lessee is submitted to the Division prior to blasting.
- (c) (i) If blasting is conducted in accordance with the following equation, the peak particle velocity shall be deemed to be within the limit. The maximum weight of explosives to be detonated within any 8-millisecond period may be determined by the formula $W = (D/D_s)^2$ where W = the maximum weight of explosives, in pounds, that can be detonated in any 8-millisecond period ; D = the distance, in feet, from the blast to the nearest dwelling, school, church, or community or institutional building; and D_s = the scaled-distance factor, using the values listed in the table in paragraph 4.08.4(10).
- (ii) For a distance between 300 and 5,000 feet, the solution of the equation results in the following maximum weight:

Distance, in feet (D)	Maximum weight, in pounds (W)
300	36
350	40
400	53
500	83
600	119
700	161
800	212
900	268
1,000	331
1,100	400
1,200	476
1,300	559

1,400	648
1,500	744
1,600	846
1,700	955
1,800	1,071
1,900	1,193
2,000	1,322
2,500	2,066
3,000	2,975
3,500	4,050
4,000	5,289
4,500	6,694
5,000	8,264

4.08.5 Records of Blasting for Surface Coal Mining Operations.

120(2)(o)(II) A record of each blast, including seismograph reports, shall be retained for at least 3 years and shall be available for inspection by the Division and by the public on request. The record shall contain the following data:

- (1) Name of the operator conducting the blast;
- (2) Location, date, and time of blast;
- (3) Name, signature, and license number of blaster-in-charge;
- (4) Identification, direction and distance, in feet, from the nearest blast hole to the nearest dwelling, school, church, or community or institutional building either:
 - (a) Not located in the permit area; or
 - (b) Not owned nor leased by the person who conducts the surface coal mining operations.
- (5) Weather conditions, including temperature, wind direction, and approximate velocity;
- (6) Type of material blasted;
- (7) Sketches of the blast pattern including number of holes, burden, spacing, and delay pattern.

- (8) Sketches shall also show decking, if holes are decked to achieve different delay times within a hole;
- (9) Diameter and depth of holes;
- (10) Types of explosives used;
- (11) Total weight of explosives used per hole and maximum weight of explosives used per 8-millisecond period;
- (12) Initiation system;
- (13) Type and length of stemming;
- (14) Mats or other protections used;
- (15) Type of delay detonator and delay periods used;
- (16) Number of persons in the blasting crew; and
- (17) Seismographic and airblast records, where required, including:
 - (a) Type of instrument, sensitivity, and the calibration signal of the gain setting or certification of annual calibration;
 - (b) Exact location of instrument and the date, time and its distance from the blast;
 - (c) Name of the person and firm taking the reading;
 - (d) Name of the person and firm analyzing the seismographic record;
 - (e) The vibration and/or airblast level recorded; and
- (18) Reasons and conditions for each unscheduled blast.

4.08.6 Seismographic Measurements.

- 120(2)(o)(II)
- (1) Where a seismograph is used to monitor the velocity of ground motion and the peak particle velocity limit of 1 inch per second is not exceeded, the equation in 4.08.4(10)(c)(i) need not be used. If that

equation is not used by the person conducting the surface coal mining operations, a seismograph record shall be obtained for each shot.

- (2) The use of a modified equation to determine maximum weight of explosives per delay for blasting operation at a particular site, may be approved by the Division, on a receipt of reports including seismograph records of test blasting on the site. In no case shall the Division approve the use of a modified equation where the peak particle velocity fails to comply with the limitations of 4.08.4(10) at a 95% level of confidence.
- (3) The Division may require a seismograph record of any or all blasts and may specify the location at which such measurements are taken.

4.09 DISPOSAL OF EXCESS SPOIL

4.09.1 General Requirements.

- 120(2)(v) (1) All excess spoil shall be transported to and placed in designated disposal areas within a permit area, if disposal areas are authorized for such purposes in the approved permit application in accordance with 4.09. The spoil shall be placed in a controlled manner to:
 - 120(2)(j) (a) Minimize the adverse effects of leachate and surface water runoff from the fill on surface and ground waters;
 - 120(2)(j)(II)(A)
120(2)(v)(I) (b) Comply with the effluent limitations of 4.05.2;
 - (c) Ensure stability of the fill; and
 - (d) Ensure that the land mass designated as the disposal area is suitable for reclamation and revegetation compatible with the natural surroundings.
- 120(2)(v)(VIII) (2) The fill shall be designed using recognized professional standards, certified by a registered professional engineer, and approved by the Division.
- (3) Alternative specifications may be utilized after approval by the Division upon thorough analytical demonstration, by a qualified registered professional engineer, prepared in accordance with 2.05.3(6)(b), (c) and (d), that such alternatives shall be as environmentally sound and

structurally stable as that resulting from fills complying with the requirements of 4.09 and with such other criteria as are necessary to achieve reclamation in accordance with the requirements of this Rule, taking into consideration physical, climatological and other characteristics of the site.

- 120(2)(v)(II) (4) All vegetation and organic materials shall be removed from the disposal area and the topsoil shall be removed, segregated, and stored or replaced under 4.06. If approved by the Division, organic material may be used as mulch or may be included in the topsoil to control erosion, promote growth of vegetation, or increase moisture retention of the soil.
- 120(2)(d) (5) Slope protection shall be provided to minimize surface erosion at the site. Diversion design shall conform with the requirements of 4.05.4. All disturbed areas, including diversion ditches that are not riprapped, shall be vegetated upon completion of construction.
- 120(2)(v)(V) (6) The disposal areas shall be located on the most moderately sloping and naturally stable areas available as approved by the Division. If such placement provides additional stability and prevents mass movement, fill materials suitable for disposal shall be placed upon or above a natural terrace, bench, or berm.
- 120(2)(v)(I)(7) The excess spoil shall be transported and placed in horizontal lifts in a controlled manner, concurrently compacted as necessary to ensure mass stability and prevent mass movement, covered with topsoil or substitute material in accordance with 4.06, and graded to allow surface and subsurface drainage to be compatible with the natural surroundings and ensure a long-term static safety factor of 1.5.
- 120(2)(v)(VII) (8) The final configuration of the fill shall be suitable for postmining land uses approved in accordance with 4.16, except that no impoundments shall be allowed on the completed fill. Small depressions may be allowed by the Division if they are needed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation; and if they are compatible with stability of the fill, as demonstrated in accordance with 2.05.3(6)(b), (c) and (d).
- 120(2)(v)(III) (9) The final configuration of the fill shall be designed to minimize erosion. Terraces may be utilized to control erosion and enhance stability if approved by the Division and consistent with 4.14.2(2).

- 120(2)(v)(VI) (10) Where the slope in the disposal area is steeper than 2.8h:1v (36 percent), or such lesser slope as may be designated by the Division based on local conditions, keyway cuts (excavations to stable bedrock) or rock toe buttresses shall be constructed to stabilize the fill. Where the toe of the spoil rests on a downslope, stability analyses shall be performed in accordance with 2.05.3(6)(b), (c) and (d) to determine the size of the rock toe buttresses and keyway cuts.
- 122(1) (11) Inspection
- (a) The fill shall be inspected for stability by a registered engineer or other qualified professional specialist experienced in construction of earth and rockfill embankments under the direction of a qualified professional engineer at least quarterly throughout the construction and during the following critical construction periods:
 - (1) removal of all organic material and topsoil, (2) placement of underdrainage systems, (3) installation of surface drainage systems, (4) placement and compaction of fill materials, and (5) revegetation.
 - (b) The qualified registered engineer shall provide to the Division a certified report within 2 weeks after each inspection that the fill has been constructed as specified in the design approved by the Division. The report shall include a description of any appearances of instability, structural weakness, and other hazardous conditions observed during the inspection. A copy of the report shall be retained at the mine site.
 - (c) Any certified report addressing the underdrain system and protective filters shall include color photographs taken during and after construction, but before underdrains are covered with excess spoil. If the underdrain system is constructed in phases, each phase shall be certified separately. Where excess durable rock spoil is placed in single or multiple lifts such that the underdrain system is constructed simultaneously with excess spoil placement by natural segregation of dumped materials, photographs shall be taken of the underdrain as the underdrain system is being formed. The color photographs accompanying each certified report shall be taken in adequate size and number with enough terrain or other physical features of the site shown to provide a relative scale to the photographs and to specifically and clearly identify the site.

- (12) Coal mine wastes may only be disposed of in excess spoil fills, if such waste is:
 - (a) Placed in accordance with 4.10.4;
 - (b) Demonstrated to be non-toxic and non-acid forming; and
 - (c) Demonstrated to be consistent with the design stability of the fill, in accordance with 2.05.3(6)(b), (c) and (d).
- 120(2)(v)(IV) (13) If the disposal area contains springs, natural or manmade watercourses, or wet-weather seeps, an underdrain system consisting of durable non-acid-forming and non-toxic-forming rock shall be constructed from the wet areas in a manner that prevents infiltration of the water into the spoil material. The underdrain system shall be protected by an adequate filter and shall be designed and constructed using standard geotechnical engineering methods.
- 120(2)(v)(I)(14) The foundation and abutments of the fill shall be stable under all conditions of construction and operation. Sufficient foundation investigation and laboratory testing of foundation materials shall be performed in order to determine the design requirements for stability of the foundation. Analyses of foundation conditions shall include the effect of underground mine workings, if any, upon the stability of the structure.
- (15) Excess spoil may be returned to underground mine workings, but only with a disposal program approved by the Division and MSHA upon the basis of a plan submitted under 2.05.3(9)(a).

4.09.2 Valley Fill.

Disposal of excess spoil in valley fills shall meet all the requirements of 4.09.1 and the additional requirements of 4.09.2.

- (1) The fill shall be designed to attain a long-term static safety factor of 1.5 based upon data obtained from subsurface exploration, geotechnical testing, foundation design, and accepted engineering analyses.
- 120(2)(v)(III) (2) A subdrainage system for the fill shall be constructed in accordance with the following:

- (a) Underdrains shall consist of non-degradable, non-acid or toxic-forming rock such as natural sand and gravel, sandstone or limestone. Other durable rock may be used, if it has been demonstrated not to slake in water or degrade to soil material and will be free of coal, clay and other non-durable material.
- (b) A system of underdrains shall:
 - (i) Be installed along the natural drainage system;
 - (ii) Extend from the toe to the head of the fill; and
 - (iii) Contain lateral drains to each area of potential drainage or seepage.
- (c) A filter system to insure the proper functioning of the rock underdrain system shall be designed and constructed using standard geotechnical engineering methods.
- (d) In constructing the underdrains, no more than 10 percent of the rock may be less than 12 inches in size and no single rock may be larger than 25 percent of the width of the drain. The minimum size of the main underdrain shall be:

120(2)(v)(IV)

Total Amount of Fill Material	Predominant Type of Fill Material	Minimum Size of Drain, in feet	
		Width	Height
Less than 1,000,000 yd ³	Sandstone	10	4
	Shale	16	8
More than 1,000,000 yd ³	Sandstone	16	8
	Shale	16	16

120(2)(v)(I)(3) Excess spoil shall be transported and placed in a controlled manner and concurrently compacted as specified by the Division, in horizontal lifts demonstrated in accordance with 2.05.3(6)(b), (c) and (d) to achieve or provide the following:

- (a) Achieve densities designed to ensure mass stability;

- (b) Prevent mass movement;
 - (c) Avoid contamination of the rock underdrain of rock core; and
 - (d) Prevent formation of voids.
- (4) The final configuration of the fill shall be suitable for the approved postmining land use. Terraces may be constructed on the outslope of the fill if required for stability, control of erosion, to conserve soil moisture, or to facilitate the approved postmining land use.
- (5) Drainage shall not be directed over the outslope of the fill.
- (6) The outslope of the fill shall not be steeper than 2h:1v (50 percent). The Division may require a flatter slope.
- 120(2)(v)(III) (7) Surface water runoff from the area above the fill shall be diverted away from the fill and into stabilized diversion channels designed to pass safely the runoff from a 100-year, 24-hour precipitation event or larger event specified by the Division. Surface runoff from the fill surface shall be diverted to stabilized channels off the fill which will safely pass the runoff from a 100-year, 24-hour precipitation event. Diversion design shall comply with the requirements of 4.05.4.

4.09.3 Head of Hollow Fill.

Disposal of spoil in the head-of-hollow fill shall meet all the standards set forth in 4.09.1 and 4.09.2 and the additional requirements of 4.09.3.

- 120(2)(c)
120(2)(v)(III)
- (1) The fill shall be designed to completely fill the disposal site to the approximate elevation of the ridgeline. A rock-core chimney drain may be utilized instead of the subdrain and surface diversion system required for valley 120(2)(v)(III) fills. If the crest of the fill is not approximately at the same elevation as the low point of the adjacent ridgeline, the fill must be designed as specified in 4.09.2 with diversion of runoff around the fill. A fill associated with contour mining and placed at or near the coal seam, and which does not exceed 250,000 cubic yards may use the rock core chimney drain.
 - (2) The alternative rock-core chimney drain system incorporated into head-of-hollow fills shall be designed and constructed as follows:

- (a) The fill shall have, along the vertical projection of the main buried stream channel or fill a vertical core of durable rock at least 16 feet thick which shall extend from the toe of the fill to the head of the fill, and from the base of the fill to the surface of the fill. A system of lateral rock underdrains shall connect this rock core to each area of potential drainage or seepage in the disposal area. Rock used in the rock core and underdrains shall meet the requirements of 4.09.2(2).
 - (b) A filter system to ensure the proper functioning of the rock core shall be designed and constructed using standard geotechnical engineering methods.
 - (c) The grading may drain surface water away from the outslope of the fill and toward the rock core. The maximum slope of the top of the fill shall be 33h:1v (3 percent). A drainage pocket may be maintained at the head of the fill during and after construction, to intercept surface runoff and discharge the runoff through or over the rock drain, if stability of the fill is not impaired. In no case shall this pocket or sump have a potential for impounding more than 10,000 cubic feet of water. Terraces on fill shall be graded with a 3 to 5 percent grade toward the fill and a 1 percent slope toward the rock core.
- (3) The drainage control system shall be capable of passing safely the runoff from a 100-year, 24-hour precipitation event, or larger event specified by the Division.

4.09.4 Durable Rock Fills.

The Division may approve the alternative method of disposal of excess durable rock by gravity placement in single or multiple lifts, provided the following conditions are met:

- 120(2)(v)(I)(1) The requirements of 4.09.1 through 4.09.3 must be met, except as provided in this section.
- (2) The excess spoil consists of at least 80 percent, by volume, durable non-acid- and non-toxic-forming rock (e.g., sandstone, or limestone) that does not slake in water and will not degrade to soil material. Where used, noncemented clay shale, clay spoil, soil or other nondurable excess spoil material shall be mixed with excess durable

rock spoil in a controlled manner such that no more than 20 percent of the fill volume, as determined by tests performed by a registered professional engineer and approved by the Division, is not durable rock.

- 120(2)(v)(III) (3) A qualified registered professional engineer certifies that the design
120(2)(v)(IV) will ensure the stability of the fill and meet all other applicable requirements.
- 120(2)(v)(IV) (4) The fill is designed to attain a minimum long-term static safety factor of 1.5, and an earthquake safety factor of 1.1.
- (5) The underdrain system may be constructed simultaneously with excess spoil placement by the natural segregation of dumped materials, provided the resulting underdrain system is capable of carrying anticipated seepage of water due to rainfall away from the excess spoil fill and from seeps and springs in the foundation of the disposal area and the other requirements for drainage control are met.
- (6) The surface water runoff from areas adjacent to and above the fill is not allowed to flow onto the fill and is diverted into stabilized diversion channels designed to meet the requirements of 4.05.3 and to safely pass the runoff from a 100-year, 24-hour precipitation event.

4.10 COAL MINE WASTE BANKS.

4.10.1 General Requirements.

- 120(2)(n) (1) All coal mine waste shall be transported and placed in new and existing
121(2)(d) disposal areas approved by the Division for this purpose. These areas shall be within a permit area. The disposal area shall be designed, constructed, inspected and maintained:
- (a) In accordance with 4.09.1, 4.09.2, 4.10, and 4.11; and
- (b) To prevent combustion.
- (2) Coal mine waste materials from activities located outside a permit area, such as those activities at other mines or abandoned mine waste piles may be disposed of in the permit area only if approved by the Division. Approval shall be based on a showing by the person who conducts surface coal mining operations in the permit area, using hydrologic,

geotechnical, physical, and chemical analysis, that disposal of these materials does not:

- 120(2)(j), 120(2)(x)(a) Adversely affect water quality, water flow, or vegetation;
- (b) Create public health hazards; or
 - (c) Cause instability in the disposal areas.

4.10.2 Site Inspection.

- (1) All coal mine waste banks shall be inspected, on behalf of the person conducting surface coal mining operations by a qualified registered engineer, or other qualified professional specialist under the direction of the professional engineer, experienced in construction of similar earth and waste structures, approved by the Division.
- (2) Inspection of coal mine waste banks shall be performed in accordance with rule 4.09.1(11), and the following additional requirements:
 - (a) Inspection shall occur at least quarterly, beginning within 7 days after the preparation of the disposal area begins. The Division may require more frequent inspection based upon an evaluation of the potential danger to the health or safety of the public and the potential harm to land, air and water resources. Inspections may terminate when the coal mine waste bank has been graded, covered in accordance with 4.10.4(4), topsoil has been distributed on the bank in accordance with 4.06.4, and revegetated, or at such a later time as the Division may require.
 - (b) Inspections shall include such observations and tests as may be necessary to evaluate the potential hazard to human life and property, to ensure that all organic material and topsoil have been removed and that proper construction and maintenance are occurring in accordance with the plan submitted under 2.05.3(8) and approved by the Division.
 - (c) The engineer or other approved inspector shall consider steepness of slopes, seepage, and other visible factors which could indicate potential failure, and the results of failure with respect to the threat to human life and property.

(d) Copies of the inspection findings shall be maintained at the mine site.

- (3) If any inspection discloses that a potential hazard exists, the Division shall be informed promptly of the finding and of the emergency procedures formulated for public protection and remedial action. If adequate procedures cannot be formulated or implemented, the Division shall be notified immediately. The Division shall then notify the appropriate emergency agencies that other emergency procedures are required to protect the public from the coal mine waste area.

4.10.3 Water Control Measures.

120(2)(j)
121(2)(d) (1) A properly designed subdrainage system shall be provided, in accordance with the following except where alternative specifications are used in accordance with 4.10.3(5). Each system shall:

- (a) Intercept all ground water sources;
- (b) Be protected by an adequate filter; and
- (c) Be covered so as to protect against the entrance of surface water or leachate from the coal processing waste.

(2) All surface drainage from the area above the coal mine waste bank and from the crest and face of the waste disposal area shall be diverted in accordance with 4.09.2(7).

120(2)(d) (3) Slope protection shall be provided to minimize surface erosion at the site. All disturbed areas, including diversion ditches that are not ripped, shall be vegetated upon completion of construction.

(4) All water discharged from a coal mine waste bank shall comply with the relevant Subsections of 4.05.

(5) An alternative subdrainage system may be utilized after approval by the Division upon a thorough analytical demonstration that such an alternative will ensure the applicable static safety factor, stability of the fill and protection of the surface and groundwater in accordance with the requirements of these Rules.

120(2)(k) **4.10.4 Construction Requirements.**

121(2)(d)

- (1) Coal mine waste banks shall be constructed in compliance with 4.09.1 and 4.09.2, except to the extent that the requirements of those Subsections are varied in 4.10.4.
- (2) Coal mine waste banks shall have a minimum static safety factor of 1.5.
- (3) Compaction requirements during construction or modification of all coal mine waste banks shall be:
 - (a) Spread in layers no more than 24 inches in thickness;
 - (b) Compacted to attain 90 percent of the maximum dry density to prevent spontaneous combustion and to provide the strength required for stability of the coal mine waste bank. Dry densities shall be determined in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Specifications T99-74 (Twelfth Edition)(July 1978) or an equivalent method. AASHTO T99-74 is hereby incorporated by reference as it exists on the date of adoption of 4.10. This publication is on file and available for inspection at the office of the Division; and
 - (c) Variations may be allowed in these requirements for maximum allowable lift thickness and minimum required compaction, after approval of the variance by the Mine Safety and Health Administration's (MSHA) District Manager, as required by 30 CFR 77.215. Copies of the MSHA district manager's written approval and the application documents furnished for his review, supporting the request for variance, shall be included within the application. Compaction testing shall be performed to verify that the minimum required compaction is achieved.
- (4) In no case shall the slope of a terrace on a coal mine waste bank be steeper than 2h:1v (50 percent).
- (5) Following grading of the coal mine waste bank, the site shall be covered with a minimum of 4 feet of the best available non-toxic and non-combustible material, in accordance with 4.06.2, and in a manner that does not impede flow from subdrainage systems. The coal mine waste bank shall be revegetated in accordance with 4.15. The Division may allow less than 4 feet of cover material based on physical and

chemical analyses which show that the requirements of 4.15 will be met.

4.11 COAL MINE WASTE.

4.11.1 Burning.

120(2)(n)
121(2)(h) Coal mine waste fires shall be extinguished by the person who conducts the surface coal mining operations, in accordance with a plan approved by the Division and the Mine Safety and Health Administration. The plan shall contain, at a minimum, provisions to ensure that only those persons authorized by the operator, and who have an understanding of the procedures to be used, shall be involved in the extinguishing operations.

4.11.2 Burned Waste Utilization.

120(2)(k)
121(2)(d) Before any burned coal mine waste, other materials, or refuse is removed from a disposal area, approval shall be obtained from the Division. A plan for the method of removal, with maps and appropriate drawings to illustrate the proposed sequence of the operation and method of compliance with 4.11, shall be submitted to the Division. Consideration shall be given in the plan to potential hazards which may be created by removal to persons working or living in the vicinity of the structure. The plan shall be certified by a qualified engineer.

4.11.3 Return to Underground Workings.

121(2)(c)
121(2)(h) Coal mine waste may be returned to underground mine workings only in accordance with the waste disposal program approved by the Division and Mined Safety and Health Administration under 2.05.3(9).

4.11.4 Disposal of Noncoal Waste.

120(2)(k)
121(2)(c) (1) Noncoal wastes including, but not limited to, grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, lumber and other combustibles generated during surface or underground mining activities shall be placed and stored in a controlled manner in a designated portion of the permit area. Placement and storage shall ensure that leachate and surface runoff do not degrade surface or ground water, fires are prevented, and that the area remains stable and suitable for reclamation and revegetation compatible with the natural surroundings.

- (2) Final disposal of noncoal wastes shall be in a designated disposal site in the permit area or in a State-approved solid waste disposal area outside the permit area. Disposal sites located within the permit area shall be constructed to ensure that leachate and surface runoff do not degrade surface or ground water, fires are prevented, and that the area remains stable and suitable for reclamation compatible with the natural surroundings. Wastes shall be routinely compacted and covered to prevent combustion and wind-born waste. When the disposal is completed a minimum of 2 feet of soil cover shall be placed over the site, slopes stabilized, and revegetation accomplished in accordance with 4.15. The Division may allow less than 2 feet of cover material based on physical and chemical analyses which show that the requirements of 4.15 will be met. Operations of the disposal site shall be conducted in accordance with the local, State and Federal requirements.
- (3) At no time shall any noncoal mine waste be deposited in a refuse pile or impounding structure, nor shall any excavation for noncoal mine waste disposal be located within 8 feet of any coal outcrop or coal storage area.

4.11.5 Dams and Embankments.

(1) General Requirements.

120(2)(m)
121(2)(e)

- (a) 4.11.5 applies to dams and embankments, constructed of coal mine waste or intended to impound coal mine waste, whether they were completed before adoption of the regulatory program or are intended to be completed thereafter.
- (b) Waste shall not be used in the construction of dams and embankments unless it has been demonstrated to the Division that the stability of such a structure conforms with the requirements of 4.11.5(3)(a). It shall also be demonstrated that the use of waste material shall not have a detrimental effect on downstream water quality or the environment due to acid seepage through the dam or embankment. All demonstrations shall be submitted to and approved by the Division.
- (c) All dams and embankments constructed of or impounding coal mine waste are subject to the general coal mine waste bank design,

construction, certification, inspection and maintenance requirements of 4.10 and the additional requirements of 4.11.5.

- (d) Dams and embankments constructed of or impounding coal mine waste may not be retained permanently as impounding structures.

(2) Site Preparation.

Before any coal processing waste is placed at a dam or embankment site:

- (a) All trees, shrubs, grasses, and other organic material shall be cleared and grubbed from the site, and all combustibles shall be removed and stockpiled in accordance with the requirements of 4.11; and
- (b) Surface drainage that may cause erosion to the embankment area or the embankment features, whether during construction or after completion, shall be diverted away from the embankment by diversion ditches that comply with the requirements of 4.05.3. Adequate outlets for discharge from these diversions shall be in accordance with 4.05.7. Diversions that are designed to divert drainage from the upstream area away from the impoundment area shall be designed to carry the peak runoff from a 100-year, 24-hour precipitation event. Sediment control measures shall be provided at the discharge of each diversion ditch before entry into natural water courses in accordance with 4.05.1-4.05.6.

(3) Design and Construction.

- (a) The design of each dam and embankment constructed of coal mine waste or intended to impound such waste shall comply with the requirements of 4.05.9 modified as follows:
 - (i) The design freeboard between the lowest point on the embankment crest and the maximum water elevation shall be at least 3 feet. The maximum water elevation shall be that determined by the freeboard hydrograph criteria contained in the U.S. Soil Conservation Service criteria referenced in 4.05.9;

- (ii) The dam and embankment shall have a minimum safety factor of 1.5 for the partial pool with steady seepage saturation conditions, and the seismic safety factor shall be at least 1.2; and
 - (iii) The dam or embankment foundation and abutments shall be designed to be stable under all conditions of construction and operation of the impoundment. Sufficient foundation investigations and laboratory testing shall be performed to determine the safety factors of the dam or embankment for all loading conditions appearing in 4.11.5(3)(a)(ii) or the publication referred to in 4.05.9 and for all increments of construction.
- (b) Each dam or embankment constructed of or impounding coal mine waste, that meets the size or other criteria of the Mine Safety and Health Administration 30 CFR 77.216(a)(1989) shall have sufficient spillway capacity to safely pass, adequate storage capacity to safely contain, or a combination of storage capacity and spillway capacity to safely control, the probable maximum precipitation of a 24-hour event, or a greater event as specified by the Division.
 - (c) Spillways and outlet works shall be designed to provide adequate protection against erosion and corrosion. Inlets shall be protected against blockage.
 - (d) Dams or embankments constructed of or impounding waste materials shall be designed and maintained so that at least 90 percent of the water stored during the design precipitation event shall be removed within the 10-day period following the precipitation event.

4.12 SLIDES AND OTHER DAMAGE

- 120(2)(u) (1) An undisturbed natural barrier shall be provided beginning at the elevation of the lowest coal seam to be mined and extended from the outslope for such distance as may be determined by the Division as needed to assure stability for surface mining activities. The barrier shall be retained in place to prevent slides and erosion.
- 120(2)(y)

- 121(2)(h) (2) At any time a slide occurs which may have a potential adverse effect on public property, health, safety, or the environment, the person who conducts the surface coal mining operations shall notify the Division by the fastest available means and comply with any remedial measures required by the Division.

4.13 CONTEMPORANEOUS RECLAMATION

- 120(2)(p)
121(2)(j) Reclamation efforts, including, but not limited to, backfilling, grading, topsoil replacement and revegetation, of all land that is disturbed by surface coal mining operations shall occur as contemporaneously as practicable with mining operations.

4.14 BACKFILLING AND GRADING

4.14.1 General Requirements.

- 120(2)(c)
120(2)(p) (1) Timing of backfilling and grading.
- (a) Contour mining. Rough backfilling and grading shall follow coal removal by not more than 60 days or 1,500 linear feet. The Division may grant additional time for rough backfilling and grading if the permittee can demonstrate, through a detailed written analysis under 2.05.4(2)(c), that additional time is necessary.
 - (b) Open pit mining with thin overburden. Rough backfilling and grading shall occur in accordance with the time schedule approved by the Division, on the basis of materials submitted under 2.05.4(2)(c), which shall specifically establish in stated increments the period between removal of coal and completion of backfilling and grading.
 - (c) Area Strip mining. Rough backfilling and grading shall be completed within 180 days following coal removal and shall not be more than four spoil ridges behind the pit being worked, the spoil from the active pit being considered the first ridge. The Division may grant additional time for rough backfilling and grading if the permittee can demonstrate, through a detailed written analysis under 2.05.4(2)(c), that additional time is necessary.

