STATE OF WEST VIRGINIA

OFFICE OF THE SECRETARY OF STATE

CHARLESTON 25305

A. JAMES MANCHIN
SECRETARY OF STATE

FILED IN THE OFFICE OF
A. JAMES MANCHIN
SECRETARY OF STATE
THIS DATE 6/16/82
Administrative Law Division

STATE REGISTER FILING

I, David C. Callaghan, Chairman,
Title or Position

Reclamation Commission, hereby submit to record in
Department or Division

the State Register on 8 1/2 x 11" paper two (2) copies of

( ) proposed rules and regulations concerning topics of material not covered by existing rules and regulations;

(X) proposed rules and regulations superseding rules and regulations already on file;

( ) notice of hearing;

( ) findings and determinations;

(X) rules and regulations; or

(X) other - specify (Declaration of Emergency).

This filing pertains to

Chapter 20
Article 6
Series VII
Section 1-9, 11-16
Page No. 1-298, 1-302

(X) proposed rules and regulations are required to go to Legislative Rule Making Committee;

( ) proposed rules and regulations are excluded from Legislative Rule Making Committee;

6/16/82
Date Submitted

D. C. Callaghan
Signature of Person Authorizing this Filing

Emergency
Valid June 6, 1982
for 180 days

STATE OF WEST VIRGINIA
DEPARTMENT OF NATURAL RESOURCES
CHARLESTON 25305

DAVID C. CALLAGHAN
Director

June 16, 1982

FILED IN THE OFFICE OF
A. JAMES MANCHIN
SECRETARY OF STATE
THIS DATE 6/16/82
Administrative Law Division

The Honorable A. James Manchin
Secretary of State
Capitol Complex
Charleston, West Virginia 25305

Dear Secretary Manchin:

The following is submitted to you pursuant to the requirements of Chapter 29A, Article 3, Section 15 of the Code of West Virginia, as amended.

Declaration of Emergency

The Reclamation Commission hereby makes the following statement of facts and circumstances constituting the emergency which requires the promulgation of these regulations pursuant to West Virginia Code 29A-3-15(a). The Commission affirmatively states that an emergency exists because, in accordance with Code 29A-3-15(a), these rules (1) are necessary for the immediate preservation of the public peace, health, safety or welfare; (2) are necessary to comply with federal law and regulations; and (3) are necessary to prevent substantial harm to the public interest.

The Legislature has found that unregulated surface mining can "burden and adversely affect ... public welfare and safety" [Code 20-6-2(a)] and it specifically intended to expand West Virginia's mining program "to protect the public and the environment ..." [Code 20-6-2(b)], when it passed the West Virginia Surface Mining Control and Reclamation Act. Code 20-6-7(b)(1) charged the Reclamation Commission with the responsibility of promulgating regulations to implement that law.

The regulations offered today as emergency rules fully implement Code 20-6-1 et seq. and are thus calculated to protect the public and the environment. Without these rules taking effect immediately, what would then be unregulated surface mining operations would cause substantial harm to the public interest. This type of harm is exactly what the Legislature intended to prevent when it passed Article 6 and charged this Commission with its implementation.

Moreover, federal law and federal regulation require the immediate implementation of these rules. The federal Surface Mining Control and Reclamation Act of 1977, P.L. 95-87, and specifically Section 503, 30 U.S.C. § 1253, require that a state have laws and regulations in effect which are consistent with their counterparts before a state can be delegated primacy over regulating its mining industry. These regulations were initially put into effect as emergency regulations on January 19, 1981, and subsequently the state received primacy. Then, by order of the Circuit Court of Kanawha County, a large portion of these regulations were enjoined. The injunction expired later and just last week the emergency declaration did also, in accordance with the previous state APA. If these regulations do not remain in effect, the Secretary of the Department of the Interior is required to revoke West Virginia's primacy and substitute a federal program. See, 33 U.S.C. § 1254. To allow federal takeover simultaneously prohibits the state from issuing new permits (33 U.S.C. § 1256) which in turn will substantially harm the public interest.

Federal regulations found throughout 30 C.F.R., Parts 732 and 733, require West Virginia to maintain its approved primacy program in full effect at all times in accordance with the dictates of P.L. 95-87. This emergency promulgation enables the state to satisfy the commands of federal law.

David C. Callaghan, Director
Department of Natural Resources

David C. Callaghan, Chairman
Reclamation Commission

Walter N. Miller, Director
Department of Mines

Walter N. Miller, Member
Reclamation Commission

David Robinson, Member
Reclamation Commission

James E. Pitsenbarger, Member
Reclamation Commission

STATE OF WEST VIRGINIA
OFFICE OF THE ATTORNEY GENERAL
CHARLESTON 25305

CHAUNCEY H. BROWNING, JR
ATTORNEY GENERAL

June 28, 1982

The Honorable A. James Manchin
Secretary of State
State Capitol
Charleston, West Virginia 25305

Re: Reclamation Commission Chapter 20-6 Regulations

Dear Secretary Manchin:

As counsel for the Reclamation Commission, I am hereby advising you of the current status of the DNR Reclamation Division regulations in hopes of allowing your office to clear out your files. The regulations at issue are the Series VII Regulations.

These regulations were first presented to your office on January 19, 1981, as emergency regulations (1st filing). They were subsequently enjoined by Order of the Circuit Court of Kanawha County until February 12, 1982. Subsequent to that date, on March 13, 1982, I believe, these same regulations were repromulgated on an emergency basis (2nd filing).