121(2)(j)

(d) Surface areas disturbed incident to underground mining activities shall be backfilled and graded in accordance with the time schedule approved by the Division as a condition of the permit.

(2) Method for backfilling and grading.

(a) Except as specifically exempted, pursuant to Rules 4.14.1(2)(e), 4.14.1(2)(f), 4.14.1(2)(g), 4.27.4, and 2.06.5, all areas disturbed by surface coal mining operations shall be returned to their approximate original contour. All spoil shall be transported, backfilled, segregated and compacted where needed to insure stability or prevent leaching of toxic materials and graded to eliminate all spoil piles, depressions, and highwalls, with the exception that complete highwall elimination is not required for underground operations which meet the criteria of 4.14.1(2)(f), and for re-mining of sites mined and abandoned prior to August 3, 1977, pursuant to 4.14.1(2)(g).

(b) Backfilled material shall be placed to minimize adverse effects on ground water, minimize off-site effects, and to support the approved postmining land use.

(c) Cut and fill terraces may be used only in those situations expressly identified in 4.14.2.

(d) Box cut spoil or initial cut spoil, may not be permanently disposed of outside of the mined area unless the applicant demonstrates that such material is not required to achieve the approximate original contour of the area in accordance with 4.09.1.

(e) In the case of underground mining operations, with the approval of the Division, excess material not required to eliminate all highwalls and depressions need not be returned to approximate original contour as required under 4.14.2 upon demonstration that the fill meets all the requirements of 4.05, 4.06, 4.09 and 4.15.

121(2)(j)

(f) Complete elimination of face-up areas and highwalls at underground mining operations shall not be required if the applicant demonstrates in writing to the Division that the existing highwall was in place prior to August 3, 1977, and that the volume of all reasonably available spoil is insufficient to completely backfill the highwall and face-up area so as to achieve

a safety factor of 1.3. In such instances, the highwall shall be eliminated to the maximum extent technically practical and shall comply with the following criteria:

- (i) All reasonably available spoil in the permit area shall be used to backfill the highwall. Reasonably available spoil in the vicinity of the operation shall be included in the permit area.
- (ii) The backfill shall be graded to a slope which is compatible with the approved post-mining land use and which provides adequate drainage and meets a minimum static safety factor of 1.3.
- (iii) The highwall remnant shall be sufficiently stable so as not to pose a hazard to the public health and safety or to the environment. The operator shall demonstrate, to the satisfaction of the Division, that the highwall remnant is stable.
- (iv) Exposed coal seams, toxic and acid forming materials, and combustible materials shall be adequately covered or treated in accordance with 4.14.3.
- (v) Spoil placed on the outslope during mining operations which occurred prior to August 3, 1977 shall not be disturbed if such disturbance will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.

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- (g) Re-mining operations initiated after August 3, 1977 on sites which were mined and abandoned prior to August 3, 1977 and contain a preexisting highwall shall comply with all requirements of 4.14 except that complete highwall elimination shall not be required when the operator demonstrates in writing to the Division that the volume of all reasonably available spoil is insufficient to completely backfill the reaffected or enlarged highwall so as to achieve a safety factor of 1.3. In such instances, the highwall shall be eliminated to the maximum extent technically practical and shall comply with the following criteria:

- (i) All spoil generated by the re-mining operation and any other reasonably available spoil shall be used to backfill the area.

Reasonably available spoil in the immediate vicinity of the re-mining operation shall be included within the permit area.

- (ii) The backfill shall be graded to a slope which is compatible with the approved post-mining land use and which provides adequate drainage and meets a minimum static safety factor of 1.3.
 - (iii) The highwall remnant shall be sufficiently stable so as not to pose a hazard to the public health and safety or to the environment. The operator shall demonstrate to the satisfaction of the Division, that the highwall remnant is stable.
 - (iv) Exposed coal seams, toxic and acid forming materials, and combustible materials shall be adequately covered or treated in accordance with 4.14.3.
 - (v) Spoil placed on the outslope during mining operations which occurred prior to August 3, 1977 shall not be disturbed if such disturbance will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.
- (h) Spoil may be placed on the area outside the mined-out area in non-steep slope areas to restore the approximate original contour by blending the spoil into the surrounding terrain, if:
- (i) All vegetative and organic material is first removed from the area;
 - (ii) Topsoil is removed from the area and segregated, stored and redistributed in accordance with Rule 4.06; and
 - (iii) The spoil is backfilled and graded in accordance with Rule 4.14.2.

4.14.2 General Grading Requirements.

- 120(2)(c) (1) The final graded slopes shall approximate pre-mining slopes, or any

120(2)(w)

lesser slopes approved by the Division based on consideration of soil, climate, or other characteristics of the surrounding area. Post-mining final graded slopes need not be uniform but shall approximate the general nature of the pre-mining topography identified in 2.10.3(1)(j). The requirements of 4.14.2 may be modified by the Division for steep slope mining pursuant to 4.27, for underground operations pursuant to 4.14.1(2)(e) and (f), and for re-mining operations pursuant to 4.14.1(2)(g). The person who conducts surface coal mining operations shall, at a minimum:

- (a) Retain all overburden and spoil on the solid portion of existing or new benches, and return all such material, except excess spoil, to the mined out area, except as provided in Rule 4.14.1(2)(h); and
 - (b) Backfill and grade to the most moderate slope possible, which does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum static safety factor of 1.3. In all cases the highwall shall be eliminated, unless retention of a highwall remnant is specifically approved by the Division pursuant to 4.14.1(2)(f) or (g).
- (2) On approval by the Division in order to conserve soil moisture, ensure stability, and control erosion of final graded slopes, cut-and-fill terraces may be allowed, if the terraces are compatible with the approved postmining land use. The terraces shall meet the following requirements:
- (a) The width of the individual terrace bench shall not exceed 20 feet, unless specifically approved by the Division as necessary for stability, erosion control, or roads included in the approved postmining land use plan.
 - (b) The vertical distance between terraces shall be as specified by the Division to prevent excessive erosion and to provide long-term stability.
 - (c) The slope of the terrace outslope shall not be steeper than 2h:1v (50 percent).
 - (d) Culverts and underground rock drains shall be used on the terrace only when approved by the Division.

- (e) Terraces shall be installed so as not to impede revegetation procedures including vehicular access for such revegetation in accordance with the requirements of these Rules.
 - (f) Additional surface manipulation procedures shall be installed in accordance with the requirements of these Rules as required by the Division.
- (3) Small depressions may be constructed if they:
- (a) Are approved by the Division to minimize erosion, conserve soil moisture, create or enhance wildlife habitat, or promote vegetation;
 - (b) Do not restrict access or constitute a hazard; and
 - (c) Are compatible with the proposed postmining land use.
- 120(4)(b) (4) All surface coal mining operations on slopes above 20 degrees, or on lesser slopes that the Division defines as steep slopes shall meet the provisions of 4.27.
- 120(2)(d) (5) Grading, preparation, or placement of material shall be conducted in a manner which minimizes erosion and slippage and provides a surface for the replacement of topsoil. Final surface or seedbed preparation of topsoil shall be done along the contour to minimize subsequent erosion and instability. If such preparation of topsoil along the contour is hazardous to equipment operators, then preparation in a direction other than parallel to the contour may be used.

4.14.3 Covering Coal and Acid- and Toxic-Forming Materials.

- (1) Cover.
- 120(2)(k)
121(2)(d) (a) A person who conducts surface coal mining operations shall insure that all debris, acid-forming materials, toxic materials or materials constituting a fire hazard are treated or buried and compacted or otherwise disposed of in a manner approved by the Division and are designed to prevent contamination of ground or surface waters, and that approved contingency plans are developed to prevent sustained combustion.

- 120(2)(w) (b) Where necessary to protect against upward migration of salts, exposure by erosion, formation of acid or toxic seeps, to provide an adequate depth for plant growth, or otherwise to meet local conditions, the Division shall specify an appropriate amount of cover using non-toxic material, or special compaction and isolation from ground water contact.
- 120(2)(n) (c) Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution.
- (2) Stabilization. Backfilled materials shall be selectively hauled or conveyed, segregated, and compacted, wherever necessary to prevent leaching of acid-forming and toxic-forming materials into surface or ground waters and wherever necessary to insure stability of the backfilled materials. The method and design specifications of compacting material shall be approved by the Division before acid-forming or toxic-forming materials are covered.

4.14.4 Thin Overburden.

- 120(2)(c) (1) The provisions of 4.14.4 apply only where the final volume is less than 0.8 of the initial volume. Initial volume is the sum of overburden volume and coal volume prior to removal of coal. Final volume is the product of the overburden volume prior to the removal of coal, times the bulking factor to be determined for each permit area. These provisions of 4.14.4 apply only when surface mining activities cannot be carried out to comply with 4.14.1 to achieve the approximate original contour.
- (2) In surface mining activities carried out continuously in the same limited pit area for more than 1 year from the day coal-removal operations begin and where the volume of all available spoil and suitable waste materials over the permit area is demonstrated to be insufficient to achieve the approximate original contour of the lands disturbed, surface mining activities shall be conducted to meet, at a minimum, the following standards:
- (a) Haul or convey, backfill, and grade, using all available spoil and suitable waste materials from the entire mine area, to attain the lowest practicable stable grade, to achieve a static safety factor of 1.3, and to provide adequate drainage and long-term stability of

the regraded areas and cover all acid-forming and toxic-forming materials;

- (b) Eliminate highwalls by grading or backfilling to stable slopes not steeper than 1v:2h (50 percent), or such lesser slopes as the Division may specify to reduce erosion, maintain the hydrologic balance, or allow the approved postmining land use;
- (c) Haul or convey, backfill, grade, and revegetate in accordance with 4.15, to achieve an ecologically sound land use compatible with the prevailing use in unmined areas surrounding the permit area; and
- (d) Haul or convey, backfill, and grade, to ensure impoundments are constructed only where:
 - (i) It has been demonstrated to the Division's satisfaction that all requirements of 4.15 have been met; and
 - (ii) The impoundments have been approved by the Division as suitable for the approved postmining land use and as meeting the requirements of these Rules and all other applicable Federal and State laws and regulations.

4.14.5 Thick Overburden.

120(2)(c)

- (1) The provisions of 4.14.5 apply only where the final volume is greater than 1.2 of the initial volumes. Initial volume is the sum of overburden volume and coal volume prior to removal of coal. Final volume is the product of the overburden volume prior to the removal of coal, times the bulking factor to be determined for each permit area. The provisions of 4.14.5 apply only when surface mining activities cannot be carried out to comply with 4.14.1 to achieve the approximate original contour.
- (2) In surface mining activities where the volume of spoil over the permit area is demonstrated to be more than sufficient to achieve the approximate original contour, surface mining activities shall be conducted to meet, at a minimum, the following standards:
 - (a) Haul or convey, backfill, and grade all spoil and wastes, not required to achieve the approximate original contour of the permit

area, to the lowest practicable stable grade, to achieve a static factor of safety of 1.3 and cover all acid-forming and other toxic-forming materials;

- (b) Haul or convey, backfill, and grade excess spoil and wastes only within the permit area and dispose of such materials in accordance with 4.09;
- (c) Haul or convey, backfill, and grade excess spoil and wastes to maintain the hydrologic balance, in accordance with 4.05 and to provide long-term stability by preventing slides, erosion and water pollution;
- (d) Haul or convey, backfill, grade, and revegetate wastes and excess spoil to achieve an ecologically sound land use approved by the Division as compatible with the prevailing land uses in unmined areas surrounding the permit area;
- (e) Eliminate all highwalls and depressions by backfilling with spoil and suitable waste materials; and
- (f) Meet all the revegetation requirements of 4.15 for all disturbed areas.

4.14.6 Regrading or Stabilizing Rills and Gullies

120(2)(d) Rills and gullies, which form in areas that have been regraded and topsoiled shall be filled, regraded, or otherwise stabilized when such rills and gullies:

- (1) Disrupt the approved postmining land use;
- (2) Prohibit successful revegetation; or
- (3) Cause or contribute to a violation of water quality standards for a receiving stream.

4.15 REVEGETATION

4.15.1 General Requirements.

120(2)(b) (1) Each person who conducts surface coal mining operations shall establish
120(2)(c) on all affected land a diverse, effective and permanent vegetation cover

120(2)(d)
120(2)(e)

of the same seasonal variety native to the area of disturbed land, or species that support the approved postmining land use. This vegetation cover shall meet the requirements of 4.15.2. For areas designated as prime farmland, the requirements of 4.25 shall be met.

- (2) All revegetation shall be in compliance with the plans submitted under 2.05.3 and 2.05.4, as approved by the Division in the permit, and carried out in a manner that encourages the prompt establishment of vegetation cover and recovery of productivity levels compatible with the approved postmining land use.
 - (a) The reclamation of all disturbed land, except water areas, surface areas of roads, and other facilities that are approved as a part of the postmining land use, shall include seeding or planting to achieve a permanent vegetation cover as specified in (1) above.
 - (b) The vegetation cover shall be capable of stabilizing the soil surface to achieve erosion control equal to premining levels.
 - (c) If the approved postmining land use is cropland, planting of the crops normally grown in the area will meet the requirements of paragraphs (1) and (2)(a) above.
 - (d) If fish and wildlife is to be a planned postmining land use in accordance with 2.05.5, the requirements of 4.18(5)(i) shall be satisfied as appropriate and as approved by the Division to achieve and complement the planned uses.
- (3) Each person who conducts surface coal mining operations shall maintain any necessary fences and utilize proper management practices.
- (4) Each person who conducts coal mining operations shall monitor revegetation as required by the Division. The extent, scope and frequency of monitoring required shall be based upon good cause shown by the Division taking into consideration the specific conditions at the site. Such monitoring may employ methods different from those used in baseline vegetation data collection or evaluation of revegetation success. Monitoring need not meet statistical adequacy requirements, but shall represent the revegetated area. The Division's use of the data shall not provide a basis for determinations of revegetation success.

- (5) Each operator shall submit a weed management plan that will become part of the permit requirements. Species to be considered shall be noxious weeds as set forth in the permit. The plan shall also address invasion of other weed species that seriously threaten the continued development of desired vegetation. Weed control methods shall also be used whenever the inhabitation of the disturbed area by weeds threatens further spread of weeds to nearby areas.

4.15.2 Use of Species.

Plant species may be approved for use only if the species meet the following criteria:

- (1) The species are compatible with the plant and animal species of the area;
- (2) The species meet the requirements of applicable State and Federal seed or introduced species statutes and are not poisonous or noxious; and
- (3) Introduced species may be used after appropriate field trials and/or relevant technical literature have demonstrated that the introduced species are desirable and necessary to achieve the approved postmining land use.

4.15.3 Seeding and Planting.

- (1) Seeding and planting of disturbed areas shall be conducted during the first normal period for favorable planting conditions after final preparation for seeding or planting. The normal period for favorable planting shall be that planting time generally accepted locally for the type of plant materials selected.
- (2) The permittee shall utilize seeds, seedlings or other plant materials adapted to the area, i.e. from a seed source of similar habitat when available in sufficient quality and quantity.

4.15.4 Mulching and Other Soil Stabilizing Practices.

- (1) Soil stabilizing practices approved by the Division shall be used on all regraded and topsoiled areas.

- (2) When required by the regulatory authority, mulches shall be mechanically or chemically anchored to the soil surface to assure effective protection of the soil and vegetation.
- (3) A cover crop may be used in place of or in conjunction with mulch, when the Division determines that it will provide adequate soil erosion control and will later be replaced by perennial species approved for the postmining land use.
- (4) When approved by the Division, chemical soil stabilizers alone, or in combination with appropriate mulches, may be used to meet temporary soil stabilization requirements.

4.15.5 Grazing.

- (1) Domestic livestock grazing must not commence until one year after seeding or planting and shall be managed to promote the postmining land use.
- (2) In no case shall grazing be allowed to preclude or interfere with postmining vegetation sampling as required in 4.15.8.

4.15.6 Field Trials.

- (1) The permittee shall be encouraged to establish small test plots of limited planned duration, intended to assess the effectiveness of proposed or ongoing revegetation plans. These field trials may include tests of various aspects of the plan such as different seed mixes, alternative soil stabilization procedures and variations in seeding or planting times. The Division shall comment on the design and appropriateness of the field trials.
- (2) Such test plots shall not be considered experimental practices, as defined in 2.06.2.
- (3) In certain instances, where the Division has identified a potential concern with respect to one or more aspects of the proposed revegetation plan, the Division may require field trials as described in (1) above.

4.15.7 Determining Revegetation Success: General Requirements and Standards.

- (1) Success of revegetation shall be measured by the techniques identified in these rules.
- (2) The plan for revegetation required as part of a permit application in 2.05.4(2)(e) includes a description of measures proposed to be used to determine the success of revegetation. Such description shall, at a minimum, contain the following information:
 - (a) A discussion of the applicable success criteria under 4.15.8, 4.15.9 or 4.15.10, and how the revegetation plan will allow for these success criteria to be met;
 - (b) Design approaches and methods to be used in the measurement and sampling of all applicable parameters such as vegetative cover and productivity, species diversity and woody plant density, and how the applicable measurement and sampling requirements of 4.15.11 will be met;
 - (c) Statistical demonstrations to be performed and how the demonstrations comply with 4.15.11.
 - (d) A discussion of the comparisons to be made between the reclaimed and undisturbed areas in order to demonstrate that the success criteria in 4.15.8, 4.15.9 or 4.15.10 have been met. Upon approval of the Division, such comparisons of vegetative cover and herbaceous productivity, woody plant density, species diversity, seasonal variety or other applicable parameters shall be based on one or more of the following:
 - (i) Reference areas as described in 4.15.7(3);
 - (ii) Standards of vegetative cover or herbaceous productivity, or other applicable parameters, established by reference to technical documents of the United States Department of Agriculture, United States Department of Interior, or other authorities. These documents must be approved by the Division and the Director;
 - (iii) Standards, based on pre-mining data, for the evaluation of species diversity, woody plant density, or seasonal variety on the reclaimed surface;

- (iv) Standards, based on pre-mining data, for evaluation of vegetative cover or herbaceous productivity, for those plant communities which the Division determines are minor significance within the permit area and do not constitute critical or unique habitat;
 - (v) Standards, based on reference to a historic record of pre-mining conditions for the land to be disturbed, for vegetative cover and herbaceous productivity, or other applicable parameters. Such standards must be derived from statistically adequate samples collected over a period of several years;
 - (vi) Standards, for permit areas totalling 40 acres or less in size or for underground mines where the total area to be affected by surface operations or facilities is 40 acres or less, based on pre-mining data for the area to be disturbed which are obtained from statistically valid sampling procedures and collection methods. The pre-mine data must be representative of local conditions for land under proper management.
- (3) In those cases where reference areas are to be used to determine the success of revegetation, these must be approved by the Division as a part of the permit according to the following criteria:
- (a) Reference areas shall be selected to be representative of each plant community, as defined in 2.04.10, present within the area to be disturbed, unless otherwise approved by the Division.
 - (b) The permittee shall demonstrate statistically, to the satisfaction of the Division, that each proposed reference area is comparable to its equivalent area to be disturbed in terms of vegetative cover and herbaceous productivity and other applicable parameters with the following exceptions:
 - (i) Where cropland is the approved postmining land use, the permittee need only demonstrate that the proposed reference area is comparable to the equivalent area to be disturbed in terms of crop production.

- (ii) Where post-mining land use of the area to be disturbed will be different than pre-mining land use, the permittee must demonstrate that the reference area selected is suitable for evaluation of the alternative approved post-mining land use and representative of vegetation characteristic of properly managed lands in the vicinity of the permit area, with similar ecological site conditions. Selection of a separate reference area representative of each plant community present within the area to be disturbed is not required. More than one reference area for a particular post-mining land use may be required to be representative of differing ecological sites in the permit area as determined by pre-mining inventories and the reclamation plan. The demonstration of statistical equivalency with pre-mining disturbed area cover and herbaceous production is not required.

The permittee must demonstrate that management of the reference area will be under the permittee's control and, will remain under the permittee's control throughout the period of extended liability under the performance bond requirements of 3.02.3.

- (iii) Where the planned post-mining land use will be the same as the pre-mining land use, but the vegetation community structure of the area to be disturbed will differ significantly from pre-mining, a reference area may be selected based on its approximation of vegetation characteristics which reflect reclamation plan objectives, rather than its similarity to pre-mining vegetation.

In such cases, selection of a separate reference area representative of each plant community present within the area to be disturbed is not required. Consequently, the demonstration of statistical equivalency for vegetation cover and herbaceous production between the reference area and a particular plant community, which will not be replaced, is not required.

Such reference areas will be approved only when the permittee has demonstrated that the altered vegetation community structure will be as effective as pre-mining

vegetation in meeting the post-mining land use needs, and in controlling erosion.

The permittee must demonstrate that the reference area selected reflects proper land management and is representative of the ecological site conditions for the reclaimed area as determined by pre-mining inventories and the reclamation plan.

The permittee must demonstrate that management of the reference area will be under the permittee's control and, will remain under the permittee's control throughout the period of extended liability under the performance bond requirements of 3.02.3.

- (c) The size of the reference area(s) shall be sufficient to allow for valid comparisons with the revegetated area;
 - (d) Reference areas shall be managed in a manner which is in accordance with the approved postmining land use for the area to be mined;
 - (e) In those instances where fencing of the reference areas is necessary to meet the management requirements of (d) above, a buffer zone shall be included within the fence, adequate to eliminate edge effects; and
 - (f) During any year when vegetation sampling related to a bond release application is conducted by the permittee, the reference area(s) and revegetated area(s) shall receive the same management.
- (4) The primary methods by which reference areas may be utilized, upon approval of the Division, to determine revegetation success are:
- (a) For reference areas as described in 4.15.7(3)(a) and (b)(i), comparison of an individual reference area representative of a certain plant community which existed on the premining surface with the corresponding plant community planted on the revegetated surface.
 - (b) For reference areas as described in 4.15.7(3)(a) and (b)(i), comparisons of weighted averages between reference areas and

revegetated areas. In such a weighting technique, a single comparison would be made between all reference areas and the entire revegetated area, and would be based on the relative area occupied by each plant community in the premining surface.

- (c) For reference areas as described in 4.15.7(3)(b)(ii) and (iii), comparison of an individual reference area representative of a specified ecological site based on soil, elevation and topographic characteristics with a corresponding site on the revegetated surface.
- (d) For reference areas as described in 4.15.7(3)(b)(ii) and (iii), comparisons of weighted averages between reference areas and revegetated areas. In such a weighting technique, a single comparison would be made between all reference areas and the entire revegetated area, and would be based on the relative area occupied by each ecological site on the revegetated surface.

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- (5) The liability period under the performance bond requirements of 3.02.3 begins after the last year of augmented seeding, fertilization, irrigation or other work. The liability period shall continue for not less than either five (5) or ten (10) years, as appropriate, as described in 3.02.3. The revegetation success criteria as defined in relevant subsections of 4.15, shall be met for at least two of the last four years of the liability period. Sampling for final revegetation success shall not be initiated prior to year nine (9) of the liability period. The liability period shall re-initiate whenever augmented seeding, planting, fertilization, irrigation, or other augmentive work is required or conducted. Management activities that are not augmentive and are approved as normal husbandry practices may be conducted without re-initiating the liability period under the following specified conditions:
 - (a) Repair of rills and gullies of limited areal extent, which do not result from deficient backfilling and grading or deficient surface drainage design or implementation, is a normal husbandry practice. To be considered of limited areal extent, no more than five percent of the acreage initially revegetated during any one year shall be reaffected by rill and gully repair or revegetation. Revegetation treatments specifically necessitated by repair activities are part of these practices. The nature, location and extent of erosion repair work must be fully described in the annual reclamation report.

- (b) Weed control measures conducted in compliance with the "Colorado Weed Management Act" (§ 35-5.5-115) and the Division's "Guideline for the Management of Noxious Weeds on Coal Mine Permit Areas" are considered normal husbandry practices. The revegetation specifically necessitated by such measures and approved by the Division shall not re-initiate the liability period, if less than five percent of the acreage initially reclaimed in any one year is revegetated. The location and extent of such revegetation must be fully described in the annual reclamation report.

The "Colorado Weed Management Act" (§ 35-5.5-115) and the Division's "Guideline for the Management of Noxious Weeds on Coal Mine Permit Areas" are hereby incorporated by reference as they existed on the date of these regulations. This rule does not include later amendments to or editions of the incorporated material. Copies of the Weed Management Act are available on the Department of Agriculture's, Division of Plant Materials, web site. The Guideline for Management of Noxious Weeds on Coal Mine Permit Areas is available on the Division of Minerals and Geology's web site. Both documents are also available at cost upon request from the Division and are available at the Division's Denver office.

- (c) Annual seeding, cultivation, fertilization, and irrigation associated with production of annual crops are considered to be normal husbandry practices when such practices are consistent with normal or prudent management in the region and could reasonably be expected to occur after final bond release. Documentation that irrigation and fertilization rates and methods are appropriate shall be based on applicable publications of the Cooperative Extension Service of Colorado State University, the Colorado Department of Agriculture, or the United States Department of Agriculture, or the written recommendations of the Colorado State University Cooperative Extension director for the county in which the mine is located.
- (d) Fertilization and irrigation, annual tillage and leveling, and periodic stand renewal including major tillage and reseeding associated with perennial alfalfa or grass hay cropland are considered to be normal husbandry practices when such practices

are consistent with normal or prudent management in the region and could reasonably be expected to occur after final bond release.

Documentation that fertilization and irrigation application rates and methods are appropriate, and that the other practices addressed are reasonable or necessary is required. Such documentation shall be based on applicable publications of the Cooperative Extension Service of Colorado State University, the Colorado Department of Agriculture, or the United States Department of Agriculture, or the written recommendations of the Colorado State University Cooperative Extension director for the county in which the mine is located.

- (e) Fertilization and irrigation associated with pasture land forage production are considered to be normal husbandry practices when such practices are consistent with normal or prudent management in the region and could reasonably be expected to occur after final bond release. Documentation that irrigation and fertilization application rates and methods are appropriate shall be based on applicable publications of the Cooperative Extension Service of Colorado State University, the Colorado Department of Agriculture, the United States Department of Agriculture, or the written recommendations of the Colorado State University Cooperative Extension director for the county in which the mine is located.
- (f) When tree or shrub establishment is required, limited replanting shall be permitted within the first four years of any ten year liability period, upon approval by the Division. The cumulative total number of trees or shrubs transplanted pursuant to this rule shall not exceed twenty percent of the approved standard applicable to the reclaimed parcel. The nature, location and extent of any additional tree or shrub transplanting shall be fully described in the annual reclamation report.
- (g) Interseeding is considered a normal husbandry practice to enhance species or life form diversity on rangeland or wildlife habitat. Interseeding is not an allowable substitute for complete reseeding when a stand is dominated by species which do not support the approved post mine land use, or when vegetation cover is deficient and excessive erosion has resulted. Interseeding shall be permitted within the first four years of any ten-year liability period, upon

approval by the Division. The nature, location and extent of the interseeding must be fully described in the annual reclamation report.

Interseeding is defined as a tool to enhance the diversity of established vegetation. Forb, shrub, and grass species native to the area are considered acceptable. The exact species to be used depends upon the post mining land use. Interseeding only applies to lands where vegetation is established and no other management tools are necessary. In contrast, augmented seeding is reseeding with fertilizer or irrigation, or in response to an unsuccessful reclaimed parcel. If a reclaimed parcel is deficient in vegetative cover due to insufficient moisture, poor germination or improper planting methodologies, augmented seeding would be necessary and the ten year liability period is reinitiated.