When the new APA rule-making statute took effect on June 11, 1982, we again refiled on June 16, 1982, so that there would be no question about their continuing validity (3rd filing). Thus, you have on file three (3) sets of the same regulations, only one set of which is still an effective set. Accordingly, I am requesting that you return to the Commission the 1st and 2nd filings above-mentioned, leaving the 3rd filing in effect.

Very truly yours,

Dennis M. Abrams

Dennis M. Abrams
Deputy Attorney General
Environmental Task Force

DMA/skc

David C. Callaghan, Director
Department of Natural Resources

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WEST VIRGINIA SURFACE MINING RECLAMATION REGULATIONS

DEPARTMENT OF NATURAL RESOURCES

CHAPTER 20-6

SERIES VII
SUBSERIES A
(1982)

INDEX

WEST VIRGINIA SURFACE MINING RECLAMATION REGULATIONS
Department of Natural Resources
Chapter 20-6
Series VII
(1982)

Sub Series A
Subject: Rules and regulations pertaining to areas disturbed by prospecting, surface mining operations, and surface effects of underground mining operations, particularly with regards to requirements for permit requirements, performance bonds, haulageways or access roads, blasting, protection of the hydrologic system, drainage system, method of operation, backfilling and regrading, postmining use of land, prime farmlands, revegetation, ~~other mining operations on disturbed surface mined areas, surface mining other than coal, surface mining of limestone, sandstone and sand,~~ modifications, and state and federal compliance and validity of regulations.

Sub Series B
Subject: Rules and regulations pertaining to definitions, general permit requirements, transportation facilities, drainage systems, blasting, post mining land use, fish and wildlife considerations, revegetation, prime farmlands, bonding, prospecting, additional permit requirements and performance standards for surface mining operations, additional permit requirements and performance standards for surface effects of underground mining operations, subsidence control, additional permit requirements and performance standards for facilities incidental to coal mining, additional permit requirements and performance standards for coal removal incidental to development, exemptions, additional permit requirements and performance standards for coal mine waste piles, reprocessing, impoundments, small operators assistance program, notice of citizens' suits, citizens' inspections, designation of areas unsuitable for coal mining, inspections, enforcement, open meetings and Reclamation Board of Review appeals.

SECTION 1. GENERAL

1.01 A. Scope - These Subseries A regulations establish general and specific rules for permits, for haulageways or access roads for blasting, for protection of the hydrologic system, for drainage systems, for methods of operation, for postmining use of lands, for prime farmlands, for revegetation of lands disturbed by prospecting and surface mining operations, for ~~other mining operations on surface mined areas, for surface mining other than coal, for~~ bonds ~~and permits,~~

~~for quarries, for surface mining of limestone, sandstone and sand,~~ for modifications, for state and federal compliance and for validity of regulations.

1.01 B. Scope - These subseries B regulations establish general and specific rules for general permit requirements, transportation facilities, drainage systems, blasting, post mining land use, fish and wildlife considerations, revegetation, prime farmlands, bonding, prospecting, additional permit requirements and performance standards for surface mining operations, additional permit requirements and performance standards for surface effects of underground mining operations, subsidence control, additional permit requirements and performance standards for facilities incidental to coal mining, additional permit requirements and performance standards for coal removal incidental to development, exemptions, additional permit requirements and performance standards for coal mine waste piles, reprocessing, impoundments, small operators assistance program, notice of citizens' suits, citizens' inspections, designation of areas unsuitable for coal mining, inspections, enforcement, open meetings and Reclamation Board of Review appeals.

1.02 A. Applicability - The interim rules and regulations contained in Subseries A:

(a) Apply on March 12, 1982 to all permits, underground approvals, existing mine permits issued or modified by the Director between August 14, 1978 and February 13, 1982. These operations must continue to comply with these regulations until the Director has made his decision whether to grant or deny a modification to an interim or permanent program permit which requires compliance with Subseries B.

(b) Apply on March 12, 1982 to all surface mining operations as defined by Section 3 (t) of the Act which do not have a permit, underground approval or existing mine (EM) permit from the Director. This group consists primarily of underground mines opened or reopened before July 1, 1976 and most facilities

incidental to coal mining. The interim regulations apply to these operations until the date specified in a permit which has been approved or denied by the Director in conformity with the Act.

(c) Apply on March 12, 1982 to all surface mining operations who receive conditionally approved permits under the Act issued after February 13, 1982. Those interim regulations apply until the date which shall be specified in the permit requiring compliance with the permanent regulations in Subseries B.

1.02 B. Applicability - The permanent rules and regulations contained in Subseries B:

(a) Apply, once the Director has made his decision to grant or deny a modification which requires compliance with Subseries B to operations presently under permit or approval issued or modified between August 14, 1978 and February 13, 1982.

(b) Apply on September 22, 1982, to any new operation which does not have any permit or approval issued or modified persuant to Chapter 20, Article 6 by that date.

(c) Apply to all operations which received conditionally approved permits after February 13, 1982 from the Director on the date specified in the permit.

(d) Sections 4C.01 and sections 11 - 16 apply on the date these regulations become effective.