4.15.8 Revegetation Success Criteria.

- (1) This Subsection defines the success criteria which must be met for the postmining vegetation to be judged adequate for final bond release. Exceptions to the requirements of 4.15.8 may be granted only under the following conditions:
 - (a) If the approved postmining land use is cropland, the requirements of 4.15.9 shall apply; or
 - (b) In the case of previously mined lands or areas to be developed for industrial or residential use, the requirements of 4.15.10 shall apply.
- (2) Vegetative cover and herbaceous production, species diversity and woody plant density on the reclaimed surface shall be at least equal to (as defined below) the vegetative cover and herbaceous production, species diversity and woody plant density of living plants on the approved reference area or to the standards established in 4.15.7(2)(d). In addition, the vegetation on the reclaimed area shall be of the same seasonal variety native to the area of disturbed land, or shall consist of species that support the approved postmining land use.
- (3)
 - (a) For vegetative cover the revegetated area shall be considered acceptable if statistically adequate sampling and testing pursuant to 4.15.11 demonstrate that the revegetated area cover is not less than

90 percent of the reference area cover or 90 percent of the approved standard or that the revegetated area cover exceeds 90 percent of the reference area cover or 90 percent of the approved standard, unless the Division makes a finding that:

- (i) A higher percentage of herbaceous cover than existed before mining is practicable and is desirable for reducing erosion; or
 - (ii) A lower percentage of herbaceous cover is advisable where there is danger that herbaceous vegetation will out-compete the woody vegetation and hinder its successful establishment, and the lower percentage will be adequate for erosion control.
- (b) For purposes of 4.15.8, cover means either canopy or basal cover of living herbaceous or herbaceous and woody vegetation.
- (4) For herbaceous production the revegetated area shall be considered acceptable if statistically adequate sampling and testing pursuant to 4.15.11 demonstrate that the revegetated area production is not less than 90 percent of the reference area production or 90 percent of the approved standard, or that the revegetated area production exceeds 90 percent of the reference area production or 90 percent of the approved standard. Production shall be measured as current year above-ground biomass of herbaceous vegetation on rangeland, pasture land, or for forage crops. For grain crops, or other non-forage crops, measurement of production shall be limited to the primary harvestable commodity.
- (5) The permittee shall be required to demonstrate, using techniques approved by the Division, that adequate species diversity has been achieved on the revegetated area. Such techniques may include, but not be limited to, diversity indices and/or comparisons of species composition (based on cover or production) between the reclaimed area and the undisturbed vegetation.
- (6) The permittee shall be required to demonstrate, using techniques approved by the Division, that the vegetation on the reclaimed surface consists of a mixture of the species of the same seasonal variety native to the area of disturbed land, or of species that support the approved postmining land use. The vegetation on the reclaimed surface must be of equal or superior utility for the approved postmining land use when

compared with the utility of naturally occurring vegetation during each season of the year.

- (7) For areas with a fish and wildlife habitat, combination rangeland/fish and wildlife habitat, or recreation post-mining land use, establishment of woody plants on the revegetated area shall be considered acceptable if statistically valid sampling and testing pursuant to 4.15.11 demonstrate that woody plant density mean is not less than 90 percent of the reference area or 90 percent of the approved standard, or that the woody plant density mean exceeds 90 percent of the reference area or 90 percent of the approved standard, or that the woody plant density median exceeds 70 percent of the approved technical standard. For areas with a wildlife postmining land use minimum stocking levels, planting arrangements, and methods for mitigation of potential adverse impacts must be determined on the basis of local and regional conditions after consultation with the and approval by the Colorado Division of Wildlife.
 - (a) For the purposes of 4.15.8, density shall be determined by the number of countable tree and shrub stems per unit area. A countable tree or shrub stem means a woody plant stem that can be used in the calculation of density under the following criteria:
 - (i) The tree or shrub shall be in place at least two growing seasons;
 - (ii) The tree or shrub stem shall be alive and healthy;
 - (iii) The stems to be counted, will be determined by methods approved by the Division based on species characteristics.
 - (b) For areas with a fish and wildlife, combination rangeland/fish and wildlife, or recreation postmining land use initially seeded after November 30, 2005, demonstrations of successful establishment of woody plants shall include documentation showing that all required woody plant establishment efforts were completed during the first four years of the liability period. Any natural woody plant regeneration will count towards the success standard.
- (8) Where the approved postmining land use is forestry, the revegetated area will be stocked using documented local and regional reforestation practices of appropriate State or Federal agencies for the species to be

planted in the commercial forest, with the exception that, where no such practices exist, the minimum acceptable stocking rate shall be 450 trees per acre. The stocking rate and planting arrangement for commercial tree species shall be approved by the State Forester. Establishment of the trees shall be considered acceptable if the density is not less than 90 percent of the standard. Stocking rates shall be determined on the basis of countable trees which can be used in the calculation of density under the following criteria:

- (a) The tree shall be of a species deemed appropriate for the forestry post-mine land use by the Division;
- (b) The tree shall be alive and healthy and shall have been in place at least two growing seasons; and
- (c) At the time of final bond release, at least 80 percent of the trees used to determine such success shall have been in place for at least 60 percent of the minimum period of liability, as described in 3.02.3.

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4.15.9 Revegetation Success Criteria: Cropland.

For areas to be used as cropland, success of revegetation shall be determined on the basis of crop production from the mined area as compared to approved reference areas or other approved standard(s). Crop production from the mined area shall not be less than that of the approved reference area or standard for two of the last four years of the liability period established in 3.02.3. Crop production shall not be considered prior to year nine of the liability period. With respect to annual grain crops for which the cropping cycle may incorporate a summer fallow year, two of the last four cropping years will be considered. This liability period shall commence on the date of initial planting of the crop being grown. Production shall be considered equal if it is not less than 90% of the production as determined from the reference area or approved standard with 90% statistical confidence.

4.15.10 Revegetation Success Criteria: Previously Mined Lands; Areas to be Developed for Industrial or Residential Use.

- (1) For previously mined areas that were not reclaimed to the requirements of these Rules as a minimum ground cover of living plants shall not be less than can be supported by the best available topsoil or other suitable

material in the reaffected areas, shall not be less than the ground cover existing before redisturbance, and shall be adequate to control erosion;

- (2) With the exception of areas specified in 4.15.10(3), for areas to be developed for industrial or commercial, or residential use less than 2 years after regrading is completed, or less than 2 years after approval of such use, whichever is later, the ground cover of living plants shall not be less than required to control erosion. Final bond release shall not occur prior to satisfactory cover establishment.
- (3) For mine support facilities located within areas where the pre-mining land use was industrial or commercial, and the approved post-mining land use is industrial or commercial, the vegetation requirement of 4.15.10(2) may be waived if requested in writing by the landowner, and if the Division determines that revegetation is not necessary to control erosion.

4.15.11 Revegetation Sampling Methods and Statistical Demonstrations for Revegetation Success

- (1) All aspects of the vegetation sampling program must be conducted to ensure a repeatable, unbiased estimate of the appropriate population parameter. Consistency in sampling shall be required in comparisons between the reclaimed area and the undisturbed areas. Both random and systematic sampling designs are acceptable. Double sampling (involving measurements and estimations as equivalent sample data) is not acceptable.
 - (a) Vegetation cover shall be sampled using one of the following methods.
 - (i) Point intercept in which the observational unit is a series of points along a transect. The transect is a minimum of 5 meters in length, with at least 50 data points at regular intervals along the transect. A point sampling device supported by a rigid frame must be utilized to ensure unbiased point placement; or
 - (ii) Line intercept in which the observational unit is a transect tape at least 5 meters in length; or

- (iii) Quadrat sampling in which the observational unit is a plot frame at least $\frac{1}{4}$ square meter and large enough to encompass individual plants of the larger species being sampled. Quadrats can be distributed independent of transects or treated as subsamples when associated with other quadrats along a transect. Plot frames must be marked in discrete increments appropriate for the level of accuracy required for unbiased, repeatable estimates of cover by species.
- (b) Herbaceous Production shall be sampled using one of the following methods.
 - (i) Quadrat sampling in which the observational unit is a rectangular or circular plot frame at least $\frac{1}{4}$ square meter and large enough to encompass individual plants of the larger species being sampled. Production estimates are made by clipping current annual growth of herbaceous, non-woody, species within each quadrat, and bagging, drying and weighing the clippings. Drying must be consistent with the technical standard where applicable (i.e. air-dry or oven-dry). Where reference areas are used, samples will be dried at 105 degrees Celsius to constant weight. For non-forage crops such as grain, fruit or vegetables, the plant material sampled shall be restricted to the harvested commodity. Quadrats can be distributed independent of transects or treated as subsamples when associated with other quadrats along a transect. If quadrats are used to sample non-forage crops such as grain, fruit, or vegetable crops, the plant material sampled shall be restricted to the primary harvested commodity; or
 - (ii) Total harvest method. If the total harvest method is used for non forage crops such as grain, fruit, or vegetable crops, the plant material sampled shall be restricted to the harvested commodity.
- (c) Woody plant density shall be sampled using one of the following methods.

- (i) Belt transects which are elongate quadrats at least 1 meter wide by at least 5 meters long. Woody plants rooted in the quadrat are counted.
 - (ii) Circular or rectangular quadrats at least one meter squared which can be distributed independent of transects or treated as subsamples when associated with other quadrats along a transect. Woody plants rooted in the quadrat are counted.
- (2) Demonstrations of sample adequacy and revegetation success for cover and productivity shall be made with one of the following statistically valid approaches in (a), (b), or (c). Demonstrations of sample adequacy and revegetation success for woody plant density shall be made with one of the following statistically valid approaches in (a), (b), or (c), or with one of the alternative approaches specified 4.15.11(3).
- (a) If the reclaimed area sample mean is equal to or greater than 90 percent of the relevant success standard, success may be demonstrated by direct comparison if sample size adequacy is demonstrated by the formula below. A minimum of 15 sample observations shall be taken even if statistical sample adequacy is achieved with fewer observations.

$$n_m = \frac{t^2 s^2}{(d\bar{x})^2}$$

where:

n_m = minimum sample size

s^2 = Sample variance (n-1 degrees of freedom)

d = Precision (0.10 for cover and production; 0.15 for woody plant density)

\bar{x} = Sample arithmetic mean

t = The ($\alpha = .10$) t-table value for a 1 tail t-test, n-1 degrees of freedom (infinite degrees of freedom may be used if $n > 30$)

n = Sample size

- (b) If the reclaimed area sample mean is less than 90 percent of the relevant standard, a one sided t-test with alpha error probability of 0.10 shall be used to demonstrate that the reclaimed area mean is

not less than 90 percent of the applicable success standard with 90 percent statistical confidence. If the basic assumption, or null hypothesis, of equality between the reclaimed area and 90 percent of the standard is not rejected by the test, then reclamation is considered successful for the parameter tested. This is the “standard null” hypothesis approach to the t-test. Sample size adequacy must be demonstrated using the formula in (a) above. A minimum of 15 sample observations shall be taken even if statistical sample adequacy is achieved with fewer observations. The general form of the “standard null” t-test is:

$$t_c = \frac{Q - \bar{x}}{S_{\bar{x}}}$$

Where:

\bar{x} = Bond Release Block Sample Mean

Q = 90% of Standard

$S_{\bar{x}}$ = Standard error of mean [s/\sqrt{n}]

S = Sample standard deviation

n = Sample size

t_c = Calculated t value

t_t = Table t value

The null hypothesis being tested is that the bond release block mean (μ) is greater than or equal to 90% of the standard, stated as $H_0: \mu \geq Q$.

If t_c is less than or equal to the 1-tailed t table value for alpha error probability of .10, at (n-1) degrees of freedom (infinite degrees of freedom may be used if $n > 30$), then H_0 is not rejected, and revegetation is deemed successful for the parameter tested.

- (c) If the reclaimed area sample mean is greater than 90 percent of the standard, and sample adequacy is not demonstrated using the formula in (a), success may be demonstrated by use of the “reverse” null hypothesis. Under the reverse null approach, a one sided t-test with alpha error probability of 0.20, is used to demonstrate that the reclaimed area mean is greater than 90 percent of the relevant success standard with 80 percent statistical

confidence. The basic assumption, or null hypothesis, is that the reclaimed area mean is less than or equal to 90 percent of the standard. If the null hypothesis of equality is rejected by the test, then reclamation is considered successful for the parameter tested.

A minimum sample size of thirty is required. The general form of the “reverse null” t-test is:

$$t_c = \frac{\bar{x} - Q}{S_{\bar{x}}}$$

Where:

\bar{x} = Bond Release Block Sample Mean

Q = 90% of Standard

$S_{\bar{x}}$ = Standard error of mean [s/\sqrt{n}]

S = Sample standard deviation

n = Sample size

t_c = Calculated t value

t_t = Table t value

The null hypothesis being tested is that the bond release block mean (μ) is less than or equal to 90% of the standard, stated as $H_0: \mu \leq Q$.

If t_c is greater than the 1-tailed t table value for alpha error probability of .20, with (n-1) degrees of freedom (infinite degrees of freedom may be used if $n > 30$), then H_0 is rejected, and revegetation is deemed successful.

- (3) Demonstrations of sample adequacy and revegetation success for woody plant density may be made with one of the following valid approaches, in lieu of the approaches in (2) above.
 - (a) A reverse null approach based on the median, as set forth below, is allowable. In this approach, it must be demonstrated that the lower 80 percent confidence limit on the reclaimed area median is greater than 70 percent of the relevant success standard. A minimum sample size of thirty is required.

Step 1: Rank sample observation values in ascending order from 1 to n.

Step 2: Calculate approximate lower 80% confidence limit on the median with the following formula (from Gilbert, 1987. Statistical Methods for Environmental Pollution Monitoring. See Page 142, Equation 11.13 and related narrative. This book is hereby incorporated by reference as it existed on the date of adoption of these rules and does not include later revisions to the book. The book can be viewed at the Division as set forth in Rule 1.01(9)).

$$L = p(n+1) - Z [np (1-p)]^{1/2}$$

where:

- L = order statistic corresponding to the one sided lower 80% confidence limit
- p = .5 (e.g. the .5 quantile, or median)
- n = sample size
- Z = 0.842 (the t-table value for infinite degrees of freedom for 1 sided test; alpha = .20)

Note that the value for L will be an order statistic, and likely will not be an integer. If L is an integer (for example, 12) the lower confidence limit is the 12th ranked value in the data set. In the more likely event that L is not an integer, the limit is obtained by linear interpolation between the closest order statistics. For example, if L = 11.506, then the lower confidence limit is the value that is 50.6% of the way between the 11th and 12th order statistics.

- (b) If the reclaimed area sample mean is equal to or greater than 90 percent of the relevant success standard, but sample adequacy is not achieved using the formula in 4.15.11(2)(a) above, success may be demonstrated by direct comparison and sample adequacy may be established by:
 - (i) a minimum sample size of 75, and minimum quadrat size of 100 square meters.
 - (ii) a stabilization of the reclaimed area shrub density mean as a demonstration of sample adequacy using the formula below. In this formula, variance of the running sample mean is

substituted for sample variance in the numerator, with a specified precision level of 0.03 in the denominator. A minimum of 40 sample observations shall be taken even if statistical sample adequacy is achieved with fewer observations.

$$n_m = \frac{t^2(\text{Var}\bar{x})}{(d\bar{x})^2}$$

where:

Var \bar{x} = Variance of Running Sample Mean (n-1 degrees of freedom)
d = Precision (0.03)
 \bar{x} = Sample arithmetic mean
t = The ($\alpha = .10$) t-table value for a 1 tail t-test, n-1 degrees of freedom (infinite degrees of freedom may be used if $n > 30$)
n = Sample size

- (c) If the reclaimed area sample mean is less than 90 percent of the relevant standard, a one sided t-test with alpha error probability of 0.10 shall be used to demonstrate that the reclaimed area mean is not less than 90 percent of the applicable success standard with 90 percent statistical confidence. If the basic assumption, or null hypothesis, of equality between the reclaimed area and 90 percent of the standard is not rejected by the test, then reclamation is considered successful for woody plant density. Statistical sample size adequacy must be demonstrated, and the formula in 3(b)(ii) based on stabilization of the running sample mean may be used in lieu of the formula in 2(a). If sample size adequacy is demonstrated using the formula in 3(b)(ii), a minimum of 40 sample observations shall be taken even if statistical sample adequacy is achieved with fewer observations. In addition, if this variant of the sample adequacy formula is employed, the standard deviation of the running sample mean (square root of the variance of the running sample mean) must be substituted in the t-test formula for the sample standard deviation [“s” in the formula specified in 2(b)].

4.16 POSTMINING LAND USE

4.16.1 General.

120(2)(b) All areas affected by surface coal mining operations shall be restored in a
121(2)(j) timely manner:

- (1) To conditions that are capable of supporting the uses which they were capable of supporting before any mining; or
- (2) To higher or better uses achievable under criteria and procedures of 4.16.

4.16.2 Determining Postmining Use of Land.

The postmining land use shall be determined after consideration for the use(s) before any mining and the appropriateness of such use(s) based on the land's capability.

- (1) The postmining land use for land that has been previously mined and not reclaimed shall be determined on the basis of the uses which the land was capable of supporting prior to any mining or of the higher and better uses that can be achieved and are compatible with surrounding areas.
- (2) The postmining land use for land that has received improper management shall be judged on the basis of the premining use of surrounding lands that have received proper management. If such lands are not available for comparison, the standard by which postmining land use will be set will be determined by the Division.
- (3) If the premining use of the land was changed within 5 years of the beginning of mining, the Division may require the postmining use to be determined from the historic use of the land instead of its use immediately preceding mining.

4.16.3 Alternative Land Uses.

Alternative land uses may be approved by the Division after consultation with the landowner or the land-management agency having jurisdiction over the lands, if the following criteria are met:

- (1) The proposed postmining land use is compatible with adjacent land use and, where applicable, with existing local, State, or Federal land use policies and plans: any required approval, including any necessary zoning or other changes required for land by local, State or Federal land management agencies, shall be obtained and remain valid throughout the surface coal mining operations.
- (2) Where necessary, specific plans shall be prepared and submitted to the Division which show the feasibility of the postmining land use as related to projected land use trends and markets including a schedule showing how the proposed use will be developed and achieved within a reasonable time after mining and will be sustained. The Division may require appropriate demonstrations to show that the planned procedures are feasible, reasonable, and integrated with mining and reclamation, and that the plans would result in successful reclamation.
- (3) The proposed use will not present actual or probable hazard to public health or safety nor will it pose actual or probable threat of water flow diminution or pollution contrary to State or Federal laws, Rules or Regulations.
- (4) The use shall not involve unreasonable delays in reclamation.
- (5) Necessary approval of measures to prevent or mitigate adverse effects on fish, wildlife, and related environmental values and threatened or endangered plants shall be obtained from the Division and appropriate State and Federal fish and wildlife management agencies. Such agencies shall have a 60-day period in which to review the plan before surface coal mining operations begins.
- (6) Proposals to change premining land uses of range, fish and wildlife habitat, forest land, hayland, or pasture to a postmining cropland would require continuous maintenance such as seeding, plowing, cultivation, fertilization, or other similar practices to be practicable or to comply with applicable Federal, State, and local laws, shall be reviewed by the Division to ensure that:
 - (a) There is sufficient water available and committed to maintain crop production; and
 - (b) Topsoil quality and depth are sufficient to support the proposed use.

4.17 AIR RESOURCE PROTECTION.

111(1)(i) Each person who conducts surface coal mining and reclamation operations shall stabilize and protect all surface areas, including spoil piles, to effectively control erosion and attendant air pollution and shall conduct such operations in such a manner so as to comply with all applicable State and Federal air quality statutes and regulations.

Editor's Note: The following section replaces 2 CCR 407-2, 5.

4.18 PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

- 120(2)(x)
121(2)(k)
- (1) Any person conducting surface coal mining operations shall, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts of the operations on fish, wildlife, and related environmental values, and, where practicable, achieve enhancement of such resources.
 - (2) No surface coal mining operations shall be conducted which will or is likely to:
 - (a) Jeopardize the continued existence of endangered or threatened species listed by the Secretary;
 - (b) Result in the destruction or adverse modification of designated critical habitats of such species in violation of the Endangered Species Act (16 U. S. C. 1531 et seq.); or
 - (c) Result in the unlawful taking of a bald or golden eagle, its nest, or any of its eggs.
 - (3) (a) A person who conducts surface coal mining operations shall promptly report to the Division the presence in the permit area of:
 - (i) Any threatened or endangered animal or plant species listed or proposed to be listed by the State or Secretary;
 - (ii) Any critical habitat of any threatened or endangered animal or plant species listed or proposed to be listed by the State or Secretary; or

- (iii) Any bald or golden eagle, or nest thereof, of which that person becomes aware and which was not previously reported to the Division by that person.
 - (b) Upon notification, the Division shall, after consultation with appropriate State and Federal fish and wildlife agencies, identify whether, and under what conditions, the operator may proceed.
- (4) A person who conducts surface coal mining operations shall ensure that electric power lines and other transmission facilities used for or incidental to surface mining activities on the permit area are designed and constructed to minimize electrocution hazards to raptors, except where the regulatory authority determines that such requirements are unnecessary.
- (5) Each person who conducts surface coal mining operations, to the extent possible using the best technology currently available, shall:
 - (a) Locate and operate roads so as to avoid or minimize impacts to fish and wildlife species;
 - (b) Fence roadways where specified by the Division to guide locally important wildlife to roadway underpasses. No new barrier shall be created in known and important wildlife migration routes as identified by the State;
 - (c) Fence, cover, or use other appropriate methods to exclude wildlife from ponds which contain hazardous concentrations of toxic-forming materials;
 - (d) Restore, enhance where practicable, or avoid disturbance to habitats of unusually high value for fish and wildlife as identified by the State;
 - (e) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks of streams, lakes and other wetland areas;
 - (f) Afford protection to aquatic communities by providing stream channel buffer zones as required in 4.05.18 and 4.20.4 or restoring stream channels as required in 4.05.4;

- (g) Not use persistent pesticides on the area during surface mining and reclamation operations, unless approved by the Division;
- (h) To the extent possible, prevent, control, and suppress range, forest, and coal fires which are not approved by the Division as part of a management plan;
- (i) In accordance with 4.15.1(2)(d), if fish and wildlife habitat is to be a planned postmining land use designated pursuant to 2.05.5, the operator shall, as appropriate and as approved by the Division:
 - (i) Select plant species to be used on reclaimed areas, based on the following criteria:
 - (A) Their proven nutritional value for fish and wildlife,
 - (B) Their uses as cover for fish and wildlife, and
 - (C) Their ability to support and enhance fish and wildlife habitat after release of bonds; and
 - (ii) Distribute plant groupings to maximize benefit to fish and wildlife. Plants should be grouped and distributed in a manner which optimizes edge effect, cover, and other benefits for fish and wildlife;
- (j) Where cropland is to be the postmining land use and where appropriate for wildlife and crop management practices, intersperse the fields with trees, hedges, fence rows or areas of natural vegetation throughout the cultivated area to break up large blocks of monoculture or to diversify habitat types for birds and other animals; and
- (k) Where the primary land use is to be residential, public service, or industrial land use, intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs and trees useful as food and cover for birds and small animals, unless such green belts are inconsistent with the approved postmining land use.

4.19 PROTECTION OF UNDERGROUND MINING

- 120(2)(1) (1) No surface coal mining activities shall be conducted closer than 500 feet, measured horizontally, of either an active or abandoned underground mine, except that the Division shall permit an operator to mine near, through or partially through an abandoned underground mine or closer to an active underground mine if:
- (a) The nature, timing, and sequence of the operations are jointly approved by the Division, the Mine Safety and Health Administration or its successor, and the State agency, if any, responsible for the safety of mine workers; and
 - (b) The activities result in improved resource recovery, abatement of water pollution, or elimination of hazards to the health and safety of the public.
- (2) Surface coal mining activities shall be designed to protect disturbed surface areas, including spoil disposal sites, so as not to endanger any present or future operations of either surface or underground mining activities.

4.20 SUBSIDENCE CONTROL

4.20.1 General Requirements.

- 121(2)(a)(I) (1) Underground mining activities shall be planned and conducted so as to prevent subsidence from causing material damage to the surface, to the extent technologically and economically feasible, so as to maintain the value and reasonably foreseeable use of surface lands. This may be accomplished by leaving adequate coal in place, backfilling, or other measures to support the surface, or by conducting underground mining in a manner that provides for planned and controlled subsidence. Nothing in 4.20 shall be construed to prohibit the standard method of room and pillar mining.
- (2) The person engaged in underground mining activities shall comply with all provisions of the subsidence control plan, if required, and approved by the Division in accordance with 2.05.6(6).
- (3) At the time of revision to a permit, or for permit renewal, to the extent not previously submitted, the operator shall submit a detailed plan of the underground workings. The plan shall include maps and descriptions, as appropriate, of significant features of the underground mine,

including the size, configuration, and approximate location of pillars and entries, extraction ratios, measures taken to prevent or minimize subsidence and related damage, areas of full extraction, and other information requested by the Division for good cause shown. Upon request of the operator, information submitted with the detailed plan may be held confidential, in accordance with Rule 2.07.5(1)(b).

4.20.2 Public Notice.

121(1) The mining schedule shall be distributed by mail to all owners of property and residents within the area above the underground workings and adjacent areas. Each such person shall be notified by mail at least six months prior to mining beneath his or her property or residence. The notification shall contain, in minimum:

- (1) Identification of specific areas in which mining will take place;
- (2) Dates of mining activities that could cause subsidence and affect specific structures; and
- (3) Measures to be taken to prevent or control adverse surface effects.

4.20.3 Surface Owner Protection.

121(2)(a)(I)(1) Each person who conducts underground mining activities shall adopt all measures of the subsidence control plan approved by the Division to reduce the likelihood of subsidence, to prevent subsidence from causing material damage or reducing the value or reasonably foreseeable use of surface lands, and to mitigate the effects of any such damage or reduction which may occur.

121(2)(a)(II) (2) Each person who conducts underground mining activities which result in subsidence that causes material damage or reduces the value or reasonably foreseeable use of surface lands shall, with respect to each of the following surface areas or uses affected by subsidence:

- (a) Promptly restore or rehabilitate any renewable resource lands for which the value or reasonably foreseeable use has been reduced or which have been materially damaged. Such lands shall be restored or rehabilitated to a condition capable of maintaining the value and reasonably foreseeable and appropriate uses they were capable of

supporting before subsidence, to the extent technologically and economically feasible.

- (b) (i) Promptly repair, rehabilitate, restore, or replace damaged occupied residential dwellings and related structures or noncommercial buildings; or
- (ii) Compensate the owner of the damaged occupied residential dwelling and related structure or noncommercial building in the full amount of the diminution in value resulting from the subsidence. Compensation may be accomplished by the purchase, prior to mining, of a noncancellable, premium-prepaid insurance policy.

- 121(2)(a)(III) (c) Nothing in 4.20.3 shall be deemed to grant or authorize an exercise of power of condemnation or the right of eminent domain by any person engaged in underground mining activities.

4.20.4 Buffer Zones

- 121(2)(a)
121(2)(i) (1) Underground mining activities shall not be conducted beneath or adjacent to any perennial stream, or impoundment having a storage volume of 20 acre-feet or more, or bodies of water with a volume of 20 acre-feet or more unless the Division, on the basis of detailed subsurface information, determines that subsidence will not cause material damage to streams, water bodies and associated structures. If subsidence causes material damage, then measures will be taken to the extent technologically and economically feasible to correct the damage and prevent additional subsidence from occurring.
- 111(1)(m) (2) Underground mining activities beneath any aquifer that serves as a significant source of water supply to any public water system shall be conducted so as to avoid disruption of the aquifer and consequent exchange of ground water between the aquifer and other strata. The Division may prohibit mining in the vicinity of the aquifer or may limit the percentage of coal extraction to protect the aquifer and water supply.
- 121(3) (3) Underground mining activities shall not be conducted beneath or adjacent to any public buildings and facilities, including but not limited to, churches, schools, hospitals, courthouses and government offices, unless the Division, on the basis of detailed subsurface information,

determines that subsidence from those activities will not cause material damage to these structures and specifically authorizes the mining activities.

- (4) In order to protect the stability of affected land, the Division, after consultation with the operator and the Colorado Division of Mines, shall suspend underground coal mining under urbanized areas, cities, towns, and communities, and adjacent to industrial or commercial buildings, major impoundments or permanent streams, if imminent danger is found to inhabitants of the urbanized areas, cities, towns, or communities. If, in the opinion of the Division, the delay necessary for consultation would exacerbate the imminent danger to inhabitants, the Division shall suspend underground coal mining prior to consultation.