1.03 A. The interim regulations (Subseries A) apply generally until September 22, 1982 to daily activities at the mine site. Once a permit is modified or a permit is obtained which requires compliance with the permanent regulations (Subseries B), then those regulations govern the daily activities at the mine site.

1.03 B. Phased Submittal - Chapter 20, Article 6, Section 9, of the West Virginia Code provides that:

"Within two months after the secretary of the interior approves a

permanent state program for West Virginia, all surface mining operations shall file an application for a permit or modification of a valid existing permit or underground opening approval relating to those lands to be mined eight months after that approval. "No later than eight months after the secretary's approval of a permanent state program for West Virginia, no person may engage in or carry out, on lands within this state, any surface-mining operations unless such person has first obtained a permit from the Director."

The two-month period referred to above expires on March 22, 1982. The eight-month period expires on September 22, 1982. Because of the extensive workloads imposed upon the industry in preparation of and the Reclamation Division in the review of permit applications, phased submittals shall be accepted.

No later than March 22, and upon the initial filing with the local DNR office, the Department of Natural Resources shall begin and maintain a file on that permit application. When the file is complete and all relevent information has been reviewed, the applicant shall forward the complete application to the Charleston office for final action on the application.

If the initial submittal is incomplete, the applicant shall submit a statement and schedule of dates for the remaining submittals.

1.04. Authority - These regulations are issued under the authority of Article 6, Chapter 20, Code of West Virginia, as amended.

1.05. Effective Date - These regulations were promulgated on the 16th day of June, 1982.

1.06. Filing Date - These regulations were filed in the Office of the Secretary of State on the 16th day of June, 1982.

SECTION 2

DEFINITIONS

SECTION 2. DEFINITIONS: UNLESS THE CONTEXT IN WHICH USED CLEARLY REQUIRES A DIFFERENT MEANING, AS USED IN THESE REGULATIONS OR AS REFERRED TO IN ARTICLE 6, CHAPTER 20, CODE OF WEST VIRGINIA, AS AMENDED:

2.01. Acidity shall mean the capacity of water to donate protons. The symbol pH referring to the degrees of acidity or alkalinity. On this scale, pH of 1 is the strongest acid, pH of 14 is the strongest alkali, pH of 7 is neutral.

2.02. Acid mine drainage shall mean water with a pH of less than 6.0 discharged from active or abandoned mines and from areas affected by surface mining operations.

2.03. Acid-forming materials shall mean earth materials that contain sulfide mineral or other materials which may create acid drainage.

2.04. Acid-producing overburden shall mean material that may cause spoil which upon chemical analysis, show a pH of 4.0 or less. Seams commonly associated with such material may include, but not be limited to Waynesburg, Washington, Freeport, Sewickley, Redstone, Pittsburgh, Kittanning, Elk Lick, Peerless, No. 2 Gas, Upper Eagle, No. 5 Block and Stockton Lewiston.

2.05. Active surface mining operation shall mean an operation where land is being disturbed or mineral is being removed and where grade release has not been approved.

2.06. Approximate original contour shall mean that surface configuration achieved by backfilling and grading of the mined area 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 compliments the drainage pattern of the surrounding terrain.

2.07. Aquifer shall mean a zone stratum or group of strata that can store and transmit water in sufficient quantities for a specific use.

2.08. Auger mining shall mean mining of coal from an exposed vertical coal face by means of a power-driven boring machine which employs an auger to cut and remove the coal.

2.09. Backfill shall mean to place material back into an excavation and return the area to a predetermined slope.

2.10. Bench shall mean the result of surface mining operations where there is created a leveled surface of an excavated area measured horizontally at any point in the overburden, spoil or mineral between the base of the highwall and outer point of original fill bench; or a working base extending from the base of a highwall on which excavating equipment can set and operate.

2.11. Buffer zone shall mean an undisturbed border along or around an intermittent or perennial stream.

2.12. Coal refuse means any waste coal, rock shale, slurry, culm, gob, boney, slate, clay, and related materials associated with or near a coal seam, which are either brought above ground or otherwise removed from a mine in the process of mining coal, or which are separated from coal during the cleaning or preparation operations.

2.13. Completion of mining shall mean an operation where no mineral has been removed or overburden removed for a period of two consecutive months, unless the operator, within thirty (30) days of receipt of the director's notification declaring completion, submits sufficient evidence that the operation is in fact not completed.

2.14. Controlled placement shall mean the method of surface mining by which the site is prepared, and the overburden is removed, manipulated, and replaced by mechanical means in such a manner as to achieve and maintain stabilization in accordance with the approved pre-plan.

2.15. Cut shall mean an excavation made by excavating equipment to remove overburden in a single progressive line.

2.16. Cut-fill shall mean overburden or other material removed from an elevated portion of a road or bench and deposited in a depression in order to maintain a desired grade.

2.17. Design storm shall mean predicted rainfall of given intensity, frequency, and duration based on National Weather Service.

2.18. Director and/or his authorized agent shall mean the director of the Department of Natural Resources, deputy directors, the Chief of the Division of Reclamation, the Assistant Chiefs of the Division of Reclamation and all duly authorized surface mining reclamation supervisors, or inspectors and inspectors-in-training.

2.19. Disturbed areas shall mean those lands that have been affected by surface mining operations.

2.20. Diversion ditch shall mean a designed channel constructed for the purpose of collecting and transmitting surface runoff.

2.21. Downslope shall mean the land surface between the projected outcrop of the lowest coal seam being mined and the valley floor.

2.22. Drill bench shall mean the construction of a bench created for the purpose of setting up and operating drilling equipment and all roads and other disturbed areas incidental to such construction.

2.23. Ephemeral stream shall mean a stream which flows less than one month per year in direct response to precipitation.

2.24. Face-up shall mean the result of an excavation where a vertical or near vertical highwall is created that exposes the overburden and/or the mineral face.

2.25. Groundwater shall mean subsurface water at or below the water table occupying the saturation zone from which wells or springs are fed.

2.26. Haulageway or access road shall mean any road constructed, improved, maintained or used by the operator with exception of state owned roads.

2.27. Hydrologic balance shall mean the relationship between the quality and quantity of inflow stroage and outflow in a hydrologic unit such as a drainage basin, aquifer, soilzone, lake, or reservoir. It encompasses the quantity and quality relationships between preciptiation, runoff, evaporation, and the change in ground and surface water storage.

2.28. Intermittent stream shall mean a stream or portion of a stream that flows continuously for at least one month of the calendar year as a result of ground water discharge or surface runoff.

2.29. Inspection shall mean a visual review of prospecting, surface, or other mining operations to insure compliance with any applicable law or rules and regulations under jurisdiction of the director.

2.30. Leachate shall mean a liquid that has percolated through soil, rock, or waste and has extracted dissolved or suspended materials.

2.31. Lightly buffered stream shall mean any stream or its tributaries that contains less than 15 ppm methyl orange alkalinity (to pH 4.5) and a conductivity of less than 50 micro MHO.

2.32. Mine shall mean the shaft, slopes, drifts or inclines connected with excavations penetrating coal seams or strata and the surface structures or equipment connected therewith which contributes directly or indirectly to the mining, preparation or handling of coal.

2.33. Mineral face shall mean the exposed vertical cross-section of the natural coal seam or mineral deposit.

2.34. Mountaintop removal shall mean surface mining operations that remove entire coal seams 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 and where equal, higher and/or better land use is proposed.

2.35. Natural drainway shall mean any water course or channel which may carry water to the tributaries and rivers of the watershed.

2.36. Operation shall mean the permit area indicated on the approved map submitted by the operator, or an area where land is being disturbed or mineral is being removed.

2.37. Outer spoil or outer slope shall mean the disturbed area extending from the outer point of the bench to the extreme lower limit of the disturbed land.

2.38. Overburden or spoil shall mean the earth, rock and other materials lying in the natural state above a mineral deposit before or after excavation.

2.39. Peak runoff shall mean the maximum flow at a specified location resulting from a design storm.

2.40. Perennial stream shall mean a stream or portion of a stream that flows continuously.

2.41. Pit shall mean that part of the surface mining operation from which the mineral is being actively removed or where the mineral has been removed and not backfilled.

2.42. Pre-Inspection shall mean a preliminary survey and a field review by the director or his authorized agent of a pre-plan and the proposed area to be disturbed.

2.43. Pre-plan shall mean the total application submitted to the director including the application form, mining and reclamation plan, drainage plan, blasting plan, planting plan, maps, drawings, data, cross-sections, bonds and other information as may be required.

2.44. Prospecting shall mean the use of excavating equipment in an area not covered by a surface mining permit for the purpose of removing the overburden to determine the location, quantity or quality of a natural coal deposit, or to make feasibility studies, or for any other purpose.

2.45. Recharge capacity shall mean the ability of the soils and underlying materials to allow precipitation to infiltrate and reach the zone of saturation.

2.46. Reclamation shall mean the process of converting disturbed land to a stable form for productive use.

2.47. Reference area shall mean land units of varying size for the purpose of measuring ground cover, productivity and species diversity.

2.48. Sand shall mean individual rock or mineral fragments having a diameter less than 2.00 mm but greater than .02 mm.

2.49. Sediment shall mean solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

2.50. Sediment control structure shall mean a barrier, dam, ditch, excavation or other structure placed in a suitable location to form a silt or sediment basin.

2.51. Sizeable quantity of water shall mean an accumulation of storm or any other water in excess of 5,000 cubic feet not provided for in the pre-plan.

2.52. Stoniness shall mean a characteristic of earth, overburden or spoil reflecting its relative proportion of sizeable aggregate content as apposed to its sand, silt, clay or rock fragment content.

2.53. Storm water shall mean any water flowing over or through the surface of the ground caused by precipitation; generally, surface runoff.

2.54. Structure shall mean but not be limited to gas lines, water lines, towers, airports and dams. This shall not include operational facilities of the surface mining operation.

2.55. Subsidence shall mean a sinking of a portion of the earth's surface resulting from underground removal of a mineral seam subsequent to failure of support structures.

2.56. Surface effect of underground mining operations shall mean surface mining operations where lands are disturbed including but not limited to roads, drainage systems, mine entry excavation, above-ground-work areas, such as tipples, coal processing facilities and other operating facilities; also waste work and spoil disposal areas and mine waste impoundments or embankments which are incident to mine openings or reopenings.

2.57. Surface mining operations shall mean surface disturbances and all activities necessary and incident to the removal of mineral and the reclamation of such operations.

2.58. Surface water shall mean water on the surface of the earth.

2.59. Toxic-forming materials shall mean 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, air or water that are detrimental to the environment.