4.21 COAL EXPLORATION

4.21.1 Scope.

117 This section sets forth performance standards and design requirements required for coal exploration which substantially disturbs the natural land surface. These performance standards are the minimum standards which shall be required of such exploration, and such exploration, may, at the discretion of the Division, for good cause shown, be further required to comply with applicable performance standards and design requirements of Rule 4.

4.21.2 General Responsibility of Persons Conducting Coal Exploration.

- (1) Each person who conducts coal exploration which substantially disturbs the natural land surface and in which 250 tons or less of coal are removed shall comply with 4.21.
- (2) Each person who conducts coal exploration in which more than 250 tons of coal are removed in the area described by the written approval from the Board or Division, shall comply with the procedures described in the exploration and reclamation plan approved in accordance with 2.02.4 and shall comply with 4.21.

4.21.3 Required Documents.

117(4), 122(4) Each person who conducts coal exploration which removes more than 250 tons of coal shall, while in the exploration area, possess the written approval of the

Board or Division. The written approval shall be available for review by the authorized representative of the Board or Division upon request.

4.21.4 Performance Standards.

The performance standards in 4.21.4 are applicable to coal exploration which substantially disturbs the land surface.

- (1) Habitats of unique value for fish, wildlife, and other related environmental values and areas identified in 2.05.6(2)(a)(iii) shall not be adversely affected during coal exploration.
- (2) The person who conducts coal exploration shall to the extent practicable, obtain supportive information for any permit application that person may submit in accordance with the requirements of Rule 2.
- 120(2)(q) (3)
 - (a) Vehicular travel on other than established graded and surfaced roads shall be limited by the person who conducts coal exploration to that absolutely necessary to conduct the exploration. Travel shall be confined to graded and surfaced roads during periods when excessive damage to vegetation or rutting of the land surface could result.
 - (b) Any new road used for coal exploration, or any existing road which is significantly altered for use in coal exploration, shall comply with the provisions of 4.03.3 and 4.04. A road is significantly altered if it is widened, if the route or gradient is altered, or if the road is otherwise upgraded. Routine maintenance or minor rehabilitation activities including blading and culvert replacement do not constitute significant alteration of an existing road. Other transportation facilities constructed or significantly altered for use in coal exploration shall also comply with the provisions of 4.04.
 - (i) Existing roads or other transportation facilities used for coal exploration must meet all applicable federal, state, and local requirements.
 - (ii) If an existing road or other transportation facility is significantly altered or if use of an existing road or other transportation facility will contribute additional suspended solids to streamflow and runoff, then 4.21.4(7) shall apply

to all areas of the road or other transportation facility which are altered or which will result in such additional contributions.

- (iii) Existing roads which are to remain as permanent roads after exploration activities are completed shall be reclaimed to a condition equal to or better than their pre-exploration condition.
- (4) If excavations, artificial flat areas, or embankments are created during exploration, these areas shall be returned to the approximate original contour promptly after such features are no longer needed for coal exploration.
- (5) Prior to earth moving or excavations of any type, the A and B horizons shall be salvaged and stored in an area that will be undisturbed and not subject to excessive wind or water erosion. The underlying subsoil materials shall, if necessary, be salvaged and stored in an area separate from A and B horizon materials. Immediately upon cessation of operations, the subsoil shall be replaced with the surface left in a roughened condition. The A and B horizons shall then be replaced over the subsoil material.
- (6) Revegetation of areas disturbed by coal exploration shall be performed by the person who conducts the exploration, or his or her agent. If more than 250 tons of coal are removed from the exploration area, all revegetation shall be conducted in compliance with the plan approved by the Division. If 250 tons of coal or less are removed, all revegetation shall be conducted in accordance with the plan submitted to the Division. In all areas revegetation shall be carried out in a manner that encourages prompt vegetation cover and recovery of productivity levels compatible with approved post-exploration land use and in accordance with the following:
 - (a) All disturbed lands shall be seeded or planted to the same seasonal variety native to the disturbed area. If both the pre-exploration and post-exploration land uses are intensive agriculture, planting of crops normally grown will meet the requirements of 4.21.4(6); and
 - (b) The vegetative cover shall be capable of stabilizing the soil surface in regards to erosion.

- (7) With the exception of small and temporary diversions of overland flow of water around new roads, drill pads, and support facilities, no ephemeral, intermittent or perennial stream shall be diverted during coal exploration activities. Overland flow of water shall be diverted in a manner that:
 - (a) Controls erosion;
 - (b) To the extent possible using the best technology currently available, prevents additional contributions of suspended solids to streamflow or runoff outside the exploration area; and
 - (c) Complies with Rule 4.05.3 and all applicable State or Federal requirements.
- (8) Each exploration hole, borehole, well, or other exposed underground opening created during exploration must meet the requirements of 4.07.
- (9) All facilities and equipment shall be removed from the exploration area promptly when they are no longer needed for exploration, except for those facilities and equipment that the Division determines may remain to:
 - (a) Provide additional environmental quality data;
 - (b) Reduce or control the on- and off-site effects of exploration activities; or
 - (c) Facilitates future surface coal mining operations by the person conducting the exploration, under an approved permit.
- (10) Coal exploration shall be conducted in a manner which minimizes disturbance of the prevailing hydrologic balance, and shall include sediment control measures such as those listed in 4.05.5 or sedimentation ponds which comply with 4.05.6 and 4.05.9. If the Division determines that the operation has the potential to negatively impact the quality of groundwater for which quality standards have been established by the Water Quality Control Commission, the exploration shall be conducted so as to insure compliance with applicable ground water standards at points of compliance which shall be established according to the provisions of 4.05.13(1). The Division may specify

additional measures which shall be adopted by the person engaged in coal exploration.

- (11) Toxic- or acid-forming material shall be handled and disposed of in accordance with 4.05.8 and 4.14.3. If specified by the Division, additional measures shall be adopted by the person engaged in coal exploration.

4.21.5 Requirements for a Permit.

- 109(1) Any person who extracts coal for commercial sale during coal exploration operations must obtain a surface coal mining operations permit for those operations from the Division in accordance with 2.01. No permit is required if the Division makes a prior determination that the sale is to test for coal properties necessary for the development of surface coal mining operations for which a permit application is to be submitted at a later time.

4.22 CONCURRENT SURFACE AND UNDERGROUND MINING

120(2)(p) **4.22.1 Scope and Objectives.**

This Section establishes minimum performance standards to ensure the maximum practical recovery of coal resources, to avoid multiple disturbances of surface lands, and to establish a variance from the requirement that reclamation efforts proceed as contemporaneously as practical in cases of combined surface and underground mining activities.

4.22.2 Responsibility and Applicability.

- 120(2)(p)
- (1) The Board or the Division may grant a variance from the requirement that the reclamation efforts proceed as contemporaneously as practical to permit underground mining prior to reclamation in accordance with 2.06.
 - (2) A variance granted in accordance with 4.22 applies only to those specific areas within the permit area that the person has shown to be necessary for implementing the proposed concurrent operations and that the Division has approved in the permit under 2.06.7. The variance is effective for any particular portion of the permit area only for the time necessary to facilitate the authorized underground mining activities.

4.22.3 Variance Requirements.

- 120(2)(p)(I)(1) For a variance to be granted, the Board or the Division must find in writing that:
- (a) The applicant has presented, as part of the permit application in accordance with Rule 2, specific, reasonable plans for the underground mining operations;
 - (b) The proposed underground mining is necessary or desirable to assure maximum practical recovery of the mineral resource and will avoid multiple disturbance of the surface;
 - (c) The applicant has satisfactorily demonstrated that the plan or revision for the underground mining activities conforms to applicable local and State requirements for underground mining and that the permits necessary for the underground mining activities have been issued by the appropriate authorities;
 - (d) The areas proposed for the variance have been shown by the applicant to be necessary for the proposed underground mining;
 - (e) No substantial adverse environmental damage, either on- or off-site, will result from the delay in completion of reclamation as required by 4.22; and
 - (f) Provisions for the off-site storage of spoil will comply with 4.09.
- 120(2)(p)(III) (2) Variances granted under the provisions of 2.06.7 are to be reviewed by the Division not more than three years from the date of issuance of the variance.
- 120(2)(p)(IV) (3) Liability under the bond filed by the applicant with the Division pursuant to Section 34-33-113(2) of the Act and Rule 3, will continue for the duration of the underground mining activities and until the requirements of 4.22.3 and Rule 3 have been fully complied with.

4.22.4 Performance Standards.

- 120(2)(p)(II) In addition to the applicable requirements of Rule 4 each person who conducts combined surface and underground mining activities shall comply with the following:

- 120(2)(l) (1) A 500-foot barrier, measured horizontally, shall be maintained between the surface and underground mining activities, except that the Division shall permit an operator to mine near, through, or partially through an abandoned underground mine or closer to an active underground mine if the nature, timing and sequencing of the approximate coincidence of specific surface coal mining activities with specific underground mine activities are jointly approved by the Division and by the Mine Safety and Health Administration, or its successor, if such operations will result in:
- (a) Improved coal resources recovery;
 - (b) Abatement or water pollution; or
 - (c) Elimination of hazards to the health and safety of the public.
- (2) The vertical distance between combined surface and underground mining activities working separate seams shall be sufficient to provide for the health and safety of the workers and to prevent surface water from entering the underground workings.
- (3) No combined activities shall reduce the protection provided for public health and safety below the level of protection required for those activities if conducted without a variance.

4.22.5 Compliance.

- 120(2)(p)(II) (1) Each person who conducts operations under a variance issued under 2.06.7 shall comply with all applicable requirements of this Rule and 4.22, except to the extent that:
- (a) A delay in compliance with these requirements is specifically authorized by the variance issued under the permit; and
 - (b) The delay in compliance is necessary to achieve the purposes for which the variance was granted.
- (2) Each person who conducts activities under a variance issued under 2.06.7 shall comply with each requirement of the variance as set forth in the permit.

4.23 AUGER MINING

4.23.1 Scope.

120(2)(i) This Section establishes environmental protection performance standards in addition to those applicable performance standards in Rule 4, to prevent any unnecessary loss of coal reserves and to prevent adverse environmental effects from auger mining incident to surface mining activities.

4.23.2 Performance Standards.

120(2)(i) (1) Any auger mining associated with surface mining activities shall be conducted to maximize recoverability of mineral reserves remaining after the mining activities are completed. Each person who conducts auger mining operations shall leave areas of undisturbed coal to provide access for removal of those reserves by future underground mining activities, unless the Division determines that the coal reserves have been depleted or are limited in thickness or extent to the point that it will not be practicable to recover the remaining coal reserves. The Division shall make such determination only upon presentation of appropriate technical evidence by the operator.

Undisturbed areas of coal shall be left in unmined sections which:

- (a) Are a minimum of 250 feet wide at any point between each group of auger openings to the full depth of the auger hole;
 - (b) Are no more than 2,500 feet apart, measured from the center of one section to the center of the next section, unless a greater distance is set forth in the permit application under 2.06.9 and approved by the Division; and
 - (c) For multiple seam mining, shall have a width of at least 250 feet plus 50 feet for each subjacent workable coal seam. The centers of all unmined sections shall be aligned vertically.
- (2) No auger hole shall be made closer than 500 feet in horizontal distance to any abandoned or active underground mine workings, except as approved in accordance with 4.19.

- (3) If the operation involves surface mining activities and augering, the augering shall follow the surface coal mining activities in a contemporaneous manner consistent with the applicable requirements of Rule 4.
- (4) In order to prevent pollution of surface and ground water and to reduce fire hazards, each auger hole, except as provided in 4.23.2(5), shall be plugged so as to prevent the discharge of water from the hole and access of air to the coal, as follows:
 - (a) Each auger hole discharging water containing toxic-forming or acid-forming material shall be plugged within 72 hours after completion by backfilling and compacting non-combustible and impervious material into the hole to a depth sufficient to form a water-tight seal or the discharge shall be treated commencing within 72 hours after completion to meet applicable effluent limitations and water quality standards under 4.05.2 until the hole is properly sealed; and
 - (b) Each auger hole not discharging water shall be sealed as in 4.23.2(4)(a), to close the opening within 30 days following completion.
- (5) An auger hole need not be plugged, if the Division finds:
 - (a) Impoundment of the water which would result from plugging the hole may create a hazard to the environment or public health or safety; and
 - (b) Drainage from the auger hole will not pose a threat of pollution to surface water and will comply with the requirements of 4.05.1 and 4.05.2.
- (6) The Division shall prohibit auger mining, if it determines that:
 - (a) Adverse water quality impacts cannot be prevented or corrected;
 - (b) Fill stability cannot be achieved;
 - (c) The prohibition is necessary to maximize the utilization, recoverability or conservation of the solid fuel resources; or

- (d) Subsidence resulting from auger mining may disturb or damage powerlines, buildings, or other facilities.
- (7)
- (a) Auger mining shall be conducted in accordance with the backfilling and grading requirements of 4.14.
 - (b) Where auger mining operations affect previously mined areas that were not reclaimed to the standards of these rules and the volume of all reasonably available spoil is demonstrated in writing to the Division to be insufficient to completely backfill the highwall, the highwall shall be eliminated to the maximum extent technically practical in accordance with the following criteria:
 - (i) The person who conducts the auger mining operation shall demonstrate to the Division that the backfill, designed by a qualified registered professional engineer, has a minimum static safety factor for the stability of the backfill of at least 1.3.
 - (ii) All spoil generated by the auger mining operation and any associated surface coal mining and reclamation operation, and any other reasonably available spoil shall be used to backfill the area. Reasonably available spoil shall include spoil generated by the mining operation and other spoil located in the permit area that is accessible and available for use and that when rehandled will not cause a hazard to the public safety or significant damage to the environment. For this purpose, the permit area shall include spoil in the immediate vicinity of the auger mining operation.
 - (iii) The coal seam mined shall be covered with a minimum of 4 feet of non-acid, nontoxic-forming material and the backfill graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability.
 - (iv) Any remnant of the highwall shall be stable and not pose a hazard to the public health and safety or to the environment.
 - (v) Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbances will cause instability of the remaining spoil or otherwise increase

the hazard to the public health and safety or to the environment.

4.24 OPERATIONS IN ALLUVIAL VALLEY FLOORS

4.24.1 Scope.

This Section establishes minimum environmental protection performance, reclamation and design standards for surface coal mining operations on or which affect alluvial valley floors in arid or semi-arid regions. This Section sets forth additional standards to preserve essential hydrologic functions, to protect existing or potential agricultural uses and the productivity of alluvial valley floors during and after surface coal mining and reclamation operations, and establishes monitoring requirements.

4.24.2 Essential Hydrologic Functions.

- 120(2)(j)(VI)
- (1) Surface coal mining and reclamation operations shall be conducted to preserve, throughout the mining and reclamation process, the essential hydrologic functions of alluvial valley floors not within a permit area. These functions shall be preserved by maintaining those geologic, hydrologic and biologic characteristics that support those functions.
 - (2) Surface coal mining and reclamation operations shall be conducted to reestablish, throughout the mining and reclamation process, the essential hydrologic functions of alluvial valley floors within a permit area. These functions shall be reestablished by reconstructing those geologic, hydrologic and biologic characteristics that support those functions.
 - (3) The characteristics that support the essential hydrologic functions of alluvial valley floors are those in 2.06.8 and those other geologic, hydrologic, or biologic characteristics identified during premining investigations or monitoring conducted during the surface coal mining and reclamation operation.

4.24.3 Protection of Farming and Water Supplies.

- 114(2)(e)(I)(A)
- (1) Surface coal mining and reclamation operations shall not interrupt, discontinue, or preclude farming on alluvial valley floors that are irrigated or naturally subirrigated, excluding undeveloped rangelands which are not significant to farming on said alluvial valley floors and those lands upon which the Board finds that the farming which will be

interrupted, discontinued, or precluded is of such small acreage as to be of negligible impact to the farm's agricultural production.

- (2) If environmental monitoring shows that a surface coal mining and reclamation operation is interrupting, discontinuing, or precluding farming on alluvial valley floors, the operation shall cease until remedial measures are taken by the person who conducts the operation. The remedial measures shall be approved by the Division prior to the resumption of mining.
- 114(2)(e)(I)(B) (3) Surface coal mining and reclamation operations shall not cause material damage to the quality or quantity of water in surface or underground water systems that supply alluvial valley floors. If environmental monitoring shows that the surface coal mining operation is causing material damage to water that supplies alluvial valley floors, the mining operations shall cease until remedial measures are taken by the person who conducts the operation. The remedial measures shall be approved by the Division prior to the resumption of mining operations.
- 114(2)(e)(II) (4) 4.24.3(1), (2) and (3) do not apply to those lands which were identified in a reclamation plan approved by the State prior to August 3, 1977, for any surface coal mining and reclamation operation that in the year preceding August 3, 1977:
 - (a) Produced coal in commercial quantities and was located within or adjacent to an alluvial valley floor, or
 - (b) Obtained specific permit approval by the Division or Board to conduct surface coal mining and reclamation operations within an alluvial valley floor.

4.24.4 Monitoring.

- 122(2) (1) An environmental monitoring system shall be installed, maintained and operated by the permittee on all alluvial valley floors during surface coal mining and reclamation operations and continued until all bonds are released in accordance with Rule 3. The monitoring system shall provide sufficient information to allow the Division or Board to determine that:

- (a) The important characteristics supporting the essential hydrologic functions of the alluvial valley floor in the permit area have been reestablished after mining;
 - (b) The important characteristics supporting the essential hydrologic functions of an alluvial valley floor in areas not within the permit area are preserved during and after mining; and
 - (c) The operation is not causing material damage to the quantity or quality of water in the surface or ground water systems that supply alluvial valley floors protected under 2.06.8(5)(a)(ii).
- (2) Monitoring shall be performed at adequate frequencies, to indicate long term trends that could affect agricultural use of the alluvial valley floors.
 - (3) Monitoring shall be performed during operations, to identify characteristics of the alluvial valley floor not identified in the permit application and to evaluate the importance of all characteristics as requested by the Division.
 - (4) All monitoring data collected and analyses thereof shall routinely be made available to the Division or Board.

4.25 OPERATIONS ON PRIME FARMLAND

120(2)(g)

4.25.1 Scope.

- (1) This Section sets forth soil removal, stockpiling, and replacement operational requirements and revegetation and other reclamation standards for prime farmlands to ensure that the land will have agricultural productive capacity which is equal after mining to premining levels and the land is not lost as an important national resource.
- (2) The requirements of this section shall not apply to 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 applicable performance standards of Rule 4.

4.25.2 Special Requirements.

- 114(4)(a) (1) A permit shall be obtained for those operations in accordance with 2.06.6.
- 120(2)(g)(I)(2) Soil materials to be used in the reconstruction of the prime farmland soil shall be removed before drilling, blasting, or mining, in accordance with 4.25.3 and in a manner that prevents mixing or contaminating these materials with undesirable material. Where removal of soil materials results in erosion that may cause air and water pollution, the Division shall specify methods to control erosion of exposed overburden.
- 120(2)(t) (3) Revegetation success on prime farmlands shall be measured upon the basis of comparison of actual crop production from the disturbed area, compared to the target level of crop production based on the requirements of 4.15.10 and 4.25.5 as approved by the Division in accordance with 2.06.6(3)(g). If such undisturbed prime farmland is not available for comparison purposes, comparison of production on disturbed areas shall be made with the premining target yields approved by the Division in the permit in accordance with 2.06.6(3)(g).
- (4) The aggregate total prime farmland acreage shall not be decreased from that which existed prior to mining. Water bodies, if any, to be constructed during mining and reclamation operations must be located within the post-reclamation non-prime farmland portions of the permit area. The creation of any such water bodies must be approved by the Division and the consent of all affected property owners within the permit area must be obtained.

4.25.3 Soil Removal and Stockpiling.

Unless exempted by Section 34-33-114(4)(b) of the Act, surface coal mining operation for all prime farmlands as identified in Section 34-33-110(2)(q) of the Act to be mined and reclaimed, must comply with specifications for soil removal, storage, replacement, and reconstruction to be established by the Secretary of the United States Department of Agriculture, and the operator shall be required, as a minimum to:

- 120(2)(g)(I)(1) Segregate the A horizon of the natural soil, except where it can be shown that other available soil materials will create a final soil having a greater productive capacity, and, if not utilized immediately, stockpile within the permit area this material separately from other soil materials and

spoil and provide needed protection from wind and water erosion or contamination by other acid or toxic material in accordance with 4.06.3.

- 120(2)(g)(II) (2) Segregate the B horizon of the natural soil, or underlying C horizons or other strata, or a combination of such or other strata that are shown to be texturally and chemically suitable for plant growth and that can be shown to be equally or more favorable for plant growth than the B horizon, in sufficient quantities to create in the regraded soil a root zone of comparable depth and quality to that which existed in the natural soil, and, if not utilized immediately, stockpile within the permit area this material separately from other removed soil materials and spoil and provided needed protection from wind and water erosion or contamination by acid or toxic material in accordance with 4.06.3.
- (3) Stockpiles in place for more than 30 days shall meet the requirements of 4.06.3.

4.25.4 Soil Replacement.

Surface coal mining and reclamation operations on prime farmlands shall be conducted according to the following:

- 120(2)(g)(III) (1) The minimum depth of soil and soil material to be reconstructed for prime farmland shall be 48 inches, or a depth equal to the depth of a subsurface horizon in the natural soil that inhibits root penetration, whichever is shallower. The Division shall specify a depth greater than 48 inches, wherever necessary to restore productive capacity due to uniquely favorable soil horizons at greater depths. Soil horizons shall be considered as inhibiting root penetration if their densities, chemical properties, or water supplying capacities restrict or prevent penetration by roots of plants common to the vicinity of the permit area and have little or no beneficial effect on soil productive capacity.
- 120(2)(g)(IV) (2) Replace soil material only on land which has been first returned to final grade and prepared according to 4.06.4 unless site-specific evidence is provided and approved by the Division showing that such preparation will not enhance the capability of the reconstructed soil to achieve equivalent or higher levels of yield.
- 120(2)(g)(III) (3) Replace the soil horizons or other suitable soil material in a manner that avoids excessive compaction.

- (4) Replace the B horizon or other suitable material specified in 4.25.3(2) to the thickness needed to meet the requirements of 4.25.4(1).
- (5) Replace the A horizon or other suitable soil materials specified in 4.25.3(1) as the final surface soil layer. This surface soil layer shall equal or exceed the thickness of the original soil, as determined in 2.06.6(2)(a), and be replaced in a manner that protects the surface layer from wind and water erosion before it is seeded or planted.
- (6) Apply nutrients and soil amendments according to the results of soil tests taken after regrading and topsoiling but prior to seeding as approved by the Division to quickly establish vegetative growth.

4.25.5 Revegetation.

120(2)(t)

Each person who conducts surface coal mining activities on prime farmland shall meet the following revegetation requirements during reclamation:

- (1) Following soil replacement, that person shall establish a vegetation cover capable of stabilizing the soil surface with respect to erosion. All vegetation shall be in compliance with the plan approved by the Division under 2.06.6 and carried out in a manner that encourages prompt vegetation cover and recovery of productive capacity. The timing and mulching provisions of 4.15 shall be met.
- (2) Within a time period specified in the permit, but not to exceed 10 years after completion of backfilling and rough grading, any portion of the permit area which is prime farmland must be used for crops commonly grown, such as corn, soybeans, cotton, grain, hay, sorghum, wheat, oats, barley, or other crops on surrounding prime farmland. The crops may be grown in rotation with hay or pasture crops as defined for cropland. The Division may approve a crop use of perennial plants for hay, where this is a common long-term use of prime farmland soils in the surrounding area. Where one or more row crops are the dominant crops grown on prime farmland in the area, that row crop requiring the greatest rooting depth shall be chosen as the reference crop. The level of management shall be equivalent to that based on non-mined prime farmland in the surrounding area.
- (3) Measurement of success in prime farmland revegetation will be determined based upon the techniques approved in the permit by the Division under 2.06.6. At a minimum, the following shall be met:

- (a) Average annual crop production shall be determined based upon a minimum of 3 years of data. Crop production shall be measured for the three cropping years immediately prior to full release of bond in accordance with Rule 3.03.1(2)(c), or partial release of bond in accordance with Rules 3.03.1(2)(b), and 3.03.1(3)(b);
- (b) Reference crop yields for a given crop season are to be determined from:
 - (i) The current yield records of representative local farms in the surrounding area, with concurrence by the U.S. Soil Conservation Service; or
 - (ii) The average county yields recognized by the U.S. Department of Agriculture, which have been adjusted by the U.S. Soil Conservation Service for local yield variation within the county that is associated with differences between non-mined prime farmland soil and all other soils that produce the reference crop. The average reference crop yield may be adjusted with the concurrence of the U.S. Soil Conservation Service for disease, pest, and weather-induced seasonal variability, or differences in specific management practices where the overall management practices of the crops being compared are equivalent;
- (c) Revegetation on prime farmland shall be considered a success when the adjusted 3 year average annual crop production is equivalent to, or higher than, the average yield of the reference crop established for the same period for non-mined soils of the same or similar texture or slope phase of the soil series in the surrounding area under equivalent management practices; and
- (d) In measuring revegetation success on prime farmlands, a statistically valid sampling technique shall be employed. A positive determination of revegetation success shall be made with not less than 90 percent level of confidence in accordance with statistical methods as approved by the Division after consultation with the U.S.D.A. Soil Conservation Service.

4.26 MOUNTAINTOP REMOVAL

4.26.1 Scope.

120(3) This Section establishes special environmental protection performance, reclamation and design standards for mountaintop removal. Erosion control, contour grading, hydrologic balance and spoil placement are specified for those postmining land uses approved by the Division in accordance with a variance issued under 2.06.3 for restoring affected areas to their approximate original contour.

4.26.2 Performance Standards.

(1) Variance conditions.

120(2)(c) Surface coal mining operations may be conducted under a variance from the requirement of 4.26 for restoring affected areas to their approximate original contour, if:

120(3)(a) (a) The Division grants the variance under a permit, in accordance with 2.06.3;

120(3)(a) (b) The activities involve the mining of an entire coal seam running through the upper fraction of a mountain, ridge, or hill, by removing all of the overburden and creating a level plateau or gently rolling contour with no highwalls remaining;

(c) The alternative land use requirements of 4.16 are met;

120(3)(b) (d) In cases where industrial, commercial, agricultural, residential, or public facility including recreational facility use is proposed and approved in accordance with 4.16.3 for the affected land;

120(3)(c)(VII) (e) All applicable requirements of this Rule other than the requirement to restore affected areas to their approximate original contour, are met.

(2) Stabilization.

120(3)(c)(I)
120(2)(u) An outcrop barrier of sufficient width, consisting of the toe of the lowest coal seam, and its associated overburden, are retained to prevent slides and erosion, except that the Division may permit an exemption to

the retention of the coal barrier requirement if the proposed mine site was mined prior to May 3, 1978, and the toe of the lowest seam has been removed.

- 120(3)(c)(II) (3) The final graded slopes on the mined area are flatter than 5h:1v, so as to create a level plateau or gently rolling configuration, and the out-slopes of the plateau do not exceed 1v:2h except where the engineering data substantiates, and the Division finds, in writing, and includes in the permit under 2.06.3 that a minimum static safety factor of 1.5 will be attained.
- (4) Hydrologic balance.
- 120(3)(c)(III) (a) The resulting level or gently rolling contour is graded to drain inward from the outslope, except at specified points where it drains over the outslope in stable and protected channels. The drainage shall not be through or over a valley or head-of-hollow fill.
- 120(3)(c)(IV) (b) Natural watercourses below the lowest coal seam mined are not damaged.
- (c) All waste and acid-forming or toxic-forming materials, including the strata immediately below the coal seam, are covered with non-toxic spoil to prevent pollution and achieve the approved postmining land use.
- (5) Alternative specifications may be utilized after approval by the Division of a thorough analytical demonstration, by a qualified registered professional engineer, that such alternatives shall be as environmentally sound and structurally stable as that resulting from compliance with the requirements of 4.26 and with such other criteria as are necessary to achieve reclamation in accordance with the requirements of this Rule, taking into consideration physical, climatological and other characteristics of the site.