2.60. Toxic mine drainage shall mean water that is discharged from active, abandoned and other areas affected by surface mining operations and which contains a substance which 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.

2.61. Valley or head of hollow fills shall mean a controlled earth and rock fill across or through the head of a valley or hollow to form a stable, permanent storage space for excess surface mine overburden.

SECTION 3.

PROSPECTING

SECTION 3. PROSPECTING

3.01. Performance Bond Coverage - The amount of performance bond or its equivalent as provided in Section 7, Article 6, Chapter 20 of the Code of West Virginia, as amended, shall be five hundred dollars ($500) per acre or any fraction thereof. Performance bond or its equivalent shall not be transferable as a credit to surface mining.

3.02. Notification of Approval or Disapproval - After review of the prospecting permit application and the reclamation plan for the area to be disturbed by prospecting, the director shall inform the applicant if they are approved or disapproved. If the application and plan are not acceptable, he shall set forth the reasons why they are not acceptable, and he may propose modifications, delete areas, or reject the permit on the basis of the reclamation plan or for other justifiable reasons set forth in the Code of West Virginia, as amended, and/or rules and regulations.

3.03. Reclamation Tax - No special reclamation tax, as outlined in Section 17 of Article 6, Chapter 20, Code of West Virginia, as amended, is required for a prospecting permit. However, if said permit is to be converted to a surface mining permit, the acreage disturbed by prospecting shall be included as a part of the total area to be assessed the special reclamation tax, as set forth in Section 17, Article 6, Chapter 20 of the Code of West Virginia, as amended.

3.04. Validity of Permit - A prospecting permit shall be valid for one year from its date of issue.

3.05. Governing Regulations - Prospecting and reclamation procedures may be governed by the following regulations of the Reclamation Commission.

a. Section 5 - Haulageways or access roads;

b. Section 6 - Blasting;

c. Section 7 - Protection of the Hydrologic Balance;

d. Section 8 - Drainage Systems;

e. Section 9 - Method of Operation; and

f. Section 12 - Revegetation.

3.06. Removal of Minerals - Minerals may be removed during prospecting operations for testing purposes only, and shall be limited to a maximum of two hundred fifty (250) tons for each permit area. Request for permission to remove greater amounts than two hundred fifty (250) tons of minerals shall be submitted to the director and may be approved at his discretion.

3.07. Bond Release - The performance bond or other securities accompanying a prospecting permit shall be released in the same manner as surface mining permit bonds.

SECTION 4.

PERMIT REQUIREMENTS

SECTION 4. PERMIT REQUIREMENTS

4.01. Class III Legal Advertisement Requirements - Prior to the publication of the Class III Legal Advertisement for a surface mining permit, excluding underground opening approval, the following requirements shall be met:

a. Upon filing of a surface mining permit application, proposal maps, reclamation plan and filing fee, a surface mining application (SMA) file number may be assigned. Surface mining application (SMA) file number assignments shall be valid for a period of time not to exceed 120 days from date of assignment.

b. A clear and accurate location map shall be made a part of the legal advertisement. The map of a scale and detail found in the West Virginia General County Highway Map or the equivalent will be acceptable. Any significant landmarks, roads or streams shall be indicated on the location map. Longitude and latitude coordinates on the map shall cross at a perimeter marker.

4.02. Operator Reassignment - Should the applicant or operator designate, contract or otherwise assign the surface mining operation to others, prior written notification of the assignment and additional information as provided in Section 8, Article 6, Chapter 20 of the Code of West Virginia, as amended, shall be submitted and approved.

4.03. Approval of Person to Prepare a Reclamation and Mining Plan - Any person preparing a reclamation and mining plan and drainage system for the area of land to be disturbed as required by the provisions of Article 6, Chapter 20, Section 9 and 9A, Code of West Virginia, as amended, or by the regulations, shall first submit to the director a written resume of his past experience and training. A written test shall also be administered. On the

basis of the resume and written test, he shall be adjudged qualified or not as the case may be, and so notified by the director in writing. Should experience warrant, an approved person may be adjudged disqualified and so notified by the director in writing.

4.04. Scale for Reclamation Pre-plan Map - The scale required for all maps prepared for submission with an application for a surface mining permit or underground opening reclamation plan approval shall be as follows:

a. Scale on a U. S. geological survey topographic 7.5-minute quadrangle shall be enlarged to 500 feet or less to the inch; and

b. Scale on aerial photograph shall be 660 feet or less to the inch.

4.05. Scale for Drainage, Progress and Final Maps - The scale on the drainage, progress and final maps shall be of the same scale as the approved pre-plan map.

4.06. Scale Approval - Written permission from the director shall be required prior to the submission of maps drawn to any scale other than set forth by regulations.

4.07. Map Size - All maps and plans shall be submitted on standard print paper, 24 inches by 36 inches or less. If supplementary maps or plans are attached, match lines shall be used.

4.08. Color Code - A color code shall be used in preparing all maps to indicate critical features of the permit area as follows:

a. Red shall indicate mineral to be removed;

b. Yellow shall indicate the total disturbed land;

c. Blue shall indicate water and drainage;

d. Brown shall indicate special uses;

e. Green shall indicate regrading; and

f. Purple for adjacent mining permits.