4.26.3 Spoil Placement.

- 120(3)(c)(V) Spoil shall be placed on the mountaintop bench as necessary to achieve the postmining land use approved under 4.26.2(1)(c) and 4.26.2(1)(d). All excess spoil material not retained on the mountaintop shall be placed in accordance with 4.05.13 and 4.09.

4.27 OPERATIONS ON STEEP SLOPES

4.27.1 Scope.

- 120(4)(a) This Section sets forth the environmental performance standards and reclama-
120(4)(b) tion and design standards for surface coal mining and reclamation operations on
steep slopes where steep slope is defined as any slope above 20 degrees or such
lesser slope as may be determined by the Board or Division after consideration
of soil, climate and other characteristics of a region.

4.27.2 Applicability.

- 120(4)(a) Any surface coal mining and reclamation operations on steep slopes shall
comply with the requirements of 4.27. The standards of 4.27 do not apply to
mining conducted on a flat or gently rolling terrain with an occasional steep
slope through which the mining proceeds and leaves a plain or predominately
flat area, or to operations covered by 4.26.

4.27.3 Performance Standards.

Surface coal mining and reclamations operations shall comply with the
following requirements, except to the extent a variance is approved under
2.06.4.

- 120(4)(a)(I) (1) The person engaged in surface coal mining and reclamation operations
shall prevent the following materials from being placed or allowed to
remain on the downslope:
- (a) Spoil;
 - (b) Waste materials, including waste mineral matter;
 - (c) Debris, including that from clearing and grubbing of haul road
construction; and
 - (d) Abandoned or disabled equipment.
- (2) Nothing in 4.27.3 shall prohibit the placement of material in road
embankments located on the downslope, so long as the material used
and embankment design comply with the requirements of 4.03 or 4.04
and the material is moved and placed in a controlled manner.

- 120(4)(a)(II) (3) The highwall shall be completely covered with compacted spoil and the disturbed area graded to comply with the provisions of 4.14, including but not limited to the return of the site to the approximate original contour. The person who conducts the surface coal mining operation must demonstrate to the Board or Division, using standard geotechnical analysis, that the minimum static factor of safety for the stability of all portions of the reclaimed land is at least 1.3.
- 120(4)(a)(III) (4) Land above the highwall shall not be disturbed, unless the Board or Division finds that the disturbance facilitates compliance with the requirements of 4.27.
- 120(4)(a)(I)(5) Material in excess of that required by the grading and backfilling provisions of 4.27.3(3) shall be disposed of in accordance with the requirements of 4.09.
- (6) Woody materials shall not be buried in the backfilled area unless the Board or Division determines that the proposed method for placing woody material beneath the highwall will not deteriorate the stable condition of the backfilled area as required in 4.27.3(3). Woody materials may be chipped and distributed over the surface of the backfill as mulch, if special provision is made for their use and approved by the Board or Division.
- (7) Unlined or unprotected drainage channels shall not be constructed on backfills unless approved by the Division as stable and not subject to erosion.
- (8) Alternative specifications may be utilized after approval by the Division of a thorough analytical demonstration, by a qualified registered professional engineer, that such alternatives shall be as environmentally sound and structurally stable as that resulting from compliance with the requirements of 4.27 and with such other criteria as are necessary to achieve reclamation in accordance with the requirements of this Rule, taking into consideration physical, climatological and other characteristics of the site.

4.27.4 Limited Variances.

- 120(5)(a) Persons may be granted variances from the approximate original contour requirements of 4.27.3(3) for steep slope coal mining and reclamation

operations, if the following standards are met and a permit incorporating the variance is approved under 2.06.5;

- (1) Unless retention of a highwall remnant is specifically authorized pursuant to 4.14.1(2)(f) or 4.14.1(2)(g), the highwall shall be completely backfilled with spoil material, in a manner which results in a static factor of safety of at least 1.3 using standard geotechnical analyses.
- (2) The watershed control of the area within which mining occurs shall be improved, in accordance with the approval by the appropriate State agency, by reducing the peak flow from precipitation or thaw and by reducing the total suspended solids or other pollutants in the surface water discharge during precipitation or thaw. The total volume of flow during every season of the year shall not be altered in such a way that adversely affects the ecology of any surface water or any existing or planned public or private use of surface or ground water. The watershed control may be demonstrated by maps and exhibits reflecting the watershed conditions before and after mining.
- 120(4)(a)(III) (3) Land above the highwall may be disturbed only to the extent that the Board or the Division deems appropriate and approves as necessary to facilitate compliance with the provisions of 4.27 and if the Board or Division find that the disturbance is necessary to:
 - (a) Blend the solid highwall and the backfilled material;
 - (b) Control surface runoff;
 - (c) Provide access to the area above the highwall; or
 - (d) Temporarily store overburden.
- 120(5)(b) (4) The landowner of the permit area has requested, in writing, as part of the permit application under 2.06.5 that the variance be granted.
- (5) The operations are conducted in full compliance with a permit issued with 2.06.5.
- 120(5)(d) (6) Only the amount of spoil as is necessary to achieve the postmining land use, ensure the stability of spoil retained on the bench, and meet all other requirements of the Act and these Rules shall be placed off the

mine bench. All spoil not retained in the bench shall be placed in accordance with 4.09, 4.14.1, and 4.14.2.

4.27.5 Multiple Seam.

120(5)(d) In multiple-seam steep slope affected areas, spoil not required to reclaim and
120(2)(v) restore the permit area may be placed on a pre-existing bench, if approved by the Board or Division and if the following requirements are met:

- (1) All excess spoil must be hauled, placed, and retained on the solid bench;
- (2) The spoil must be graded to the most moderate slope so as to eliminate the existing highwall to the extent possible with the available spoil;
- (3) The fill must comply with 4.09.1 and other applicable requirements of this Rule; and
- (4) The bench on which the spoil is to be placed must have been created and abandoned due to coal mining prior to August 3, 1977.

4.28 COAL PROCESSING PLANTS AND SUPPORT FACILITIES NOT LOCATED AT OR NEAR THE MINESITE OR NOT WITHIN THE PERMIT AREA FOR THE MINE

4.28.1 Scope.

103(26)(a)(b) This Section establishes requirements for construction, operation, maintenance, modification, reclamation and removal activities of coal processing plants and support facilities incident to surface or underground mining activities not located at or near the minesite or not within the permit area for the mine.

4.28.2 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 in accordance with 2.06.10 to conduct those operations and comply with 4.28.3.

4.28.3 Performance Standards.

Construction, operation, maintenance, modification, reclamation, and removal activities at operations covered by 4.28 shall comply with the following:

- (1) Signs and markers for the coal processing plant, coal processing waste disposal area, and water treatment facilities shall comply with 4.02.
- (2) Roads, transport, and associated structures shall be constructed, maintained, and reclaimed in accordance with 4.03 and 4.04.
- (3) Any stream or channel realignment shall comply with 4.05.4.
- (4) If required by the Division, any disturbed area related to the coal processing plant or associated facilities shall have sediment control structures, in compliance with 4.05.5 and 4.05.6 and all discharges from these areas shall meet the requirements for 4.05.1 and 4.05.2 and any other applicable State or Federal law.
- (5) Permanent impoundments associated with coal processing plants shall meet the requirements of 4.05.9 and 4.05.17. Dams constructed of or impounding coal processing waste shall comply with 4.11.
- (6) Use of water wells shall comply with 4.05.14 and water rights shall be protected in accordance with 4.05.15.
- (7) Disposal of coal processing waste, solid waste, and excavated materials shall comply with 4.09 and 4.11, respectively.
- (8) Discharge structures for diversions and sediment control structures shall comply with 4.05.7.
- (9) Air pollution control measures associated with fugitive dust emissions shall comply with 4.17.
- (10) Fish, wildlife, and related environmental values shall be protected in accordance with 4.18.
- (11) Slide areas and other surface areas shall comply with 4.12.
- (12) Adverse effects upon or resulting from nearby underground coal mining activities shall be minimized by appropriate measures including, but not limited to, compliance with 4.05.6 and 4.19.

- (13) Reclamation shall include proper topsoil handling procedures, revegetation, and abandonment, in accordance with 4.12, 4.14, 4.15, 4.16, 4.21, and 4.05.17.
- (14) Conveyors, buildings, storage bins or stockpiles, water treatment facilities, water storage facilities, and any structure or system related to the coal processing plant shall comply with the requirements of Rule 4.
- (15) Any coal processing plant or associated structures located on prime farmland shall meet the requirements of 4.25.
- (16) Points of compliance shall be established for any operation covered by 4.28 in accordance with 4.05.13(1), if the Division determines that the operation has the potential to negatively impact the quality of groundwater for which quality standards have been established by the Water Quality Control Commission.

4.29 IN SITU PROCESSING

4.29.1 Scope.

- 103(26)(a)
- (1) This Section establishes special environmental protection, reclamation and design standards to ensure all in situ processing activities are conducted in a manner which preserves and enhances environmental values in accordance with the Act and these Rules.

4.29.2 Performance Standards.

- (1) The person who conducts in situ processing activities shall comply with 4.01-4.20 and 4.29.
- (2) In situ processing activities shall be planned and conducted to minimize disturbance to the prevailing hydrologic balance by:
 - (a) Avoiding discharge of fluids into holes or wells, other than as approved by the Division;
 - (b) Injecting process recovery fluids only into geologic zones or intervals approved as production zones by the Division;
 - (c) Avoiding annular injection between the wall of the drill hole and the casing; and

- (d) Preventing discharge of process fluid into surface waters.
- (3) Each person who conducts in situ processing activities shall submit for approval as part of the application for permit under 2.06.11 and follow after approval, a plan that ensures that all acid-forming, toxic-forming, or radioactive gases, solids, or liquids constituting a fire, health, safety, or environmental hazard and caused by the mining and recovery process are promptly treated, confined, or disposed of, in a manner that prevents contamination of ground and surface waters, damage to fish, wildlife and related environmental values, and threats to public health and safety.
- (4) Each person who conducts in situ processing activities shall prevent flow of the process recovery fluid:
 - (a) Horizontally beyond the affected area identified in the permit; and
 - (b) Vertically into overlying or underlying aquifers.
- (5) Each person who conducts in situ processing activities shall restore the quality of affected ground water in the permit and adjacent area, including ground water above and below the production zone, to the approximate premining levels or better, to ensure that the potential for use of the ground water is not diminished.

4.29.3 Monitoring.

- (1) Each person who conducts in situ processing activities shall monitor the quality and quantity of surface and ground water and subsurface flow and storage characteristics, in a manner approved by the Division in accordance with 4.05.13, to measure changes in the quantity and quality of water in surface and ground water systems in the permit and in adjacent areas.
- (2) Air and water quality monitoring shall be conducted in accordance with monitoring programs approved by the Division as necessary according to appropriate Federal and State air and water quality standards.

4.30 CESSATION OF OPERATIONS

4.30.1 Temporary.

- 103(26) (1) Each person who conducts surface or underground mining activities shall
- 120(2), 121(2) effectively support and maintain all surface access openings to underground operations, and secure surface facilities in areas in which there are no current operations, but operations are to be resumed under an approved permit. Temporary abandonment shall not relieve a person of the obligation to comply with any provisions of the approved permit.
- (2) Before temporary cessation of mining and reclamation operations for a period of 30 days or more, or as soon as it is known that a temporary cessation will extend beyond 30 days, the permittee shall notify the Division. Within 90 days after notifying the Division, the permittee shall submit to the Division a notice of intention to cease temporarily or abandon operations. This notice shall include a statement of:
- (a) The exact number of surface acres and the horizontal and vertical extent of subsurface strata which have been affected in the permit area prior to cessation or abandonment;
 - (b) The extent and kind of reclamation of surface area which will have been accomplished through the date of cessation or abandonment;
 - (c) Identification of the backfilling, regrading, revegetation, environmental monitoring, underground opening closures and water treatment activities that continue during the temporary cessation; and
 - (d) A brief description of the circumstances surrounding the temporary cessation of operations and anticipated date for resumption of operations, if known.
- (3) As soon as a temporary cessation extends beyond 30 days, the operator shall modify the mine identification sign to include the name, address, and telephone number of the Division office where the mining and reclamation permit is filed.

4.30.2 Permanent.

- 103(26) (1) Persons who cease surface or underground mining activities permanently
- 120(2), 121(2) shall close or backfill or otherwise permanently reclaim all affected areas, in accordance with these Rules and the permit approved by the Division.
- (2) All underground openings, surface equipment, or other facilities not required for continued underground mining activities or monitoring, unless approved as suitable for the postmining land use or environmental monitoring, shall be removed and the affected lands reclaimed.
- (3) When surface or underground mining and reclamation activities have permanently ceased, the operator shall modify the mine identification sign; to include the name, address, and telephone number of the Division office where the mining and reclamation permit is filed; until the Division has terminated jurisdiction over the surface coal mining operation.

RULE 5 INSPECTIONS, ENFORCEMENT AND CIVIL PENALTIES

5.01 GENERAL PROVISIONS

5.01.1 Scope.

Rule 5 sets forth requirements for:

- (1) The inspection of surface coal mining and reclamation operations and of coal exploration operations which substantially disturb the natural land surface;
- (2) The enforcement by the Division and Board of the Act, these Rules, and all conditions of the permits and coal exploration approvals imposed under the State program; and
- (3) The assessment of penalties for violations of the Act, these Rules, and conditions of permits or exploration approvals.

5.01.2 Applicability.

117(3), 123 Permittees, operators of surface coal mining and reclamation operations, and persons requiring coal exploration approval or engaged in coal exploration activities which substantially disturb the natural land surface are subject to the provisions of Rule 5.

5.01.3 Responsibilities.

- 105
- (1) The Division is responsible for:
 - (a) Conducting inspections of surface coal mining and reclamation operations and coal exploration activities which substantially disturb the natural land surface;
 - (b) Responding to citizens' requests for inspections;
 - (c) Issuing cessation orders when a surface coal mining operation or coal exploration activity creates an imminent danger to the health or safety of the public, or is causing or can reasonably be expected to cause significant environmental harm to land, air, or water resources;

- (d) Issuing notices of violation to any persons or operators who are in violation of the Act or any conditions of exploration approvals or permits required by the Act, and requiring abatement of such violations;
 - (e) Holding informal public hearings on the portions of any notices of violation or cessation orders which require cessation of mining;
 - (f) Issuing orders to show cause why permits should not be suspended or revoked for patterns of violations; and
 - (g) Assessing civil penalties, holding assessment conferences to resolve issues surrounding penalties, and entering into assessment agreements with violators regarding the payment of agreed penalties.
- (2) The Board is responsible for:
- (a) Holding public hearings on the suspension or revocation of permits for patterns of violations and deciding whether permits should be suspended or revoked;
 - (b) Holding public hearings on notices of violation or cessation orders to enable operators, persons conducting coal exploration activities subject to the Act, or any persons having interests which are or may be adversely affected to present information relating to the issuance, continuance, modification, vacation, or termination of such notices or orders;
 - (c) Holding public hearings on the amount of penalties or the fact of violations; and
 - (d) Suspending penalties in appropriate cases.

5.02 INSPECTIONS

5.02.1 Scope.

This Section sets forth the requirements for inspection by the Division of surface coal mining and reclamation operations and of coal exploration activities which substantially disturb the natural land surface.

5.02.2 Frequency, Time and Manner of Inspections.

- 122(4)(b)
- (1) The Division shall conduct an average of at least one partial inspection per month of each active surface coal mining and reclamation operation under its jurisdiction. A partial inspection is an on-site or aerial review of a permittee's compliance with some of the permit conditions and requirements.
 - (2) The Division shall conduct an average of at least one complete inspection per calendar quarter of each active and inactive surface coal mining and reclamation operation under its jurisdiction. A complete inspection is an on-site review of a permittee's compliance with all permit conditions and requirements within the entire area disturbed or affected by surface coal mining and reclamation operations.
 - (3)
 - (a) Aerial inspections shall be conducted in a manner which reasonably ensures the identification and documentation of conditions at each surface coal mining and reclamation site inspected.
 - (b) Any potential violation observed during an aerial inspection shall be investigated on-site within three days from the date of the inspection. Any indication of a condition, practice or violation constituting cause for the issuance of a cessation order as outlined in Section 34-33-123(1) of the Act shall be investigated on-site immediately. An on-site investigation of a potential violation observed during an aerial inspection shall not be considered to be an additional partial or complete inspection for the purposes of paragraphs (1) and (2) of this section.
 - (4) For the purposes of this section, an inactive surface coal mining and reclamation operation is one for which:
 - (a) The Division has secured from the permittee the written notice provided for under Section 4.30 of these regulations: or
 - (b) Reclamation as defined at Rule 3.03.1(2)(b) has been completed and liability of the permittee has been reduced by the Division accordingly.

- (5) The Division shall conduct periodic inspections of all coal exploration activities which substantially disturb the natural land surface and may conduct periodic inspection of all other coal exploration activities.
- 122(4)(b) (6) Inspections shall occur on an irregular basis during times of operation
122(4)(c) of the mine. Inspection may occur at any time at sites if a surface coal mining operation does not have a valid permit under these rules or if there is reason to believe in a particular instance that significant environmental harm exists. The inspections shall occur without prior notice to the permittee or his agents or employees, except as necessary for on-site meetings with the permittee.
- 122(4)(c) (7) The inspections shall include the filing of inspection reports by the authorized representative of the Division who conducted the inspection. Inspection forms shall be approved by the Board.
- (8) In lieu of the inspection frequency established in paragraphs (1) and (2) of this section, the Division shall inspect each abandoned site on a set minimum frequency commensurate with the public health and safety and environmental considerations present at each site, but in no case shall the inspection frequency be set at less than one complete inspection per calendar year.
- (a) In selecting an alternate inspection frequency authorized under the paragraph above, the Division shall first conduct a complete inspection of the abandoned site and provide public notice under paragraph (8)(b) of this section. Following the inspection, the Division shall prepare and maintain for public review a written finding and proposed decision justifying the alternative inspection frequency selected. This written finding shall justify the new inspection frequency by affirmatively addressing in detail all of the following criteria:
- (i) How the site meets each of the criteria under the definition of an abandoned site under Rule 1.04(1) and thereby qualifies for a reduction in inspection frequency;
- (ii) Whether, and to what extent, there exist on the site impoundments, earthen structures, or other conditions that pose, or may reasonably be expected to develop into, imminent dangers to the health or safety of the public or

significant environmental harms to land, air, or water resources;

- (iii) The extent to which existing impoundments or earthen structures were constructed and certified in accordance with prudent engineering designs approved in the permit;
 - (iv) The degree to which erosion and sediment control is present and functioning;
 - (v) The extent to which the site is located near or above urbanized areas, communities, occupied dwellings, schools, and other public or commercial buildings and facilities;
 - (vi) The extent of reclamation completed prior to abandonment and the degree of stability of reclaimed and/or unreclaimed areas, taking into consideration the physical characteristics of the land mined and the extent of settlement or revegetation that has occurred naturally with them; and
 - (vii) A review of the complete and partial inspection report record for the site during at least the last two consecutive years, and estimates of the rate at which adverse environmental or public health and safety conditions have and can be expected to progressively deteriorate.
- (b) The public notice and opportunity to comment required under paragraph (8)(a) of this section shall be provided as follows:
- (i) The Division shall place a notice in the newspaper with the broadest circulation in the locality of the abandoned site providing the public with a 30-day period in which to submit written comments.
 - (ii) The public notice shall contain the permittee's name, the permit number, the precise location of the land affected, the inspection frequency proposed, the general reasons for reducing the inspection frequency, the bond status of the permit, the telephone number and address of the regulatory authority where written comments on the reduced inspection frequency may be submitted, and the closing date of the comment period.

- (c) The Division shall implement a final inspection frequency based on its findings and any additional information received during the comment period.

5.02.3 Right of Entry.

- 122(5) (1) Each permittee shall conspicuously maintain at each entrance to the surface coal mining and reclamation operations a clearly visible sign which sets forth the name, business address and telephone number of the permittee and the permit number of the surface coal mining and reclamation operations.
- 117(5)
122(4)(a) (2) Any authorized representative of the Division, upon presentation of appropriate credentials, shall have the power to enter at reasonable times, without delay, upon or through any surface coal mining and reclamation operations or any coal exploration operations and to have access to and copy any record, wherever located, and to inspect any monitoring equipment or method of exploration or operation, required under the Act, these Rules or any permit or exploration approval. A search warrant shall not be required for such purposes.

5.02.4 Availability of Records.

- 122(8) (1) Copies of all records, reports, inspection materials, or information obtained under these Rules by the Division or Board, except information identified as confidential, shall be immediately available to the public at the Division office and at a convenient place in the area of mining to which the information pertains until the Division has terminated jurisdiction at the surface coal mining operation, pursuant to 3.03.3(1).
- (2) After the Division has terminated jurisdiction over surface mining activities pursuant to 3.03.3(1), copies of all records, reports, inspection materials, or information obtained under these Rules by the Division or Board, except information identified as confidential, will be maintained at the Division office. Copies of the subject information will be available for public review or will be provided promptly by mail at the request of interested persons. The information will be retained for at least five years after the expiration of the period during which the subject operation is active or is covered by any portion of reclamation bond, whichever is later.

- (3) In order to protect preparation for hearings and enforcement proceedings, the Director of OSM and the Division and Board may enter into agreements regarding procedures for the special handling of investigative and enforcement reports and other attorney work-product materials.

5.02.5 Inspections Based Upon Citizen's Requests.

- 122(7) (1) Any person who believes there is a violation of the Act, these Rules, or permit conditions required by the Act or that any imminent danger or harm exists, may request the Division to conduct an inspection for violations.
 - (a) The Division shall conduct the inspection if the citizen request is a signed written request or an oral request followed by a signed written request, which gives the Division sufficient basis to believe that a violation of the Act, these Rules, or any permit or exploration approval has occurred. The Division shall conduct the inspection within 10 days of receipt of the written request. If the request gives the Division sufficient basis to believe that imminent danger or harm exists, the inspection shall be conducted no later than the next day, following receipt of such request.
 - (b) The Division will have "sufficient basis to believe" if:
 - (i) The request alleges facts that, if true, would constitute any of the above-described violations; or
 - (ii) The request either states the basis upon which the facts are known by the requesting citizen or provides other corroborating evidence sufficient to give the Division a basis to believe that the violation has occurred.
- (2) The identity of any person supplying information to the Division in requesting an inspection shall remain confidential, if requested by that person, unless that person elects to accompany the inspector on the inspection pursuant to (3) below. Such confidentiality shall extend to all materials that may be furnished to alleged violators under (4) and (5) below.
- 122(7) (3) When an inspection is to be conducted as a result of a citizen's request, the Division shall notify the person who made the request as far in

advance as is practicable, of the date and time when the proposed inspection is to be conducted. Such person shall be allowed to accompany the inspecting authorized representative during the inspection provided that he or she has submitted the written request for an inspection under 5.02.5(1)(a), and remains in the presence of and under the control, direction and supervision of the authorized representative, and agrees to comply with all applicable State and Federal safety rules and regulations during the inspection.

102, 122(7)(4) Within 10 days of the inspection, or if no inspection is conducted, within 15 days of receipt of the citizen's written request, the Division shall send the person requesting the inspection and the alleged violator the following:

- (a) If an inspection was conducted, either a description of the enforcement action taken or an explanation of why no enforcement action was taken;
- (b) If no inspection was conducted, an explanation of the reason why; and
- (c) In either case, an explanation of the person's right, if any, to informal review of the action or inaction of the Division under (5) below.

122(7) (5) Any person who has requested an inspection may request in writing that the Administrator informally review the Division's decision either not to inspect or not to take enforcement action on the basis of an inspection with respect to any violation alleged by that person. The Administrator shall conduct the informal review and report the results in writing to both the person requesting the review and the alleged violator within 30 days of the Administrator's receipt of the request for review. Informal review under 5.02.5(5) shall not affect any right to formal review under 34-33-124 of the Act or to a citizen's suit under 34-33-135 of the Act.

5.02.6 Review of Adequacy of Inspections.

- (1) Any person who is or may be adversely affected by a surface coal mining and reclamation operation or a coal exploration operation may notify the Administrator in writing of any alleged failure on the part of the Division to make adequate complete or partial inspections as required in 5.02.2(1) and (2). The notice shall include information

sufficient to establish a reasonable belief that 5.02.2(1) and (2) are not being complied with and shall demonstrate that the person is or may be adversely affected.

- (2) The Administrator shall, within 15 days of its receipt of the notice determine whether 5.02.2(1) and (2) are being complied with. If it is determined that 5.02.2(1) and (2) are not being complied with by the Division, the Administrator shall immediately order the Division to conduct such inspections as are needed to remedy the noncompliance. The Administrator shall also furnish the complainant with a written statement of the reasons for such determinations and the actions, if any, taken to remedy the noncompliance.

5.03 ENFORCEMENT

5.03.1 Scope.

This Section sets forth the general requirements for enforcement by the Division and Board of the Act, and these Rules, all conditions of permits and coal exploration approvals imposed under the state program, including provisions relating to notices of violation, cessation orders, and suspensions or revocations of permits. Penalties in connection with notices of violation and cessation orders are set forth in 5.04.

5.03.2 Cessation Orders and Notices of Violation.

- 123(1)
- (1)
 - (a) When an authorized representative of the Division conducts any inspection and determines that any condition or practice subject to the Act, or any violation of the Act, these Rules, or any permit or exploration approval exists at a surface coal mining operation or coal exploration operation and that such condition, practice, or violation creates an imminent danger to the health or safety of the public or is causing or can reasonably be expected to cause significant environmental harm to land, air, or water resources, then such authorized representative shall immediately order a cessation of the surface coal mining and reclamation operations or coal exploration operations of the portion thereof relevant to the condition, practice, or violation.
 - (b) Surface coal mining and reclamation operations conducted by any person without a valid permit or coal exploration operations conducted without the required approval constitute a condition or practice which causes or can reasonably be expected to cause

significant, imminent environmental harm to land, air or water resources.

- (c) When the authorized representative determines that a cessation ordered pursuant to (1)(a) above will not completely abate the imminent danger or the significant harm or reasonable expectation thereof in the most expeditious manner physically possible, such authorized representative shall, in addition to the cessation order, impose affirmative obligations on the operator or person who issued the cessation order requiring abatement of the danger or significant harm or reasonable expectation thereof. The order shall fix a reasonable time, not to exceed 90 days, within which abatement shall be accomplished and may require, among other things, the use of existing or additional personnel and equipment.
- (d) Within sixty days after issuing a cessation order, the Division shall notify in writing any person who has been identified under 2.07.7(5) and 2.03.4(3) and (4) as owning or controlling the permittee, that the cessation order was issued and that the person has been identified as a controller.
- (e) The Division may refrain from issuing a cessation order for a violation at an abandoned site, as defined in 1.04(1), if abatement of the violation is required under any previously issued notice or order.

117(3), 123(2) (2)

- (a) When an authorized representative of the Division conducts any inspection and determines that any condition or practice subject to the Act, or any violation of the Act, these Rules, or any permit or exploration approval exists at a surface coal mining operation or coal exploration operation but that such condition, practice, or violation does not create an imminent danger or significant harm or reasonable expectation thereof for which a cessation order must be issued under (1)(a) above, then such authorized representative shall issue a notice of violation to the operator or person conducting surface coal mining operations or coal exploration operations subject to the Act or to the designated agent of either.
- (b) Notices of violation shall fix a reasonable time, not to exceed 90 days, within which abatement shall be accomplished; provided, that an extension of the abatement period originally fixed may be allowed in writing by the authorized representative, subject to the

foregoing overall 90 day limitation, upon written request and showing of good cause for such an extension, except upon a showing by the person who is issued a notice of violation pursuant to (a) above that it is not feasible to abate the violation within 90 calendar days due to one or more of the circumstances in 5.03.2(2)(c).

- (c) An extended abatement date pursuant to this section shall not be granted when the failure to abate within 90 days has been caused by a lack of diligence or intentional delay by the permittee or person who is issued a notice of violation pursuant to (a) above in completing the remedial action required. Circumstances which may qualify a surface coal mining operation for an abatement period of more than 90 days are:
 - (i) Where the permittee of an ongoing permitted operation has timely applied for and diligently pursued a permit renewal or other necessary approval of designs or plans but such permit or approval has not been or will not be issued within 90 days after a valid permit expires or is required for reasons not within the control of the permittee;
 - (ii) Where there is a valid judicial order precluding abatement within 90 days as to which the permittee or other person who is issued a notice of violation pursuant to (a) above has diligently pursued all rights of appeal and as to which he or she has no other effective legal remedy;
 - (iii) Where the permittee or other person who is issued a notice of violation pursuant to (a) above cannot abate within 90 days due to a labor strike;
 - (iv) Where climatic conditions preclude abatement within 90 days, or where, due to climatic conditions, abatement within 90 days clearly would cause more environmental harm than it would prevent or;
 - (v) Where abatement within 90 days requires action that would violate safety standards established by statute or regulation under the Mine Safety and Health Act of 1977.

- 123(2) (d) Whenever an abatement time in excess of 90 days is permitted, interim abatement measures shall be imposed to the extent necessary to minimize harm to the public or the environment.
- 123(3) (e) If any of the conditions in paragraph (c) of this section exist, the permittee or other person who is issued a notice of violation pursuant to (a) above may request the authorized representative to grant an abatement period exceeding 90 days, the authorized representative shall not grant such an abatement period without the concurrence of the Administrator or his or her designee and the abatement period granted shall not exceed the shortest possible time necessary to abate the violation. The permittee or other person who is issued a notice of violation pursuant to (a) above shall have the burden of establishing by clear and convincing proof that he or she is entitled to an extension under the provisions of 5.03.2(2)(b) and (c). In determining whether or not to grant an abatement period exceeding 90 days the authorized representative may consider any relevant written or oral information from the permittee or any other source. The authorized representative shall promptly and fully document in the file his or her reasons for granting or denying the request. The authorized representative's immediate supervisor shall review this document before concurring in or disapproving the extended abatement date and shall promptly and fully document the reasons for his or her concurrence or disapproval in the file.
- 123(3) (f) Any determination made under paragraph (e) of this section shall be appealable to the Mined Land Reclamation Board in accordance with 5.03.5.
- (g) No extension granted under paragraph (e) of this section may exceed 90 days in length. Where the condition or circumstance which prevented abatement within 90 days exists at the expiration of any such extension, the permittee or other person who is issued a notice of violation pursuant to (a) above may request a further extension in accordance with the procedures of paragraph (e) of this section.
- (h) The Division may refrain from issuing a notice of violation for a violation at an abandoned site, as defined in 1.04(1), if abatement of the violation is required under any previously issued notice or order.

- 123(3) (3) If the person who is issued a notice of violation pursuant to (2) above fails to abate the violation within the abatement period as originally fixed or as subsequently extended, or fails to accomplish an interim step designated by the authorized representative of the Division within the abatement period, for good cause shown and upon written finding to that effect, the authorized representative of the Division shall immediately order a cessation of the surface coal mining and reclamation operations or coal exploration operations or of the portion thereof relevant to the violation. The Division may refrain from issuing a failure-to-abate cessation order for such failure to abate a violation or failure to accomplish an interim step, if the operation is an abandoned site as defined in 1.04(1).
- 123(4) (4) (a) Each notice of violation or cessation order issued shall be on a form approved by the Board, shall be signed by the authorized representative issuing it, and shall set forth with reasonable specificity the following:
- (i) The nature of the violation, including a reference to the provisions of the statute, regulation, permit, or approval allegedly violated;
 - (ii) A description of the steps necessary to abate the violation in the most expeditious manner physically possible, including a description of any affirmative obligations imposed under 5.03.2(1)(b) above;
 - (iii) The period of time fixed for abatement; and
 - (iv) A reasonable description of the portion of the surface coal mining and reclamation operation or coal exploration operation to which the notice of violation or cessation order applies.
- (b) The notice of violation or cessation order additionally shall:
- (i) Inform the person to whom it is issued that a civil penalty may be assessed for the violation;

- (ii) Inform such person that he or she has the right to review the notice of violation or cessation order in a public hearing before the Board in accordance with 5.03.5; and
 - (iii) Describe the procedure which must be followed to obtain such review.
 - 123(5) (5) (a) Except as set forth in (6) below, cessation orders shall remain in effect until:
 - (i) It is determined by an authorized representative of the Division that the condition, practice, or violation has been abated, or
 - (ii) The cessation order is modified, vacated, or terminated in writing by an authorized representative of the Division.
 - (b) An authorized representative may modify, vacate, or terminate a cessation order for good cause, subject to the limitation of 5.03.7(2).
 - (c) An authorized representative may, upon written request and a showing of good cause, extend the time for abatement, subject to the overall 90 day limitation of 5.03.2(1)(b), if the failure to abate within the time previously fixed in a cessation order was not caused by lack of diligence on the part of the person issued such order.
 - (d) An authorized representative shall immediately terminate a notice of violation or cessation order by written notice to the person issued the notice or order or his designated agent when such representative determines that all conditions, practices, or violations listed in the notice or order have been abated. Termination shall not affect the right of the Division to assess civil penalties under 5.04.5.
- 123(6) (6) Any notice of violation or cessation order expressly or implicitly requiring the cessation of mining shall automatically expire 30 days after service of the notice or order to the operator unless an informal public hearing on the portion of the notice or order dealing with the cessation of mining is held within such time or unless the opportunity for such a hearing is waived in writing by the operator issued the notice

or order. However, the expiration of any notice or order shall not affect the Division's authority to assess civil penalties under 5.04.

- 123(6) (7) Informal public hearings.
- (a) An informal public hearing shall be held within 30 days after the issuance of either a notice of violation or cessation order expressly or implicitly requiring the cessation of mining unless the operator issued the notice or order waives the opportunity for such a hearing in writing. The waiver of an opportunity for such a hearing shall not affect the operator's right to obtain formal review under 5.03.5.
 - (b) The Division shall give as much advance notice as is practicable of the date, time, place, and subject matter of such hearing to the operator to whom the notice or order was issued and to any person who requested an inspection which led to the issuance of the notice or order. The Division shall also post a notice of such hearing at the Division office and, when practicable, publish such notice in a newspaper of general circulation in the area of the mine site.
 - (c) Such hearing shall be held at or reasonably close to the mine site so that the mine site may be viewed during the hearing.
 - (d) Such hearing shall be presided over by an authorized representative of the Division, other than the representative who issued the notice or order in question, who shall accept oral or written arguments and any other relevant information from any person attending.
 - (e) The Division shall affirm, modify, vacate, or terminate the notice or order, or grant temporary relief therefrom, by a written decision sent within five days after the close of the hearing to both the operator to whom the notice or order was issued and to any person who requested an inspection which led to the issuance of the notice or order.

5.03.3 Suspension or Revocation of Permits.

- (1) Show cause orders.

- 123(7) (a) When the Division determines that a pattern of violations of any requirements of the Act, these Rules, or any permit conditions required by the Act exists or has existed and that such violations are or were caused by the unwarranted failure of the permittee to comply with any requirements of the Act, these Rules, or any permit conditions or that such violations are or were willfully caused by the permittee, the Division shall forthwith issue an order to the permittee to show cause why the permit should not be suspended or revoked. If practicable, at the time of issuance of the show cause order, the Division shall publish notice of the show cause order, including a brief statement of the procedure for intervention in the proceeding, in a newspaper of general circulation in the area of the surface coal mining and reclamation operation.
- (b) Violations caused by any person conducting surface coal mining operations on behalf of the permittee shall be attributed to the permittee, unless the permittee establishes by a preponderance of evidence that the acts were the results of sabotage.
- 123(7) (2) Patterns of Violations.
- 123(7) (a) The Division may determine that a pattern of violations exists or has existed, based upon two or more inspections of the permit area within any 12-month period, after considering all the circumstances including:
- (i) The number of violations, cited on more than one occasion, of the same or related requirements of the Act, these Rules, or the permit;
 - (ii) The number of violations, cited on more than one occasion, of different requirements of the Act, these Rules, or the permit;
 - (iv) The extent to which the cited violations were isolated departures from lawful conduct.
- (b) The Administrator shall promptly review the history of violations of any permittee who has been cited for violations of the Act, these rules, or the permit during three or more inspections of the

permit area within any 12-month period to determine if a pattern of violation exists or has existed.

- (c) The Administrator may decline to issue a show cause order, or may vacate an outstanding show cause order, if he or she finds that, given exceptional circumstances of a particular case, it would be demonstrably unjust to issue or to fail to vacate the order. The basis of this finding shall be fully set forth in the case records.

123(7), 124(4) (3) Following the issuance of an order to show cause as to why a permit should not be suspended or revoked, the Board shall provide an opportunity for a public hearing pursuant to 5.03.5.

- (a) If within 30 days after service of a show cause order the permittee files a response to the show cause order and a written request for review thereof, a hearing shall be held as set forth in 5.03.5.

- (b) If the permittee does not file a response and request review, the Board shall make findings of fact and issue a written decision, and the reasons therefor, concerning suspension or revocation of the permit.

124(4) (4) If the Board suspends or revokes the permit by its written decision issued pursuant to 5.03.5(4)(c) or pursuant to (3)(b) above, the permittee shall immediately cease those surface coal mining operations on the permit area as specified by the Board. As further described in 3.04, the permittee shall either complete reclamation within a period specified by the Board, or the Board shall declare the performance bonds for the operation as forfeited. Proceeds of forfeited bonds shall be available to the Division and shall be used by the Division for reclamation of the area covered by the bond.

- (5) Whenever a permittee fails to abate a violation contained in a notice of violation or cessation order within the abatement periods set in the notice or order or as subsequently extended, the Administrator shall review the permittee's history of violations to determine whether a pattern of violations exists pursuant to (2) above, and shall issue an order to show cause as appropriate in 5.03.3(1).

5.03.4 Service of Notices of Violation, Cessation Orders, and Show Cause Orders.

- 123(4) (1) Notices of violation and cessation orders shall be served in a timely fashion on the operator, or through his designated agent or management personnel at the mine, in person or by certified mail, return receipt requested as follows:
- (a) When the person or agent is a natural person, by delivery to him personally, or by leaving a copy at his dwelling house or usual place of abode with some member of his family over the age of 18 years, or by leaving a copy at his usual place of business with the person in charge of such place.
 - (b) When the person or agent is a partnership or other unincorporated association, by delivery to one or more of the partners or members, or by delivery to the managing agent of such partnership or association.
 - (c) When the person or agent is a corporation, by delivery to any officer, manager, general agent, or registered agent of such corporation, or, if no such person can be found, by delivery to any stockholder, agent, or principal employee of such corporation.
- 123(7) (2) Show cause orders shall be served by certified mail directed to either the permittee to whom any such order is issued or such permittee's designated agent.
- (3) All permittees, operators, and persons conducting coal exploration activities subject to the Act shall designate an agent to receive all notices, orders, and all modifications, vacations, and terminations thereof that may be served by the Board or Division under Rule 5.
- (a) Such designation shall be made in writing to the Division on a form prepared by the Division, and such designation may be amended in like manner.
 - (b) The designated agent shall be either a corporation whose ordinary business is serving as an agent for receipt of service or an individual who has a permanent address in Colorado other than a post office box.
 - (c) The designated agent shall be available in the county in which the mine site is located or the coal exploration activities are being

conducted or in the City and County of Denver, Colorado, to receive service during all normal business hours of mining or exploration operations.

- (4) A notice of violation or cessation order may be served by the Division by publication in a newspaper of general circulation in the area of the mine or exploration site if the Division, after diligent efforts to serve both the person and designated agent to be served under (1) above, finds that such person and agent have concealed themselves to avoid service by the Division.
- (5) Service shall be complete upon delivery, mailing, or publication under (1), (2), or (4) above and shall not be deemed to be incomplete due to any refusal to accept.

5.03.5 Formal Review by the Board.

117(3),(5)
124(1)(a)

- (1)
 - (a) An operator or person issued any notice of violation or cessation order, or any person having an interest which is or may be adversely affected by such notice or order or by any modification, vacation, or termination of such notice or order may request review thereof by the Board within 90 days after the issuance of the notice or order or within 90 days after its modification, vacation, or termination. However, the filing of such a request shall not operate as a stay or modification of any notice or order.
 - (b) A permittee issued any show cause order pursuant to 5.03.3(1) shall request formal review by the Board in accordance with 5.03.3(3)(a).
 - (c) A person issued any notice and order to pay a fixed penalty under 5.04.3(5) shall request formal review by the Board in accordance with 5.04.4.
 - (d) A person issued any notice of proposed individual civil penalty assessment under 5.04.7 may request review thereof by the Board within 30 days after issuance of the proposed individual civil penalty assessment.

124(1)(a)

- (2) Upon receipt of a request for review in accordance with (1) above, the Board shall cause an investigation to be conducted by the Division as it

deems appropriate, and the Board shall receive the completed report of such investigation before the hearing.

- 124(1)(a) (3) A formal hearing shall be held within 60 days after the Board's receipt of a request therefore pursuant to (1) above, subject to the time limitation imposed in certain cases by (4)(b) below.
- 124(1)(b) (a) Such hearing shall be "of record" and subject to the provisions of the "State Administrative Procedure Act", C.R.S., 24-4-101 *et seq.* as amended. At such hearings, no evidence as to statements made or evidence produced by any person at an informal hearing held under 5.03.2(7) or at an assessment conference held under 5.04.3 shall be introduced as evidence or to impeach any witness.
- 124(1)(b) (b) The person issued any notice of violation or cessation order, any other persons requesting a hearing pursuant to (1) above, and all other persons expressing an interest, shall be given at least 5 days written notice of the date, time, and place of the hearing. When practicable, advance notice of such hearing shall also be included in the Division's monthly mailings. Advance notice of such hearings shall be posted at the Division office closest to the mine or exploration site.
- 123(7) (c) A permittee issued a show cause order and any interested person shall be given at least 30 days written notice of the date, time, and place of the hearing. When practicable, the Division shall publish notice of the hearing in a newspaper of general circulation in the area of the mine site and include such notice in the Division's monthly mailings. Advance notice of such hearings shall be posted at the Division office closest to the mine site.
- (d) A person issued a notice and order to pay a fixed penalty shall be given at least five days written notice of the date, time, and place of the hearing. When practicable, advance notice of such hearing shall also be included in the Division's monthly mailings. Advance notice of such hearing shall be posted at the Division office.
- 124(2) (4) Decisions of the Board.
- (a) When a hearing has been held on a notice of violation, the Board shall make findings of fact and issue a written decision within 30

days after the close of the hearing. Such decision shall incorporate the Board's findings and its order affirming, modifying, vacating, or terminating the notice or the modification, vacation, or termination thereof.

- (b) When a hearing has been held on a cessation order, the Board shall make findings of fact and issue a written decision within 30 days after its receipt of the written request for review; however, if temporary relief has been granted by the Board pursuant to (5) below, by the Division pursuant to 5.03.2(7)(e), or by a court pursuant to Section 34-33-128(3) of the Act, the Board shall issue its written decision within 30 days after the close of the hearing. Decisions shall incorporate the Board's findings and its order affirming, modifying, vacating, or terminating the order or the modification, vacation, or termination thereof.
- 124(4) (c) When a hearing has been held on a show cause order, the Board shall issue and furnish to the permittee and other parties to the hearing, within 60 days after the close of the hearing, a written decision, and the reasons therefor, concerning suspension or revocation of the permit.
- (d) When a hearing has been held on a notice and order to pay a fixed penalty, the Board shall issue its decision in conformance with 5.04.4(3).
- (e) When a hearing has been held on a notice of proposed individual civil penalty assessment, the Board shall make findings of fact and issue written decision within 30 days after the close of the hearing. Such decision shall incorporate the Board's findings and its order affirming, increasing or decreasing the proposed penalty.
- (5) Temporary relief.
- 124(3) (a) Pending completion of the investigation and hearing, an operator issued any notice of violation or cessation order explicitly or implicitly requiring the cessation of mining or any other party may file with the Board a written request that the Board grant temporary relief from the notice or order. Such request shall include a detailed statement giving reasons for requesting such relief.

- (b) The Board shall issue a written decision granting or denying such temporary relief expeditiously; where the operator requests temporary relief from a cessation order, the decision shall be issued within five days of receipt of the request for temporary relief.
- (c) The Board may grant temporary relief under such conditions as it may prescribe if:
 - 124(3)(a) (i) An informal hearing has been held pursuant to 5.03.2(7) on the request for temporary relief and all parties were given an opportunity to be heard;
 - 124(3)(b) (ii) The operator shows that there is substantial likelihood that the decision of the Board under (4) above will be favorable to him; and
 - 124(3)(c) (iii) The requested temporary relief will not adversely affect the health or safety of the public or cause significant environmental harm to land, air, or water resources.

5.03.6 Costs, Expenses and Attorney's Fees.

- 124(5) Whenever a decision or order is issued by the Board under 5.03.5(4) or as a result of any administrative proceeding under the Act, at the request of any party to such proceeding, a sum equal to the aggregate amount of all costs and expenses, including Attorney fees, which the Board determines to have been reasonably incurred by such party for or in connection with his participation in such proceedings may be assessed against any party to the proceedings, as the Board deems just and proper. The sum may in addition include all costs and expenses, including attorneys' fees, which the Board determines to have been reasonably incurred by the requesting party in seeking the award.
 - (1) The petition for an award of costs and expenses including attorney's fees must be filed with the Board, within 45 days of receipt of such order. Failure to make a timely filing of the petition may constitute a waiver of the right to such an award.
 - (2) A petition filed under 5.03.6 shall include the name of the person from whom costs and expenses are sought and the following shall be submitted in support of the petition:

- (a) An affidavit setting forth in detail all costs and expenses including attorney's fees reasonably incurred for, or in connection with, the person's participation in the proceeding;
 - (b) Receipts or other evidence of such costs and expenses, and
 - (c) Where attorney's fees are claimed, evidence concerning the hours expended on the case, the customary commercial rate of payment for such services in the area, and the experience, reputation and ability of the individual or individuals performing the services.
- (3) Any person served with a copy of the petition shall have 30 days from service of the petition within which to file an answer to such petition.
- (4) Appropriate cost and expenses including attorney's fees may be awarded:
- (a) To any person from the permittee, if the person initiates any administrative proceedings reviewing enforcement actions, upon a finding that a violation of the Act, regulations or permit has occurred, or that any imminent hazard existed or to any person who participates in an enforcement proceeding where such a finding is made if the Board determines that the person made a substantial contribution to the full and fair determination of the issues;
 - (b) To a permittee from any person where the permittee demonstrates that the person initiated a proceeding under 5.03.5 or participated in such a proceeding in bad faith for the purpose of harassing or embarrassing the permittee; or
 - (c) To the Division where it demonstrates that any person applied for review pursuant to 5.03.5 or that any party participated in such a proceeding in bad faith for the purpose of harassing or embarrassing the Division.
 - (d) To a permittee from the Division when the permittee demonstrates that the Division issued a cessation order, a notice of violation, or an order to show cause why a permit should not be suspended or revoked, in bad faith and for the purpose of harassing or embarrassing the permittee.

- (e) From the Division to any person, other than a permittee or his or her representative, who initiates or participates in any administrative proceeding under the Act, and who prevails in whole or in part, achieving at least some degree of success on the merits, upon a finding that such person made a substantial contribution to a full and fair determination of the issues.

5.03.7 Insufficient Grounds for Vacating Citations.

- 122(6) (1) No notice of violation, cessation order, show cause order, or order re-
123(6) voking or suspending a permit may be vacated because it is
subsequently
124(2) determined that the Division did not have information sufficient under
5.02.5 to justify an inspection.
- 123(6), 124(2) (2) No issued cessation order or notice of violation may be vacated because
of an inability to comply with the requirements of the Act or these
Rules.
- 123(7) (3) Inability to comply with the requirements of the Act or these Rules may
not be considered in determining whether a pattern of violations exists.
- (4) Unless caused by lack of diligence, inability to comply may be
considered only in mitigation of the amount of civil penalty under 5.04
and of the duration of the suspension of a permit under 5.03.3(3)(b) or
5.03.5(4)(c).

5.04 PENALTIES

123 5.04.1 Scope.

This Section covers the assessment of civil penalties with respect to cessation orders and notices of violation.

5.04.2 When Civil Penalties Will Be Assessed.

- 123(8) The Division shall review each notice of violation and cessation order in
accordance with the assessment procedures of 5.04.5 and 5.04.6 to determine
whether a civil penalty will be assessed, the amount of the penalty, and whether
each day of a continuing violation will be deemed a separate violation for
purposes of total penalty assessment.

5.04.3 Procedures for Assessment of Civil Penalties.

- 123(8)(a) (1) Within 15 days of service of a notice of violation or cessation order, the person to whom it was issued may submit written information about the violation to the Division. The Division shall consider any information so submitted in determining the facts surrounding the violation and the amount of the civil penalty to be proposed under (2) below.
- 123(8)(b) (2) The Division shall notify the person issued a notice of violation or cessation order, or his designated agent, of the amount of proposed civil penalty within 30 days after the issuance of a notice of violation or cessation order. Such notice shall be served by certified mail directed to such person or agent, and service shall not be incomplete due to any refusal to accept service. Notifications shall be sufficient if the certified mail is directed either to such person at the address set forth on the sign required by 5.02.3(1) or to such agent at the last designated address of such agent under a designation pursuant to 5.03.4(3).
- (a) The notice of proposed penalty shall inform the person to whom it is issued that:
- (i) If an assessment conference is held upon request therefor under (3) below but the issues are not resolved, or if an agreed penalty is fixed in an assessment agreement but is not paid within the prescribed time; then
 - (ii) The notice of proposed penalty will constitute the notice and order of fixed penalty described in (5)(b) below; and
 - (iii) The notice of proposed penalty will be effective as such notice and order, for the purpose of fixing the 30 day period required by (5)(b) below for payment of a fixed penalty, from either the date of the conclusion of the assessment conference at which issues are not resolved or the date of any default under an agreement to pay an agreed penalty fixed at an assessment conference, whichever date is applicable under the circumstances.
- (b) The notice of proposed penalty shall describe the procedure which must be followed to obtain formal review by the Board under 5.03.5 on the fact of the violation or amount of the penalty.

(c) Failure by the Division to serve any notice of proposed penalty within 30 days after issuance of a notice of violation or cessation order shall not be grounds for dismissal of all or part of such assessment unless the person whom the notice of proposed penalty has been assessed proves actual prejudice as a result of the delay and makes a timely objection to the delay in the normal course of the administrative review.

123(8)(b) (3) The person issued a notice of proposed penalty shall have 10 days after receipt of the notice within which to request, on a form approved by the Board, an assessment conference in which all relevant information concerning the violation and penalty, including all information which the person may submit, shall be reviewed by the person or his authorized representative and a conference officer, who shall be an authorized representative of the Division.

(a) The Division shall post notice of the date, time, and place of the assessment conference at the Division office at least five days before the assessment conference.

(b) Any interested person shall have a right to attend and participate in the assessment conference.

(c) The assessment conference shall be held within 30 days from the request therefore, and should be held at the earliest practicable time. Failure to hold an assessment conference within 30 days of the request therefore will not constitute grounds for dismissal of all or part of the proposed penalty unless the person proves actual prejudice as a result of the delay.

(d) The conference officer may terminate the conference when he determines that the issues cannot be resolved or that the person assessed is not diligently working toward resolution of the issues.

123(8)(c) (4) If the issues are resolved at the assessment conference, the conference officer shall prepare an assessment agreement on a form approved by the Board.

(a) Such agreement shall provide, among other relevant provisions, as follows:

- (i) That an agreed penalty shall be paid within a prescribed time, which time shall not exceed 30 days after the agreement is signed by both parties; and
 - (ii) That by paying the agreed penalty within the prescribed time the person waives all rights to further review of the violation or penalty.
 - (b) Such agreement shall be signed by both the conference officer and the person charged with the violation, or his authorized representative; however, the agreement shall not be effective if it is not signed by the person or his authorized representative at the conference or within 10 days thereafter, and in the event of the failure to sign within such period the issues resolved in such assessment agreement shall be considered not to have been resolved. If the agreement is not signed at the conference, it shall be sent by certified mail, returned receipt requested, to the person charged with the violation or his authorized representative. The 10-day period shall commence upon receipt of the agreement.
 - (c) The agreement penalty incorporated into an assessment conference may vary up to 25 percent from the amount of proposed penalty provided that such variance does not exceed \$500 unless the Administrator approves a greater variance in writing.
- (5)
- (a) If any person issued a notice of violation or cessation order does not request an assessment conference under (2) above, if an assessment conference is held but the issues are not resolved, or if an agreed penalty is fixed in an assessment agreement but is not paid within the prescribed time, then the Division shall order the civil penalty fixed at an amount determined to be appropriate, in the light of the criteria set forth in 5.04.5(2) and relevant information received at any assessment conference.
 - (b) Notice of the fixed penalty and an order to pay the same shall be consolidated in a "notice and order" form approved by the Board. Such notice and order shall require the payment of the fixed penalty within 30 days after its receipt and shall describe the procedure which must be followed to obtain formal review by the Board under 5.03.5 on the fact of the violation or the amount of the penalty.

- (c) The notice and order shall be served by certified mail on the operator or his designated agent no later than one-hundred twenty (120) days after the date the notice or order describing the violation was originally issued. Service shall be considered complete if the certified mail is directed either to the operator at the address set forth on the sign required by 5.02.3(1) or to such agent at the last designated address of such agent under a designation pursuant to 5.03.4(3).

5.04.4 Public Hearings on Penalties.

- 123(8)(f) (1) If the person who is issued a notice and order under 5.04.3(5) wishes to contest either the amount of fixed penalty or the fact of the violation, he shall both forward the amount of the fixed penalty to the Division within 30 days after receipt of the notice and order and submit a written request to the Board for a public hearing in accordance with 5.03.5. The fact of the violation may not be contested if it has been decided in a review proceeding commenced under 5.03.5(4)(a) or (4)(b).
 - (a) The amount of fixed penalty forwarded to the Division shall be placed by the Division into an interest bearing escrow account.
- 123(8)(e) (b) Failure of the person to either forward the amount of the fixed penalty to the Division within 30 days or to request a public hearing shall result in waiver of all legal rights to further contest either the violation or the amount of the fixed civil penalty.
- 123(8)(f) (2) Upon submission of a request for hearing in accordance with (1) above, such hearing shall be held in accordance with 5.03.5(2)-(4). When appropriate the Board shall consolidate such hearing with other proceedings under 5.03.3 and 5.03.5.
- 123(8)(f) (3) After a public hearing has been held, the Board shall make findings of fact and shall issue a written decision as to the occurrence of the violation and the amount of civil penalty which is warranted. The decision shall incorporate, when appropriate, an order requiring that the penalty be paid, and/or that the funds escrowed under (1)(a) above be released for payment of the penalty if the period in which to request judicial review expires without such review being requested.

- (a) The decision shall be immediately served by certified mail directed to the person issued the notice and order or such person's designated agent.
- 123(8)(f) (b) The person ordered to pay any penalty must pay the difference between the amount escrowed under (1)(a) above and the amount the person is ordered to pay within 30 days of the order's issuance. Failure to pay such difference within such time shall result in a waiver of all legal rights to judicial review of the fact of the violation or the amount of the penalty.
- 123(8)(g) (4) If, after Board review or judicial review of the fixed civil penalty, it is determined that no violation occurred or that the amount of the penalty should be reduced, the Board shall, within 30 days of such determination, remit the appropriate amount to the appropriate person with interest at the rate prevailing in the escrow account established under (1) above.
- 123(8)(h) (5) Civil penalties fixed under 5.04 may be recovered in a civil action brought by the attorney general, at the request of the Board, in the district court of this state for the district in which any of the affected land is located or in such other district agreeable to all parties to such action.