4.09. Permanent Monument - A permanent monument shall be posted at all points of access from public roads and highways and at other suitable locations. The monument shall consist of a sign constructed of wood, metal, or other suitable material 2' x 3' mounted on a two-inch pipe driven three feet into the ground with four feet exposed. The sign shall clearly indicate the company name, permit numbers, business address and telephone number. Any suitable equivalent substitute may be approved.

4.10. Perimeter Marker - A two-inch (2") pipe shall be driven into the earth with a minimum of three feet (3') exposed to permanently mark the beginning and ending points of the area under permit. It shall be identified by painting the exposed portion of the pipe red. Any suitable substitute may be approved. The assigned permit number shall be permanently affixed to the perimeter marker.

4.11. Buffer Zone Markers - Appropriate markers will be established along a buffer zone. Markers shall consist of metal or wooden stakes or other suitable devices or methods.

4.12. Topsoil Markers - When topsoil or other vegetation supporting material is segregated and stockpiled, the stockpiled material shall be marked. Markers shall remain in place until the materials are removed.

4.13. Slope Measurements - The operator shall show on the map filed with the application for a permit the percent of slope of the original surface within each 200 foot interval along the contour of the operation. The first measurement is to be taken at the starting point of the operation. The flagged field measurements shall be made from the estimated cropline or proposed coal seams extending 100 lineal feet above and below or beyond the coal outcrop on the area to be disturbed. Where the original slope has been previously altered, slope measurements shall be taken above or below the dis-

turbance; whichever is more representative of the original slopes.

SECTION 5.

HAULAGEWAYS OR ACCESS ROADS

SECTION 5. HAULAGEWAYS OR ACCESS ROADS

5.01. Location - The centerline location of the proposed haulageways or access roads shall be identified on the site by visible markings at one hundred (100) foot intervals, at the time the reclamation and mining plan is pre-inspected and prior to commencement of construction. Pre-existing haulageways or access roads shall be exempted from this requirement.

5.02. Haulageway or Access Road Construction - All construction of haulageways or access roads shall conform to "controlled placement" as defined in 2.14. and described in Section 9B.02, Method of Operation. The grading of a haulageway or access road shall be such that:

a. No sustained grade shall exceed 10%;

b. The maximum pitch grade shall not exceed 15% for 300 feet;

c. There shall not be more than 300 feet of maximum pitch grade for each 1,000 feet of road constructed; and

d. The surface shall pitch toward the ditchline at the minimum rate of 1/2 inch per foot of surface width or crowned at the minimum rate of 1/2 inch per foot of surface width as measured from the centerline of the haulageway or access road.

5.03. Curves - The grade on switchback curves shall be reduced to less than the approach grade and should not be greater than ten percent (10%).

5.04. Cut Slopes - Cut slopes should not be more than 1:1 in soils or 1/4:1 in rock.

5.05. Ditches - A ditch shall be provided on both sides of a through-cut and on the inside shoulder of a cut-fill section, with ditch relief culverts being spaced according to grade. Water shall be intercepted before reaching a switchback or fill and led off. All ditchlines shall be designed to pass a peak discharge capacity of a one-year, 24-hour precipitation event.

5.06. Culverts - Ditch relief culverts shall be installed wherever necessary to insure proper drainage of surface water beneath or through the haulageway or access road, according to the following provisions:

a. Road Grade in Percent — Spacing of Culverts in Feet

0 - 5	300 - 800
6 - 10	200 - 300
11 - 15	100 - 200

b. The culvert shall cross the haulageway or access road at a 30 degree angle downgrade with a minimum grade of 3% from inlet to outlet, except in intermittent or perennial streams where the pipe shall be straight and coincident with the normal flow;

c. The inlet end shall be protected by a headwall of suitable material and the slope at the outlet end shall be protected with an apron of suitable material;

d. The culvert shall be covered by compacted fill to a depth of one foot or half the culvert diameter, whichever is greater; and

e. Design of culverts may be submitted where the aforementioned design criteria is not practical or necessary.

5.07. Culvert Openings - Culvert openings installed on haulageways or access roads shall not be less than one hundred (100) square inches in area, but, in any event, all culvert openings shall be adequate to carry storm runoff of a peak discharge capacity of a one-year, 24-hour precipitation event from the contributing watershed, and shall receive necessary maintenance to function properly at all times.

5.08. Stream Crossings - Culverts, bridges or other drainage structures shall be used to cross intermittent or perennial streams. Consideration shall be given to such factors as weather conditions, season of the year,

time period for construction, etc. with regard to using measures to minimize adverse effects to the water quality and stream channel. In no event shall the sediment load of the stream be significantly increased or the water quality be significantly decreased during the construction period. Water control structures shall be designed with a minimum discharge capacity capable of passing the runoff for a 10-year, 24-hour precipitation event from the contributing watershed.

5.09. Removal of Drainage Structures - No bridges, culverts, stream crossings, etc., necessary to provide access to the operation, may be removed until reclamation is completed and approved by the director. The same precautions as to water quality are to be taken during removal of drainage structures as those taken during construction and use.

5.10. Seeding of Slopes - All disturbed area including fill and cut slopes, shall be seeded and mulched immediately after the construction of a haulageway or access road and maintained thereafter in accordance with Section 12 of these regulations.

5.11. Haulageway or Access Road Surfacing - Haulageways or access roads shall not be surfaced with any acid-producing or toxic material or with any material which will produce a concentration of suspended solids in surface drainage.

5.12. Tolerance - All grades referred to in this section shall be subject to a tolerance of two percent (2%) grade. All linear measurements referred to in this section shall be subject to a tolerance of ten percent (10%) of measurement. All angles referred to in this section shall be measured from the horizontal and shall be subject to a tolerance of five percent (5%).

5.13. Dust Control - All reasonable means shall be employed to control dust from the surface of haulageways or access roads.

5.14. Abandonment of Haulageways or Access Roads - Haulageways or access roads shall be abandoned in accordance with Section 9 of these regulations in addition to the following requirements:

a. Upon abandonment of haulageways or access roads, every effort shall be made to prevent erosion by the use of culverts, water bars or other devices. Water bars of the ditch, earth berm or log type shall be installed according to the following table of spacings in terms of percent of haulageway or access road grade, prior to the abandonment.

Percent of Haulageway	Spacing of Water Bars in Feet
2	250
5	135
10	80
15	60
20	45
Above 20	25

b. Upon abandonment of haulageways or access roads, they shall be seeded and mulched in accordance with Section 12 of these regulations.

5.15. Sediment Control - A sediment storage volume must be provided equal to 0.125 Ac/ft. for each acre of disturbed area or a lesser value as approved by the director.

5.16. Existing Haulageways or Access Roads - Where existing roads are to be used for access or haulage and it can be demonstrated that reconstruction to meet the above requirements would result in greater environmental harm and the drainage and sediment control requirements of this section can otherwise be met, the above requirements may be waived.

5.17. Infrequently Used Access Road Exemption - Access roads constructed for and used only to provide infrequent service to surface facilities such as ventilators, monitoring devices and sedimentation ponds shall be exempt from the requirements of sub-sections 5.02, 5.03, 5.04, 5.05, 5.06, 5.07, 5.08, 5.12, 5.13 and 5.15, provided adequate stabilization to control erosion is achieved through use of alternate measures. This exemption shall not apply should environmental harm in the form of additional contributions of suspended solids or erosion occur and in such instances the director may order that any or all of the requirements of Section 5 be met.

SECTION 6. BLASTING

6.01. Blasting Signs - If blasting is necessary to conduct surface mining operations, signs reading "Blasting Area" shall be displayed conspicuously at all approaches to the blasting site and along haulageways and access roads to the mining operation. The sign shall be two feet by three feet (2' x 3') reading "Blasting Area" and explaining the blasting warning and the all clear signals shall be posted at all entrances to the permit area.

6.02. Certified Blasting Personnel - All blasting operations shall be conducted by certified, trained and competent persons who possess the knowledge of hazards involved and have full knowledge of all local, state, and federal laws and regulations pertaining to explosives and use thereof. Certification by the Fire Marshall of the State of West Virginia shall be accepted as being valid.

6.03. Pre-blasting Survey - Requirements for a pre-blasting survey shall be governed by the following:

a. On a request to the director by a resident or owner of a man-made dwelling or structure that is located within one-half mile of the permit area, the operator shall conduct a pre-blasting survey of the dwelling or structure and submit a report of the survey to the director.

b. Personnel approved by the director shall conduct the survey to determine the condition of the dwelling or structure, and to document any pre-blasting damage and to document other physical factors that could reasonably be affected by the blasting. Assessments of structures such as pipes, cables, transmission lines, wells and other water systems shall be limited to surface conditions

and other readily available data. Special attention shall be given to the pre-blasting condition of wells and other water systems used for human, animal, or agricultural purposes and to the quantity and quality of the water.

c. A written report of the survey shall be prepared and signed by the person or persons who conducted the survey. The report shall include recommendations of any special conditions or proposed adjustments to the blasting procedures 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 to the director.

6.04. Public Notice of Blasting Operations - At least 10 days, but not more than 20 days before beginning blasting operations, the operator shall publish on a form supplied by the director, a schedule in a newspaper of general circulation in the county of the proposed site. Copies of the schedule shall be distributed by mail to local governments and public utilities and to each resident within one-half mile of the blasting sites described in the advertisement. The operator shall republish and redistribute the schedule by mail at least every three (3) months. Schedules shall not be so general as to cover all working hours but shall identify as accurately as possible the location of the blasting sites and the time periods when blasting will occur. The schedule shall contain at a minimum:

a. Identification of the specific areas in which blasting will take place. The specific blasting areas described shall not be larger than 300 acres with a generally contiguous border;

b. Dates and times when explosives are to be detonated shall be expressed in not more than 4-hour increments;

c. Methods to be used to control access to the blasting area;

d. Types of audible warnings and all clear signals to be used before and after blasting; and

e. A description of possible emergency situations (defined in Section 6.05.).

6.05. Blasting Procedures - All blasting shall be conducted only during the daytime hours, defined as sunrise until sunset. (Based on public requests or other consideration, including the proximity to residential areas, the director may specify more restrictive time periods.) No blasting shall be conducted on Sunday.

Blasting may not be conducted at times different from those announced in the blasting schedule except in emergency situations where rain, lightning other atmospheric conditions, or operator or public safety requires unscheduled detonations.

6.06. Audible Blast Warning - Three (3) minutes prior to blasting, a warning signal audible to within a range of 1/2 mile from blast site will be given. This pre-blast warning shall consist of three (3) short blasts of five (5) seconds duration with five (5) seconds between each blast. One (1) long audible warning signal of twenty (20) seconds duration shall be the "all clear" signal.