5.04.5 System for Assessment of Civil Penalties.

- 123(8)(a) (1) The Division may assess civil penalties in amounts up to \$5,000 for each violation of the Act, these Rules, or any permit or exploration approval; however, the Division shall assess a civil penalty for each violation contained in a cessation order.
- (2) The Division shall assess a minimum civil penalty of \$1,750 and a maximum of \$5,000 for each violation contained within a cessation order for conducting surface coal mining operations without a valid permit or conducting coal exploration without the required written approval. Increases in the amount of the penalty beyond the minimum \$1,750 shall be based on the criteria regarding seriousness and fault set forth in Rules 5.04.5(3)(b) and (c).
- (3) The amount of penalty assessed per violation shall be governed by the following determinations:

- (a) History of previous violations. Up to \$1,750 of the penalty assessment shall be based on the history of previous violation at the particular surface coal mining and reclamation operation or coal exploration operation.
 - (i) \$50 shall be assessed for each past violation contained in a notice of violation, and \$250 shall be assessed for each past violation (but not a condition or practice) contained in a cessation order. Past violations shall be considered without regard to whether such violations led to civil penalty assessment.
 - (ii) Past violations shall not be considered for purposes of penalty assessment if:
 - (A) The notice or order based on such violation has been vacated;
 - (B) The notice or order based on such violation is the subject of pending administrative or judicial review, or the time to request such review or to appeal any administrative or judicial decision has not expired; or
 - (C) The notice or order based on such violation was issued more than one year prior to the issuance of the notice or order regarding the violation under consideration.
- (b) Seriousness. Up to \$1,750 of the penalty assessment shall be based on the seriousness of violation. The amount to be assessed for seriousness shall be based on the following factors:
 - (i) In the case of a violation of performance requirements:
 - (A) The probability of the occurrence of the event which a violated standard is designed to prevent, and
 - (B) The duration and extent of the potential or actual damage in terms of area and impact on the public environment.

- (ii) In the case of a violation of administrative requirements, the extent to which enforcement was obstructed by the particular violation.
- (c) Fault. Up to \$1,500 of the penalty assessment shall be based on the degree of fault of the person to whom the notice or order was issued in causing or failing to correct the violation, condition, or practice which led to the issuance of the notice or order, either through act or omission.
- (i) A violation which would have been unavoidable despite the exercise of reasonable care shall result in no assessment for fault.
 - (ii) A violation which occurred as the result of negligence (the failure of a person to prevent the occurrence of any violation due to indifference, lack of diligence, or lack of reasonable care, or the failure to abate any violation due to indifference, lack of diligence, or lack of reasonable care) shall result in an assessment for fault of at least \$250 but not more than \$750.
 - (iii) A violation which occurred as the result of a greater degree of fault than negligence (reckless, knowing, or intentional conduct) shall result in an assessment for fault of at least \$750 but not more than \$1,500.
- (d) Good faith in achieving compliance. The Division may subtract up to \$1,250 of the penalty assessment if the person to whom the notice of violation or cessation order was issued took extraordinary measures to abate the violation and that abatement was achieved in the shortest possible time and before the expiration of the time fixed for abatement in the notice or order, or any modification thereof.

5.04.6 Assessment of Separate Violations for Each Day.

- 123(8)(a) (1) The Division may assess a separate civil penalty for each day from the date of issuance of the notice of violation or cessation order to the date fixed for abatement of a violation. In determining whether to make such an assessment, the Division shall consider the factors listed in 5.04.5(2) and may consider the extent to which the person to whom the

notice or order was issued gained any economic benefit as a result of a failure to comply.

- (2) The Division shall assess a civil penalty for a minimum of two separate days for any violation which continues for two or more days after the issuance of a notice of violation or cessation order describing the violation which is assessed \$5,000 under 5.04.5(2).
- 123(8)(i) (3) When a person fails to correct a violation, for which a notice of violation or cessation order has been issued, within the abatement period as originally fixed or subsequently modified, the Division shall assess a civil penalty of not less than \$750 for each day during which such failure to correct the violation continues beyond the fixed abatement period. However, the abatement period shall not end until the entry of an order of the court in cases in which judicial review proceedings have been initiated under Section 34-33-128 of the Act, and the court has ordered the suspension of the abatement requirements of the notice of violation or cessation order.
- (4) Such penalty for the failure to abate the violation described in 5.04.6(3) shall not be assessed for more than 30 days for each such violation. If the person has not abated the violation within the 30 day period, the Division shall take appropriate action pursuant to Section 34-33-123(7), 34-33-123(9), 34-33-123(10) or 34-33-123(12) of the Act within 30 days to ensure that there will not be a reoccurrence of the failure to abate.

5.04.7 Individual Penalties.

- 123(10) (1) The Division may assess an individual civil penalty against any Corporate Director, Officer or Agent of a Corporate Permittee who knowingly and willingly authorized, ordered or carried out a violation, failure or refusal to comply with any regulatory requirements or order of the Board. An individual civil penalty shall not be assessed in situations resulting from a violation until a cessation order has been issued by the Division to the Corporate Permittee for the violation, and the cessation order has remained unabated for 30 days.
- (2) The amount of civil penalty shall be based on the criteria set forth in 5.04.5 and 5.04.6.
- (3) Procedure for assessment of individual civil penalty.

- (a) Notice. The Division shall serve on each individual a Notice of Proposed Individual Civil Penalty assessment, including a narrative explanation of the reasons for the penalty, the amount to be assessed, and a copy of any underlying Notice of Violation and cessation order. Such notice shall be served by certified mail directed to such person, and service shall not be incomplete due to any refusal to accept service. Notifications shall be sufficient if the certified mail is directed to such person at the address set forth in the permit application as required by 2.03.4.
 - (b) Final order and opportunity for review. The Notice of Proposed Individual Civil Penalty assessment shall become a final order of the Division 30 days after service upon the individual unless:
 - (i) The individual files a request for review by the Board within 30 days of service of the Notice of Proposed Individual Civil Penalty assessment. Upon submission of a request for hearing, such hearing shall be held in accordance with 5.03.5(2)-(4); or
 - (ii) The Division and the individual or responsible Corporate Permittee agree within 30 days of service of the Notice of Proposed Individual Civil Penalty Assessment to a schedule or plan for the abatement or correction of the violation, failure or refusal.
- (4) Payment of Penalty
- (a) No abatement or appeal. If a Notice of Proposed Individual Civil Penalty Assessment becomes a final order in the absence of a request for review or abatement agreement, the penalty shall be due upon issuance of the final order.
 - (b) Appeal. If an individual named in a Notice of Proposed Individual Civil Penalty Assessment files a request for review in accordance with 5.03.5 the penalty shall be due upon issuance of the Board Order.
 - (c) Abatement Agreement. Where the Division and the Corporate Permittee or an individual have agreed in writing on a plan for the abatement of or compliance with the unabated order, an individual named in a Notice of Proposed Individual Civil Penalty assessment

may postpone payment until receiving either a final order from the Division stating that the penalty is due on the date of such final order, or written notice that abatement or compliance is satisfactory and the penalty has been withdrawn.

- (d) **Delinquent Payment.** Following the expiration of 30 days after the issuance of a final order assessing an individual civil penalty, any delinquent penalty may be recovered in a civil action brought by the Attorney General, at the request of the Board, in the District Court of this State for the district in which any of the affected land is located or in such other district agreeable to all parties of such action.

5.04.8 Injunctive relief.

123(12)

- (1) The Board or Division may request the attorney general to institute a civil action for relief, including a permanent or temporary injunction, restraining order, or any other appropriate order, in the district court of this state for the district in which the surface coal mining and reclamation operation is located or in which the permittee thereof has his principal office, whenever such person or his agent:
 - (a) Violates, fails, or refuses to comply with any order or decision issued by the Board or Division under the Act or these Rules;
 - (b) Interferes with, hinders, or delays the Board or Division in carrying out the provisions of the Act or these Rules;
 - (c) Refuses to admit an authorized representative of the Division to the mine, or refuses to permit inspection of the mine by such representative;
 - (d) Refuses to furnish any information or report requested by the Division or Board in furtherance of the provisions of the Act or these Rules; or
 - (e) Refuses to permit access to and copying of such records as the Division or Board determines are necessary in carrying out the provisions of the Act or these Rules.
- (2) Any relief granted by the court to enforce an order based on a violation or failure or refusal to comply with any order or decision issued by the

Board or Division under the Act or these Rules shall continue in effect until the completion or final termination of all proceedings for review of such order under the Act, unless, prior thereto, the district court granting such relief sets such order aside or modifies it.

RULE 6 BLASTERS TRAINING AND CERTIFICATION

6.01 GENERAL REQUIREMENTS

120(2)(o)(IV)
121(2)(j) **6.01.1 Scope.**

This section establishes the minimum requirements for the blaster training and certification program for the State of Colorado. The objectives of this section are to ensure that all surface blasting operations are conducted by trained and competent persons certified under a program which meets the minimum criteria established by applicable law.

As used in this Rule a certified blaster means a person certified under the requirements of Rule 6 to be directly responsible for the blasting operations in surface coal mining operations and surface blasting operations of underground coal mining operations. A certified blaster shall be familiar with the blasting requirements of Rule 2.05.4(6) and Rule 4.08. A certified blaster is differentiated from a shotfirer certified by the State of Colorado in accordance with 34-32-116, C.R.S. A certified blaster has design responsibilities, whereas the shotfirer does not. The blaster certification applies only to surface blasting activities, whereas the shotfirer certification applies to surface and underground blasting activities.

120(2)(o)(IV)
121(2)(j) **6.01.2 Implementation.**

No later than 12 months after the effective date of the U.S. Department of the Interior's final approval of Rule 6, each operator shall conduct each blasting operation under the direction of an individual who has been certified by the Department pursuant to this rule and who is familiar with the operations' blasting plan and the blasting performance standards. Prior to that time, all such blasting operations shall be under the direction of shotfirers certified by the State of Colorado.

120(2)(o)(IV)
121(2)(j) **6.01.3 Duties of Blasters and Operators.**

- (1) A certified blaster may not delegate the responsibility for blasting operations to any individual who is not a certified blaster.
- (2) A certified blaster must observe and supervise the detonation of each blast.

- (3) A certified blaster shall produce on-site or at the mine office his certificate to any authorized representative of the Colorado Division of Mines, the Colorado Mined Land Reclamation Division or the Office of Surface Mining upon request.
- (4) Blaster certifications are non-transferable.
- (5) Certified blasters shall take every reasonable precaution to protect their certificates from loss, theft, or unauthorized duplication. Any such occurrence shall be reported immediately to the Division.
- (6) Operators shall require that blasting crew members who are not certified blasters receive direction and on-the-job training from a certified blaster before those persons assist surface blasting operations.

6.02 CERTIFICATION OF BLASTERS

120(2)(o)(IV)
121(2)(j)

6.02.1 Requirements.

- (1) Persons seeking certification as blasters shall submit an application on a form provided by the Division. The applicant must include a statement that he has experience in surface blasting operations and has successfully completed a training course meeting the requirements of Rule 6.03.1(2).
- (2) The Division shall issue a blaster certification to each applicant who:
 - (a) Has practical field experience qualifying the person to accept the responsibility for blasting operations in surface coal mining operations. Such experience shall demonstrate that the applicant possesses practical knowledge of blasting techniques, understands the hazards involved in the use of explosives, and otherwise has exhibited a pattern of conduct consistent with the acceptance of responsibility for blasting operations; and
 - (b) Has successfully completed a blaster training course meeting the requirements of Rule 6.03.1(2) or a self-study course using materials specified by the Division; and
 - (c) Achieves a passing grade specified by the Division on an examination administered by the Division. The examination shall, at a minimum, cover all of the topics listed in Rule 6.03.1(2) and

shall also incorporate questions based on practical field experience of blasting procedures and occurrences. An applicant who fails may retake the examination. If the applicant fails the examination a second time, he must complete the blaster training course again and reapply for certification before retaking the examination.

- (3) Certifications expire five years after issuance. The Division shall recertify the blaster for a five year period if the blaster:
 - (a) Submits to the Division, at least 60 days prior to expiration of the certification, an application for recertification on a form provided by the Division; and
 - (b) Has successfully completed a refresher training course approved by the Division; or
 - (c) Provides evidence of sufficient experience of conducting or directing of blasting operations.

6.03 BLASTER TRAINING COURSES

120(2)(o)(IV)
121(2)(j)

6.03.1 Requirements.

- (1) In order to qualify for certification, or recertification under Rule 6.02.1(3)(b), an applicant must complete training or refresher courses meeting the requirements of (2) or (3), respectively, below.
- (2) A blaster training course must provide training and discuss practical applications of:
 - (a) Use of explosives, including:
 - (i) Selection of the type of explosives to be used;
 - (ii) Determination of the properties of explosives which will produce the desired results at an acceptable level of risk; and
 - (iii) Handling, transportation, and storage;
 - (b) Design of blasts, including:

- (i) Geologic and topographic considerations;
 - (ii) Blast hole design;
 - (iii) Pattern design, field layout, and timing of blast holes; and
 - (iv) Field applications;
- (c) Loading of blast holes, including priming and boosting;
- (d) Use of initiation systems and blasting machines;
- (e) Effects of blasting vibrations, air blast, and fly rock, including:
- (i) Monitoring techniques; and
 - (ii) Methods to control adverse effects;
- (f) Use of secondary blasting;
- (g) Discussions of current Federal and State rules applicable to the use of explosives;
- (h) Maintenance of blast records;
- (i) Determination of blasting schedules;
- (j) Design and use of preblasting surveys;
- (k) Requirements of blast plans;
- (l) Certification and training;
- (m) Signs, warning signals, and site control;
- (n) Identification of unpredictable hazards, including:
- (i) Lightning;
 - (ii) Stray currents;
 - (iii) Radio waves; and

- (iv) Misfires.
- (3) The Division shall ensure that training is available for persons responsible for the use of explosives in surface coal mining operations in all of the subjects listed in (2) above by maintaining a list of formal training courses and self study materials approved by the Division as providing the required training. This list shall be updated periodically.
- (4) The Division will specify the requirements for refresher courses as required by Rule 6.02.1(3)(b), which will include new developments in the areas listed above, as well as basic material covering one or more of the above topics.

6.04 SUSPENSION OR REVOCATION OF CERTIFICATIONS

120(2)(o)(IV)
121(2)(j)

6.04.1

- (1) The following are grounds for suspension or revocation of blaster certification:
 - (a) Non-compliance with any order of the Department;
 - (b) Conviction of criminal possession or sale of dangerous drugs;
 - (c) Unlawful use in the workplace of, or current addiction to, alcohol, narcotics, or other dangerous drugs;
 - (d) Violation of any State or Federal explosives laws or regulations;
 - (e) Providing false information or misrepresentation to obtain a certification;
 - (f) Failure to present certification upon request of the Division of Mines, the Mined Land Reclamation Division, or Office of Surface Mining personnel;
 - (g) Delegating responsibility for surface blasting operations to any individual who is not a certified blaster;

- (h) Storage, transportation, or use of explosives in a manner that could threaten public health or safety or cause environmental harm.
-
- (2) If the Division finds that a certified blaster has committed one or more of the acts prohibited in (1) above, the Division may, and upon a finding of willful conduct, shall, suspend or revoke certification of the blaster. The Division shall determine whether to suspend or revoke and the length of suspension on the basis of determination of reasonable necessity to protect public health or safety or to prevent environmental harm.
 - (3) If the Division has probable cause to believe that a certified blaster has committed any of the acts prohibited in (1) above, and that the blaster's certification should be suspended or revoked, the Division shall notify the blaster and his employer in writing by certified mail at the address contained in the blaster's application for certification, or at a subsequent address of which the blaster has notified the Division in writing. The blaster does not defeat service by refusing to accept or failing to pick up the notice. The notice shall advise the blaster of the Division's proposed action, the alleged facts upon which the proposed action is based, and the blaster's right to a hearing. If the Division determines that suspension of the blaster's certification is reasonably necessary to protect the public health or safety or the environment, it may suspend the certification until the hearing is held provided, however, that no such suspension may be in effect for longer than 45 days. At the close of the hearing, the Hearings Officer may, based on a finding that the Division will probably prevail and that continued suspension is reasonably necessary, continue the suspension until a final decision is made.

RULE 7 DESIGNATING AREAS UNSUITABLE FOR SURFACE COAL MINING

7.01 OBJECTIVES

108 The objective of this Rule is to implement the requirements of the Act by establishing:

- (1) Procedures for consideration of petitions for the designation of areas as unsuitable for all or certain types of surface coal mining operations, for termination of such designations and for public participation in the petition process; and
- (2) Responsibilities and minimum standards for obtaining, maintaining, and analyzing information on the effects of coal development.

7.02 APPLICABILITY

126(4) The requirements of this Rule shall not apply to Federal lands or to lands:

- (1) On which surface coal mining operations were being conducted on August 3, 1977,
- (2) Under a permit issued pursuant to these Rules, or
- (3) Where substantial legal and financial commitments in such operations were in existence prior to January 4, 1977.

7.03 RESPONSIBILITY

126(2)(a) (1) Any person or duly authorized governmental agency may initiate the designation or termination process upon submittal of a petition in accordance with the requirements of 7.06.

126(2)(g) (2) Any person may intervene and support or refute allegations of a petition in accordance with the requirements of 7.06.4(7).

(3) The Division shall:

126(2)(c) (a) Process petitions and insure the requirements of this Rule are met;

- (b) Obtain, maintain, and analyze information on areas covered by a petition and provide assistance to the Board in accordance with 7.06;
- 130 (c) Assist the Board in collecting data and maintaining a data base and inventory system established in 7.04;
- (d) Provide information to the public on the petition procedures necessary to have an area designated unsuitable for all or certain types of surface coal mining operations or to have designations terminated; and
- 130(1) (e) Cooperate with and seek assistance from appropriate Federal, State, and local agencies, universities, and research institutions in this State as necessary to meet the requirements of this Rule.
- (4) The Board shall:
 - 126(2)(c) (a) Make decisions on the designation of areas unsuitable for surface coal mining operations, on termination of such decisions, and on frivolous petitions;
 - 126(2)(c),(e),(h)
126(3) (b) Issue statements required by the designation procedure; and
 - 130(2) (c) Cause the formation of a data base and inventory system.

7.04 DATA INVENTORY

- 130(1) (1) The Board shall cooperate with and seek assistance from State, County, and Federal agencies and universities and research institutions in this State and work in close cooperation with local planning units in order to establish a data base and inventory system.
- 130(3) (2) The Board may, at its discretion, appoint an advisory committee to assist it in establishing a data base and inventory system for surface coal mining operations. Such committee, if appointed, shall consist of experts in the areas of wildlife, plant ecology, natural areas, historic areas, reclamation, agriculture, coal geology, land management planning, and other areas as deemed necessary by the Board.

- 130(1)(a)
130(1)(c) (3) The data base and inventory system will provide information for the proper evaluation of the capacity of different land areas of the State to be reclaimed following surface coal mining operations and provide objective and scientific evaluation of fragile, historic, natural hazard, renewable resource lands, and lands listed in the Colorado natural areas registry or designated under the Colorado natural areas program.
- 130(1)(b) (4) The data base and inventory system will be utilized by the Board and the Division for evaluation of petitions. The data base and inventory system will also be available for inspection by the public and those making land use planning decisions. Such inspection shall be free of charge and copying shall be available at a reasonable cost.
- 130(2) (5) The data base and inventory system will include such information relevant to the evaluation of criteria in 7.05 including, but not limited to, information received from sources listed in 1.03.2(4), the U.S. Fish and Wildlife Service and the State Historic Preservation Officer, and the agency administering Section 127 of the Clean Air Act, as amended (42 U.S.C. 7470 *et seq.*) The data base and inventory system will also include sufficient information enabling preparation of statements of coal resources in accordance with 7.06.7 and information that becomes available from petitions, publications, experiments, permit applications, mining and reclamation operations, and other sources relevant to the purposes of the data base and inventory system.
- 130(4) (6) The Board shall accept and seek grants and financial aid from the Federal government and from private agencies for carrying out the purposes of 7.04.

7.05 CRITERIA

- 126(1)(a) (1) Upon petition pursuant to 7.06, the Board shall designate an area as unsuitable for all or certain types of surface coal mining operations if the Board determines that reclamation is not technically and economically feasible pursuant to the requirements of these Rules.
- 126(1)(b) (2) Upon petition pursuant to 7.06, the Board may designate an area as unsuitable for all or certain types of surface coal mining operations if the Board determines that such operations will:
- (a) Be incompatible with State or local land use plans or programs;

- (b) Adversely affect fragile or historic lands in which the operations could result in significant damage to important historic, cultural, scientific, or esthetic values or natural systems;
- (c) Adversely affect renewable resource lands in which such operations could result in a substantial loss or reduction of long-range productivity or water supply or food or fiber products, such lands to include aquifer and aquifer recharge areas; or
- (d) Affect natural hazard areas in which such operations could substantially endanger life and property, such lands to include areas subject to frequent flooding and areas of unstable geology.

7.06 PETITION PROCEDURE

126(2)(a) 7.06.1 Right to Petition.

Any person having an interest which is or may be adversely affected or any duly authorized governmental agency has the right to petition the Board to have an area designated as unsuitable for all or certain types of surface coal mining operations or to have such designation terminated.

126(2)(a) 7.06.2 Petition Requirements: Designation.

A petition for designation shall be in writing, shall be directed to the Board, and shall contain the following information:

126(2)(a)(I)(1) The name, address and telephone number of the petitioner.

126(2)(a)(II) (2) A brief description of the area covered by the petition, including applicable range and township numbers, location and size of such areas, and a U.S. Geological Survey topographic map showing the outline of the perimeter of the petitioned area. The petitioner shall make a good faith effort to identify, in the petition, the owners of record of surface and mineral interests in the land proposed for designation, except that a title search of the land ownership need not be performed.

126(2)(a)(III) (3) The identification of the petitioner's interest which is or may be adversely affected.

- 126(2)(a)(IV) (4) Allegations of fact with supporting evidence which would tend to establish the area as unsuitable for all or certain types of surface coal mining operations. Such allegations shall include a general statement of how mining may adversely affect or has affected the people, land, air, water, or other resources of the area identified in 7.06.2(2).

7.06.3 Petition Requirements: Termination.

126(2)(a) A petition to terminate an unsuitability designation shall be in writing, shall be directed to the Board, and shall contain the following information:

126(2)(a)(I)(1) The name, address, and telephone number of the petitioner.

126(2)(a)(II) (2) A brief description of the area covered by the petition, including applicable range and township numbers, location, and size of such areas, and a U.S. Geological Survey topographic map showing the outline of the perimeter of the petitioned area. The petitioner shall make a good faith effort to identify in the petition, owners of record of the surface and mineral interest in the land proposed for termination, except that a title search of the land ownership need not be performed.

126(2)(a)(II) (3) The identification of the petitioner's interest which is or may be adversely affected.

126(2)(a)(IV) (4) Allegations of fact, with supporting evidence not contained in the record of the proceeding in which the area was designated unsuitable, which would tend to establish the statements or allegations, and which statement or allegations indicate that the designation should be terminated based on:

(a) The nature or abundance of the protected resource or condition or on the basis upon which the designation was made pursuant to 7.05(2);

(b) Reclamation now technically and economically feasible, if the designation was based on criteria found in 7.05(1); or

(c) The resources or conditions not being affected by surface coal mining operations, or in the case of land use plans, not being incompatible with surface coal mining operations during and after mining in accordance with 7.05(2).

7.06.4 Initial Processing, Recordkeeping, and Notification Requirements.

- 126(2)(b) (1) Within 30 days of receipt of the petition, the Division shall determine whether the petition is complete and the Board shall by certified mail, notify the petitioner whether or not the petition is complete. A petition shall be considered complete when all the requirements of 7.06.2 or 7.06.3 are met. Once the requirements of 7.06.2 or 7.06.3 are met, no party shall bear any burden of proof, but each complete petition shall be considered and acted upon by the Board or Division pursuant to the procedures of this Rule. If the petition is determined to be incomplete, such petition shall be promptly returned to the petitioner and the notification shall contain the specific aspects of the petition which render it incomplete. The petitioner shall be provided an opportunity to amend, revise or otherwise make said petition complete.
- 126(2)(c) (2) Within 30 days after the filing of a complete petition:
- (a) The Division shall make a determination of whether:
- (i) Any identified coal resources exist in the area covered by the petition;
 - (ii) The petition is frivolous; or
 - (iii) The area or portion thereof has been the subject of a previous unsuccessful petition to establish or terminate an unsuitability designation, and if so, whether any new factual allegations with supporting evidence not contained in such previous petition are included in the petition.
- (b) If the Division determines that:
- (i) There are no identified coal resources in the area covered by the petition, the petition shall be returned to the petitioner with the statement of the finding.
 - (ii) The petition is frivolous, then the Division shall recommend to the Board that the petition be dismissed and provide written notice to the petitioner of such recommendation.
 - (iii) The area or portion thereof has been the subject of a previous unsuccessful petition to establish or terminate an

unsuitability designation and no new factual allegation with supporting evidence are contained in the petition, then the Division shall recommend to the Board that the petition be dismissed and provide written notice to the petitioner of such recommendation.

- 126(2)(c) (3) At its next regularly scheduled meeting the following such recommendations by the Division, but in no event less than 30 days following notice to the petitioner of the Division's recommendation, the Board shall accept or reject the Division's determination after providing the petitioner and other interested parties an opportunity to be heard at such meeting, regarding the Division's recommendation.
- 126(2)(c) (a) If the Board accepts the Division's recommendation of dismissal in accordance with 7.06.4(2)(b)(ii) or 7.06.4(2)(b)(iii), then the Division shall promptly return the petition with a written statement notifying the petitioner that the petition has been dismissed and state the reasons therefor.
- (b) If the Board rejects the Division's recommendation of dismissal in accordance with 7.06.4(2)(b)(ii) or 7.06.4(2)(b)(iii), then the petition shall be subject to the requirements of this Rule.
- 126(2)(d) (4) Within 30 days after the determination that a petition is complete, the Division shall circulate copies of the petition to, and request submissions or relevant information from, other interested governmental agencies, the petitioner, intervenors, owners of record of all surface and mineral interests in the land included in such petition, and other persons known to the Division to have an interest in the property.
- (5) Within 30 days after the determination that a petition is complete, the Division shall:
- (a) Notify the general public of the receipt of the petition and request submissions of relevant information by a newspaper advertisement placed once a week for two consecutive weeks in the locale of the area covered by the petition, and in the newspaper of the largest circulation in the State;
- 126(2)(f) (b) The Division shall send a copy of the petition to the county clerk and recorder of each county affected by such petition for recording

in the real property records of said county. The copy shall be available for inspection by the public.

- 126(2)(d) (6) The Division shall include a list of pending petitions in the monthly mailings of the Division.
- 126(2)(g) (7) After the filing of a petition and no later than 15 days before the public hearing, any person may intervene in the designation or termination proceeding by filing a petition to intervene. The petition to intervene shall contain allegations of facts and supporting evidence which tend to establish or refute the allegations contained in the subject petition, and the intervenor's name, address and telephone number.
- (8) Beginning immediately after a complete petition is filed, the Division shall compile and maintain a record consisting of all documents relating to the petition filed with or prepared by the Division. The Division shall make the record available for public inspection. Such inspection shall be free of charge and copying shall be available at a reasonable cost during all normal business hours, at a central location of the county or multi-county area in which the area in the petition is located, and at the Division office.

7.06.5 Petitions Affecting Permit Applications.

- 126(2)(a) (1) In the event that a petition is submitted to the Division relating to the permit area of a permit application in which approval of the Board is pending, that petition shall not prevent the Board from issuing a decision on the permit application, if received after the completion of the informal conferences provided for 2.07.3(6) or, if no such informal conference was requested, more than 30 days after the final publication of notice provided for in 2.07.3(2).
- (2) The Division shall notify the person who submits a petition of any application for a permit received which proposes to include any area covered by the petition.

7.06.6 Procedures: Hearing Requirements.

- 126(2)(e) (1) Within 10 months after receipt of a complete petition, the Board shall hold a public hearing in the locality of the area covered by the petition.

- (2) In the event that all petitioners and intervenors stipulate agreement prior to the hearing, the petition may be withdrawn from consideration.
- (3) The hearings shall be legislative and fact-finding in nature, with no cross-examination or sworn testimony. The hearings shall be kept informal, but there shall be an opportunity for representatives of the Board, the Division and the audience to ask questions of speakers. The Board shall make a tape of the hearing and prepare a verbatim transcript of the hearing.
- 126(2)(e) (4) The Board shall give notice of the hearing by certified mail no less than one month before the scheduled date of the hearing to:
 - (a) The owners of all surface and mineral interests in the area covered by the petition;
 - (b) All petitioners and intervenors; and
 - (c) Local, State and Federal agencies that may have an interest in the decision of the petition.
- 126(2)(e) (5) The notice shall be in writing and shall specify the time and place of the public hearing as well as the location where a copy of the subject petition may be examined.
- 126(2)(e) (6) The Board shall publish, in a newspaper of general circulation in the area to be affected by the petition, a notice of the public hearing with a description of the area to be affected as well as the location where a copy of the petition may be examined. The newspaper advertisement shall be placed once a week for two consecutive weeks and once during the week prior to the scheduled date of the hearing. The consecutive weekly advertisement must begin at least one month before the scheduled date of the hearing.
- (7) The Board may consolidate in a single hearing the hearings required for each of several similar or related petitions.

7.06.7 Pre-hearing Detailed Statement.

- 126(2) Prior to designating any area as unsuitable for surface coal mining operations and at least one month prior to the hearing required in 7.06.6, but in no case, less than 30 days after completion of the notice requirements in 7.06.4(4) and

(5), the Board, with the assistance of the Division, shall, using existing and available information, prepare and make available for public inspection and copy at a reasonable cost a detailed statement on:

- (1) The potential coal resources of the area;
- (2) The demand for coal resources; and
- (3) The impact of such designation or termination on the environment, the economy, the supply of coal.

7.07 DECISION PROCEDURES

- 126(1)(a) (1) In reaching its decision on the designation of an area as unsuitable for all or certain types of surface coal mining operations, or termination of such designation, the Board shall use:
- (a) The information contained in the data base and inventory system established in 7.04;
 - (b) Information provided by other governmental agencies;
 - (c) The detailed statement prepared in accordance with 7.06.7; and
 - (d) Any other relevant information submitted during the comment period.
- 126(1)(c) (2) Designation decisions by the Board shall be based on criteria listed in 7.05 and shall be integrated as closely as possible with present and future land use planning, leasing, and regulation processes at the Federal, State, and local levels.
- 126(2)(h) (3) Within 60 days after the public hearing, the Board shall issue a final written decision on the petition including:
- (a) A detailed statement of reasons for the decision, noting specific criteria from 7.05;
 - (b) A detailed description of the types of surface coal mining operations for which an area is designated unsuitable;

- (c) A map and appropriate description of any area designated as unsuitable for surface coal mining operations, from which it is possible to locate accurately on the ground the boundaries of the area being described.

7.08 POST DECISION PROCEDURES

- 126(2)(h) (1) Within 60 days after the public hearing is held, the Board shall simultaneously send the final written decision of 7.07(2) by certified mail to the petitioner, to every other party at the proceeding, to the Regional Director, and to the county clerk and recorder of each county affected by a petition for recording in the real property records of said county.
- 114(2)(d) (2) The Division or Board shall not issue permits which are inconsistent with designations made pursuant to requirements of this Rule.
- (3) The Division shall maintain a map of areas designated as unsuitable for all or certain types of surface coal mining operations.
- (4) The Board shall make available to any person any information within its control regarding designations, including mineral or elemental content which is a potentially toxic forming material in the environment but not including proprietary information on the quantity of coal or the analysis of the chemical or physical properties of the coal.
- 117(5) (5) Designation of an area as unsuitable for all or certain types of surface coal mining operations by the Board, shall not prohibit coal exploration operations in the area. Exploration operations on any area designated unsuitable for surface coal mining operations requires a permit issued in accordance with 2.02.3.

7.09 JUDICIAL REVIEW

- 128 (1) Any order or decision by the Board in a proceeding to establish or terminate an unsuitability designation under this Rule, or any failure of the Board or Division either to act within the time limits set forth in this Rule or to comply with other administrative requirements of this Rule, shall be subject to judicial review.
- (2) In the event of judicial review of any order, decision, determination or administrative failure by either the Board or Division, the court shall

follow the requirements for judicial review set out in Section 34-33-128 of the Act.

RULE 8 MINE SUBSIDENCE PROTECTION PROGRAM

8.01 SCOPE

This rule provides the detailed specifications for carrying out the Colorado Mine Subsidence Protection Program (the Program).

This rule includes the Colorado Mine Subsidence Protection Trust Agreement. Additional matters, such as: the eligibility of structures and property for coverage and exclusions from coverage under the Program; benefit limits for participating homeowners; costs of participation in the program; and, procedures for resolving disputes which may arise are also addressed in this rule.

The Colorado Mine Subsidence Protection Trust Agreement, Appendix A to this rule, provides the overall framework and basis for funding the Program.

8.02 HOMEOWNER PARTICIPATION

8.02.1 Eligibility Requirements

Participation shall be limited to privately owned residential structures of one to ten units which have been constructed on eligible lands pursuant to an approved building permit dated on or before February 22, 1989. Eligible lands means lands that are eligible for reclamation funding under Section 404 of the Federal Surface Mining Control and Reclamation Act of 1977 (30 USC §1234). Where a developer or landowner has, in good faith, constructed a home(s) after February 22, 1989 in an area shown on available maps as being free of mining, but which has subsequently been found to be undermined, this home(s) could be considered eligible for the Program.

8.02.2 Participation Requirements

Applicants for participation shall have their residential structures and surrounding property inspected and photographed by a company designated by the Plan Administrator. The cost of the inspection shall be paid by the applicant.

The applicant must submit a signed statement certifying the applicant's agreement with the inspection report as stated. The statement shall also certify that the applicant understands that pre-existing conditions are not eligible for benefits. Finally, the statement shall warrant that the homeowner applicant knows of no material pre-existing damage, other than that contained in the report.

If the inspection report contains recommendations for repairing pre-existing damage, the Plan Administrator may require compliance with those recommendations and a subsequent reinspection before the applicant is granted participation status. In the event of extensive pre-existing damage, the Plan Administrator may deny the applicant participation status.

The participant will receive a Notice of Participation from the Plan Administrator, after having signed the warranty and paid the invoice for the first annual administrative fee. The administrative fee shall be \$35.00 per year. Upon receiving the administrative fee of \$35.00 per year for three consecutive years, the participant shall not be required to pay any further annual administrative fees as long as the original participant owns the eligible property.

Nothing in this rule shall be construed to prohibit the Board of Trustees from using Trust Funds for such expenditures that will ensure the financial viability of the Trust and are in the best interest of the Trust, including defraying the cost of inspection for the homeowner.

8.02.3 Participation In Good Standing

An applicant shall be considered a participant in good standing once all requirements in 8.02.2 are fulfilled. Delinquency of more than 30 days in payment of the annual administrative fee shall result in suspension of participation status. Subsidence events that occur during a period of suspension will not be covered by the Program. Delinquency of more than 90 days in payment of the annual administrative fee shall result in expulsion from the Program. Re-admittance upon expulsion will require a reinspection of the homeowner's residential structure and property at the expense of the homeowner. The expelled participant may petition the Board for a waiver of the reinspection requirement. The Board reserves the right to accept or deny such petitioners.

Sale or transfer of the property shall dissolve the participation agreement unless a Notice of Transfer is filed with the Plan Administrator. If Notice of Transfer is filed within 90 days of such transfer or sale, coverage under the program shall continue without interruption. A fee of \$35.00 shall be included with such Notice of Transfer.

8.02.4 Participation Benefits

Participation in the Program shall permit the participant to petition the Program for benefits from the Mine Subsidence Trust Fund through the Plan Administrator in the event of an eligible mine subsidence event.

Benefits under this rule are subject to the terms of the Colorado Coal Mine Subsidence Trust Fund, Appendix A, and to the sufficiency of the fund.

Beneficiaries may receive a maximum of \$100,000 per occurrence subject to a \$1,000 per occurrence deductible, or a maximum cumulative benefit due to subsequent subsidence events equivalent to the fair market value of the eligible property prior to subsidence. Maximum benefit and deductible amounts in effect from time to time shall be subject to modification and approval by the Board following formal public hearings and official revision of this rule. Benefits shall be used to repair the structure and shall be determined pursuant to Rule 8.04.3

8.03 EVENTS AND CONSEQUENCES ELIGIBLE FOR BENEFITS

The term "mine subsidence" as used in the Program means lateral or vertical ground movement resulting from the collapse of man-made underground coal mines, which directly damages any dwelling, building or fixture permanently affixed to realty. Collapse of any other kind of mine is not "mine subsidence."

Ground movement resulting from any other cause is not "mine subsidence." Benefits from the trust shall not supersede or duplicate any collectible insurance. Participants shall pursue any collectible insurance before benefits are determined. The amount of the benefit paid under the Trust shall be reduced by the amount of recovery on any other such insurance. Damage to residential structures resulting from perils similar to subsidence, such as swelling or collapsing soils or damage primarily due to inappropriate structural design or construction shall not be covered by the program.

The Program, funded through the Trust, shall provide benefits to participants in Colorado against damage to their structures caused by mine subsidence as described above. The term "structure" in this rule means any dwelling, residential building, appurtenant structure, including detached garages, breezeways, and carports, or fixture permanently affixed to realty, including its basements, footings, foundations, septic systems and underground pipes directly servicing the dwelling or building. The term structure does not include such items as landscaping or earth retaining structures, driveways, walkways or outdoor pools.

Payments for subsidence damages caused by all active mining, mines abandoned or inadequately reclaimed after August 3, 1977, and non-coal mining are specifically excluded under the Program.

A participant aggrieved by a determination of the Division or the Plan Administrator concerning the proximate cause of damage, the amount of benefit appropriate to particular subsidence damages, or related issues, may petition the Board for review of the determination, pursuant to Rule 8.04.2. Decisions of the Board shall be subject to judicial review pursuant to §24-4-106, C.R.S. (1984).

8.04 NOTICE, ACCEPTANCE AND PAYMENT OF BENEFITS

8.04.1 Notice of Claim for Benefit

A participant in the Program shall notify the Plan Administrator of an event giving rise to a claim within 90 days of the subsidence event. Except for good cause, no payments shall be made if such notice is not given.

8.04.2 Acceptance or Notice of Dispute of Claims for Benefit

The Plan Administrator shall determine whether an event is eligible for benefits. The participant may dispute the determination by submitting a written notice of dispute with any evidence in support of the dispute to the Board within 30 days of the determination. Appeals will be considered as soon as practicable by the Board.

8.04.3 Payment of Benefits

The Plan Administrator shall communicate to the participant the amount of the benefit. The Plan Administrator shall provide the participant with an estimate of the cost of repairs. Payment of the benefit shall be made to the participant upon completion of necessary repairs in a good and workmanlike fashion. The amount of benefits shall not exceed the actual cost of repairs minus the \$1,000.00 deductible.

In the event that subsidence is on-going, final repairs may be delayed until the event has ceased. Any necessary work to minimize such on-going subsidence shall also be covered.

This section shall be subject to amendment by the Board. This section shall not apply to any subsidence event that occurs after such amendment.

APPENDIX A

THE COLORADO COAL MINE SUBSIDENCE TRUST FUND

THIS AGREEMENT is made this 24 day of June, 1988, between the COLORADO MINED LAND RECLAMATION DIVISION (the "Division") of the Department of Natural Resources, State of Colorado, as grantor, and the undersigned members of the COLORADO MINED LAND RECLAMATION BOARD (the "Board") as trustees.

RECITALS

A. By act of Congress, 30 United States Code section 1231, there was created on the books of the Treasury of the United States a trust fund known as the Abandoned Mine Reclamation Fund, to be administered by the United States Secretary of the Interior, which fund consists in large part of reclamation fees imposed upon the production of coal.

B. Use of the Abandoned Mine Reclamation Fund is authorized by 30 United States Code section 1231 for certain purposes therein specified, which include assistance to the states for the establishment of self-sustaining individual state administered programs for the protection of private property against damages caused by land subsidence resulting from underground coal mining.

C. The State of Colorado is eligible to receive a portion of the Abandoned Mine Reclamation Fund upon terms and conditions specified in a certain Memorandum of Understanding to be entered into by the Division and the Secretary of the Interior acting through the Office of Surface Mining Reclamation and Enforcement ("OSMRE").

D. The Division has, pursuant to 30 United States Code section 1231(c)(8) and 30 Code of Federal Regulations Part 887, applied to OSMRE for a grant of a portion of the Abandoned Mine Reclamation Fund for the establishment of a state program.

E. Johnson & Higgins of Colorado, Inc., a Colorado corporation, has, pursuant to a contract with the State of Colorado, agreed to assist the state in the establishment and operation of a Mine Subsidence Protection Program ("the Program"). The Program, when approved by OSMRE and adopted by the Board, will be administered by the Division, with the assistance of a Plan Administrator. Johnson & Higgins of Colorado, Inc. is the initial Plan Administrator.

AGREEMENT

ARTICLE 1. 00 - CORPUS - NAME OF TRUST

1. 01 Initial Corpus. The initial corpus of this trust shall be the funds received from OSMRE as a result of the Division's grant application. The Division hereby conveys to the trustees such grant funds and its right to receive the same. The trust hereby established shall be known as THE COLORADO COAL MINE SUBSIDENCE TRUST FUND.

1. 02 Additions to Corpus. The trustees may, but need not, accept additions to the trust estate from any source, upon such terms and conditions as they determine. If additions from other sources shall be received, the grant funds and the income and disbursement thereof shall nevertheless be separately accounted for at all times.

ARTICLE 2. 00 - INCOME AND PRINCIPAL

2. 01 Eligible Beneficiaries. Only those property owners identified by both the Plan Administrator and the Division to be participants in good standing in the Program shall be eligible to become trust beneficiaries.

2. 02 Benefit Payments. The trustees shall make payments, out of income and principal, to beneficiaries only in accordance with benefit vouchers issued and signed by the Plan Administrator and countersigned by the Director of the Division. A property owner shall be entitled to a benefit under this trust agreement only on the basis of a benefit voucher so issued and countersigned.

2. 03 Reliance Upon Benefit Vouchers. The trustees shall be entitled to rely upon the accuracy and sufficiency of all such benefit vouchers received, and shall have no duty of inquiry as to any underlying fact, entitlement or other representation inherent or explicit in any such benefit voucher.

2. 04 Sufficiency of Trust Fund. This trust agreement has been funded with a federal grant. Benefits can be paid only to the extent of available trust assets. Should trust assets become insufficient to pay all amounts payable in accordance with benefit vouchers so signed, countersigned and delivered to the trustees, the trustees shall, after payment of all administration expenses, apply remaining trust assets pro rata among the beneficiaries for whom, on the date the trustees determine the existence of insufficient funds, benefit vouchers have been so delivered and remain unpaid. This trust shall thereupon terminate. In such event, the trustees, the State of Colorado, the Division, the Mined Land Reclamation Board and all other agencies and officials of the State of Colorado, shall be fully released and discharged of all further responsibility to beneficiaries, program participants, property

owners, plan administrators, creditors and the United States of America.

2. 05 "Excess Surplus" Trust Funds. If the trustees determine that all or any part of the trust estate attributable to the Federal grant monies is no longer required to meet the purposes of 30 United States Code section 1231, the trustees shall distribute to the United States government through its designated agent the funds so determined to be surplus.

ARTICLE 3. 00 - TRUST ADMINISTRATIVE AND PROTECTIVE PROVISIONS

3. 01 Parties. In any judicial proceeding affecting this trust, the only necessary parties shall be the Board, the trustees, the Division and the Colorado Attorney General as representative of the beneficiaries.

3. 02 Restricted Transfer-Inalienability. The funds transferred by the Division to the trustees and the income thereon are restricted, and may be distributed and expended only as herein provided and for no other purpose. Accordingly, no part of the trust estate, including income, shall be liable for the general debts or obligations of the Division or the Plan Administrator or the State of Colorado or any agency or subdivision thereof or be subject to attachment, garnishment, legislative appropriation, executive transfer, execution, creditor's bill or other legal or equitable process.

3. 03 Essential Governmental Function. This trust is established with Federal trust funds for the accomplishment of a function that is essential to the governments of the state of Colorado and the United States of America. No part of the net earnings of this trust shall inure or be payable to or for the benefit of any private shareholder or individual other than a beneficiary, except that the trustees shall be authorized and empowered to pay reasonable compensation for services rendered. No part of the activities of this trust shall be the carrying on of propaganda, or otherwise attempting to influence legislation. No part of the activities of this trust shall be the participation in, or intervention (including the publication or distribution of statements) in any political campaign on behalf of (or in opposition to) any candidate for public office. The trustees and the trust shall not engage in any transaction or activity which would cause the trust to lose its tax exempt status under the Internal Revenue Code of the United States, as the same may be in effect from time to time.

3. 04 Discrimination and Affirmative Action. The trustees agree to comply with the letter and spirit of the Colorado Antidiscrimination Act and all other applicable laws and Executive Orders in effect from time to time respecting discrimination and unfair employment practices. Pursuant thereto, the provisions set forth in Schedule A hereto, as the same may be modified from time to time by legislative enactment or Executive Order, shall be included in all contracts entered into by or under the authority of the trustees pursuant to this trust agreement.

3. 05 Meetings. All meetings of the trustees shall be open to the public except as may be provided by law with regard to meetings of public officials of the State of Colorado.

3. 06 Majority Decisions. The decision of a majority of all acting trustees shall control upon any matter arising in the administration of this trust. Any dissenting trustee may be absolved from personal liability by registering such trustee's dissent upon the records of the trust within ten days after receiving notice of the action or proposed action from which such trustee dissents; but such trustee shall thereafter act with the other trustees in any way necessary or appropriate to effectuate the decision of the majority.

3. 07 Exoneration of Persons Dealing With Trustees. No person dealing with the trustees shall be under any obligation to see to the application of any money paid to them or to inquire into the validity, expediency or propriety of any act of the trustees or into any of the provisions of this instrument.

3. 08 Liability of Uncompensated Trustees. Individual trustees who are serving without compensation for their services as such shall be liable only for dishonesty, fraud or willful misconduct, and shall not be liable for loss arising from shrinkage in value of any asset herein authorized to be held or acquired. Every action or omission of theirs shall be presumed a proper exercise of the powers herein given them, in the absence of clear and convincing proof to the contrary. No trustee shall be liable for any act or default of any other trustee, unless a party thereto or unless, being aware of same, he shall fail to report it to the other trustees and to the Division.

3. 09 Non Waiver of Immunity. The provisions of this agreement shall not have the effect of waiving or diminishing in any way the immunity afforded by state law to trustees who are public officials.

ARTICLE 4. 00 - POWERS OF TRUSTEE

4. 01 Grant. In administering this trust agreement, the trustees are empowered to perform every act which they shall deem advisable or desirable in the discharge of their responsibilities hereunder, including the following: to hold, retain, invest and reinvest the trust estate in accordance with Colorado laws governing the investment of state funds; to employ agents, attorneys, consultants and investment advisers and to compensate them; to pay all other reasonable expenses of trust administration, including fees and expenses of the Plan Administrator; to utilize available services of the Colorado State Treasurer for investment assistance if they so desire, and to utilize available services of the Division; to sell, exchange, grant, convey, deliver, assign, transfer, lease, option, mortgage, pledge, abandon, borrow, lend, contract; to hold in nominee form, carry out agreements, establish reserves, and abandon, settle or contest claims.

4. 02 Fiduciaries' Powers Act. The trustees may also exercise all the powers conferred upon them by law, including the Colorado Fiduciaries' Powers Act as amended and in effect from time to time.

4. 03 Delegation of Powers. (a) Investment funds held by the trustees shall be invested in accordance with the standards for the investment of funds belonging to the state of Colorado. The trustees may at any time and from time to time delegate the responsibility for investment according to such standards to one or more corporate co-trustees, to the Colorado State Treasurer or to one or more qualified investment counselors and advisors, in which case the responsibilities of the trustees making such delegation shall be limited to the exercise of reasonable care in the making of such delegation and in the monitoring of the performance of such investment persons or entities. Any such delegation may be revoked at any time by the trustees. Any such delegation, and the revocation thereof, must be in writing, executed and acknowledged by the trustees and by the party to whom responsibility has been so delegated.

(b) The trustees may at any time and from time to time delegate among themselves the exercise of any powers and responsibilities, discretionary or otherwise, and may revoke any such delegation at will. The delegation of any such power, and also the revocation of any such delegation, shall be evidenced by an instrument in writing executed and acknowledged by the trustees and by the trustee or trustees to whom delegation has been made. So long as any such delegation is in effect, the powers, discretionary or otherwise, hereby granted and so delegated may be exercised and action may be taken by the trustee or trustees to whom delegation has been made with the same force and effect as if the trustees making such delegation had personally joined in the exercise of such power. The trustees making such delegation shall not be liable for any action so taken pursuant to such delegation but shall have responsibility for monitoring the performance of the trustee or trustees to whom such delegation has been made.

ARTICLE 5. 00 - TRUSTEES-REPORTS

5. 01 Trustees-Members of Mined Land Reclamation Board. Until otherwise determined by the Colorado Mined Land Reclamation Board ("the Board"), those persons who are from time to time members of the Board shall, by virtue of holding such public office, be trustees, and acceptance of appointment to the Board shall, without any other act or deed by the person so appointed, constitute acceptance of trusteeship. Termination of office as a Board member shall effect concurrent termination of trusteeship.

5. 02 Corporate Trustee or Co-Trustee. The trustees may at any time appoint as sole trustee or as co-trustee, with such powers and responsibilities and for such terms as they shall specify, any corporation authorized by the laws of the United States to administer trusts, and may revoke any such appointment at any time. Any such corporation must have at least \$100,000,000 of assets (other than the assets of this trust) under trust administration.

5. 03 Trustee Resignation, Removal, Succession. The members of the Board shall have power to appoint the individuals or entities to serve as trustees hereunder and to remove any trustee at any time. Individuals other than members of the Board who are appointed shall be individuals qualified by training, education or experience in the administration of trusts. Corporations appointed shall be corporations authorized under the laws of the United States to administer trusts and which have trust assets under administration (other than the assets of this trust) of at least \$100,000,000.

5. 04 Rights of Successors. Successor trustees shall have all the title, rights, powers, privileges and duties conferred or imposed upon the original trustees, without any act of conveyance or transfer. No trustee shall be required to examine the accounts, records and acts of any previous trustee or any allocation of the trust estate or shall be responsible for any act or omission to act on the part of any previous trustee.

5. 05 Compensation. Any corporate trustee acting under this agreement shall be entitled to reasonable compensation commensurate with the services actually performed and to reimbursement for expenses properly incurred. All trustees shall be entitled to reimbursement for reasonable expenses incurred in performance of their duties.

5. 06 Successor Corporate Fiduciary. Any corporate successor to the trust business of any corporate trustee shall be the successor corporate trustee with like powers, duties and obligations.

5. 07 Reports. Periodic reports shall be rendered by the trustees to the Board and to the Office of Surface Mining of the United States Department of the Interior, showing all receipts and disbursements during the period and assets then held in trust, which reports shall be rendered not less frequently than annually. The records of the trustees shall be public records and shall be open to public inspection to the extent provided in Colorado law applicable to the inspection and copying of similar state records.

ARTICLE 6. 00 - AMENDMENT

This agreement may be amended in any respect and at any time by written instrument signed by the grantor and the trustees, but only in furtherance of the purposes of 30 United States Code section 1231(c)(1) as said section may be in effect as amended from time to time.

ARTICLE 7. 00 - REVOCATION/TERMINATION

This trust may be revoked in whole or in part at any time by action of the grantor with the prior approval of the Board. If the trust is wholly revoked or terminated prior to exhaustion of the trust estate, or if the Memorandum of Understanding referred to in

Recital C above shall expire, all funds attributable to Federal grant monies remaining after payment of all expenses of trust administration and all Program expenses, including fees of the Plan Administrator, shall, within three months after such revocation, termination or expiration, be returned to the United States government through its designated agent. Any other trust funds not required for the payment of such expenses will be disposed of as determined by the trustees to be consistent with the purposes of this trust agreement.

ARTICLE 8. 00 - RULES OF CONSTRUCTION - APPLICABLE LAW

8. 01 Pronouns, Singular and Plural. Unless the context requires otherwise, words denoting the singular may be construed as denoting the plural, and words of the plural may be construed as denoting the singular, and words of one gender may be construed as denoting such other gender as is appropriate.

8. 02 Applicable Law. The validity of this agreement and all questions of construction and administration of this trust shall be determined under the laws of Colorado.

STATE OF COLORADO
MINED LAND RECLAMATION DIVISION

s/ Fred R. Banta
Fred R. Banta, Director
Grantor

TRUSTEES:

MEMBERS OF THE MINED LAND
RECLAMATION BOARD, DEPARTMENT OF
NATURAL RESOURCES, STATE OF COLORADO

s/ Luke J. Danielson
Luke J. Danielson
s/ Michael A. Entz
Michael A. Entz
s/ Davis Holder
Davis Holder

s/ Margaret A. Winter
Margaret Winter
s/ Dennis Donald
Dennis Donald
s/ Chris P. Jouflas
Chris P. Jouflas

s/ Terry O'Connor
Terry O'Connor

STATE OF COLORADO
CITY AND ss.
COUNTY OF DENVER

The foregoing instrument was acknowledged before me this 24 day of June, 1988, by Fred R. Banta, as Director of the State of Colorado Mined Land Reclamation Division.

My commission expires 4/18/90

(SEAL)
s/ Diana L. Knode
Notary Public

STATE OF COLORADO
CITY AND ss.
COUNTY OF DENVER

The foregoing instrument was acknowledged before me this 24th day of June, 1988, by the following members of the Mined Land Reclamation Board, Department of Natural Resources, State of Colorado: Luke J. Danielson, Michael A. Entz, Davis Holder, Margaret Winter, Dennis Donald, Chris P. Jouflas and Terry O'Connor, as trustees.

My commission expires 4/18/90

(SEAL)
s/ Diana L. Knode
Notary Public

SCHEDULE A

to

THE COLORADO COAL MINE SUBSIDENCE TRUST FUND

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, marital status, religion, ancestry, mental or physical handicap, or age. The contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to the above mentioned characteristics. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; lay-offs or terminations; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth provisions of this non-discrimination clause.
- (2) The contractor will, in all solicitations or advertisements for employees places by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, national origin, sex, marital status, religion, ancestry, mental or physical handicap, or age.
- (3) The contractor will send to each labor union or representative of workers with which he has collective bargaining agreement or other contract or understanding, notice to be provided by the contracting officer, advising the labor union or workers' representative of the contractor's commitment under the Executive Order, Equal Opportunity and Affirmative Action, dated April 16, 1975, and of the rules, regulations, and relevant Orders of the Governor.
- (4) The contractor and labor unions will furnish all information and reports required by Executive Order, Equal Opportunity and Affirmative Action of April 16, 1975, and by the rules, regulations and orders of the Governor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the office of the Governor or his designee for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- (5) A labor organization will not exclude any individual otherwise qualified from full membership rights in such labor organization, or expel any such individual from membership in such labor organization or discriminate against any of its members in

the full enjoyment of work opportunity, because of race, creed, color, sex, national origin, or ancestry.

(6) A labor organization, or the employees or members thereof will not aid, abet, incite, compel or coerce the doing of any act defined in this contract to be discriminatory or obstruct or prevent any person from complying with the provisions of this contract or any order issued thereunder; or attempt, either directly or indirectly, to commit any act defined in this contract to be discriminatory.

(7) In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further State contracts in accordance with procedures, authorized in Executive Order, Equal Opportunity and Affirmative Action of April 16, 1975 and the rules, regulations, or orders promulgated in accordance therewith, and such other sanctions as may be imposed and remedies as may be invoked as provided in Executive order, Equal Opportunity and Affirmative Action of April 16, 1975, or by rules, regulations, or orders -promulgated in accordance therewith, or as otherwise provided by law.

(8) The contractor will include the provisions of paragraph (1) through (8) in every sub-contract and subcontractor purchase order unless exempted by rules, regulations, or orders issued pursuant to Executive Order, Equal Opportunity and Affirmative Action of April 16, 1975, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontracting or purchase order as the contracting agency may direct, as a means of enforcing such provisions, including sanctions for non-compliance; provided, however, that in-the event the contractor becomes involved in, or is threatened with, litigation with the subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the State of Colorado to enter into such litigation to protect the interest of the State of Colorado.