6.07. Approaches to Area - All approaches to the blast area shall be guarded against unauthorized entry ten (10) minutes prior to and immediately after blasting.

6.08. Charged Holes - All charged holes awaiting firing for any reason shall be guarded and posted against unauthorized entry.

6.09. Air Blast Level Standard - A maximum air blast level of 128 decibel linear peak shall not be exceeded at any residence, building or

occupied structure within 1/2 mile of the blasting site other than operational facilities of the mine.

6.10. Blasting Prohibited - Except where lesser distances are approved by the director, blasting shall not be conducted within:

a. 1,000 feet of any building used as a dwelling, school, church, hospital or nursing facility;

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;

c. 500 feet of an underground mine not totally abandoned except with the concurrence of the Mining Safety and Health Administration; and

d. The director may prohibit blasting on specific areas where it is deemed necessary for the protection of public or private property and general safety of the area.

6.11. Particle Velocity - A particle velocity of one (1) inch per second in any one of the three mutually perpendicular directions shall not be exceeded at the nearest residence, building, or structure, other than operational facilities of the mine. The mutually perpendicular directions are identified as transverse, vertical and longitudinal.

6.12. Maximum Weight of Explosive - The maximum weight of explosive to be detonated within any 8 millisecond period shall be determined by the formula $W = (D/60)^2$ where W represents the maximum weight of explosives, in pounds, that can be detonated in any 8 millisecond period, and D represents the distance, in feet, from the nearest point of blast to nearest residence, building or structure, other than operational facilities of the mine.

6.13. Seismograph Measurements - Where a seismograph is used to monitor the velocity of ground motion and the peak particle velocity limit of one (1) inch per second is not exceeded, the equation in Section 6.12. need not be used. However, if the equation is not being used, a seismograph record at the nearest structure to the blast site shall be obtained for every blast. The director may require a seismograph recording of any or all blasts.

6.14. Blast Record - A blasting log record book shall be kept current daily and is to be made available at the operation for inspection by the director and the public. These blasting log records are to include seismograph reports, shall be retained for three (3) years and should include as a minimum the following data:

a. Name of permittee, operator, or other person conducting the blast;

b. Location, date and time of blast;

c. Name, signature and certification number of blaster-in-charge;

d. Direction and distance, in feet, to nearest dwelling, school, church or commercial or institutional building neither owned nor leased by the operator;

e. Weather conditions;

f. Type of material blasted;

g. Number of holes, burden, and spacing;

h. Diameter and depth of holes;

i. Types of explosives used;

j. Total weight of explosives used;

k. Maximum weight of explosives detonated within any 8 millisecond period;

m. Method of firing and type of circuit;

n. Type and length of stemming;

o. If mats or other protections were used;

p. Type of delay detonator used and delay periods used;

q. Seismograph records, where required, including but not limited to;

1. Seismograph reading, including exact location of seismograph and its distance from the blast;

2. Name of person taking the seismograph reading;

3. Name of person and firm analyzing the seismograph record, and;

r. Shot location.

The format for the arrangement and the recording of items in the blasting log record book is to be on forms prescribed by the director.

6.15. Assessment - Any assessment as set forth in Section 11a, Article 6, Chapter 20 of the Code of West Virginia, as amended, shall be paid within ten (10) days after receipt of said assessment notice.

SECTION 7.

PROTECTION OF THE HYDROLOGIC SYSTEM

SECTION 7. PROTECTION OF THE HYDROLOGIC SYSTEM

7.01. Applicability - The operator shall plan and conduct surface mining operations to minimize disturbance to the prevailing hydrologic balance in order to prevent long-term adverse changes in the hydrologic balance, both on and off site, that could result from surface mining operations. Changes in water quality and quantity, in the depth to ground water, and in the location of surface water drainage channels shall be minimized such that the postmining land use of the disturbed land is not adversely affected and applicable federal and state statutes and regulations are not violated. The operator shall conduct operations so as to minimize water pollution and shall, where necessary, use treatment methods to control water pollution. The operator shall emphasize surface mining and reclamation practices that will prevent or minimize water pollution and changes in flows in preference to the use of water treatment facilities. Practices to control and minimize pollution include, but are not limited to, stabilizing disturbed areas through grading, diverting runoff, achieving quick growing stands of temporary vegetation, lining drainage channels with rock or vegetation, mulching, sealing acid-forming and toxic-forming materials, and selectively placing waste materials in backfill areas. If pollution can be controlled only by treatment, the permittee shall operate and maintain the necessary water treatment facilities for as long as treatment is required.

7A. Permit Requirements

7A.01. Site Analysis - Each application for a permit shall include cross-sections of the land to be affected with respect to the hydrologic balance including the actual area to be mined. These cross-sections may

be derived from core boring or other approved sources. These cross-sections are to be prepared and certified by a registered professional engineer or other approved person showing pertinent elevation and location of test borings or core samplings and depicting the following information:

a. The nature and depth of the various strata of overburden;

b. The location of subsurface water, if encountered, and its quality;

c. The nature and thickness of any coal or rider seam;

d. The nature of the stratum immediately beneath the coal seam to be mined;

e. Mine openings to the surface;

f. The location of aquifers;

g. The estimated elevation of the water table;

h. Where surface mining operations are to be conducted on critical streams, pre-mining overburden sampling and analysis shall be required. Sampling points shall be located on the drainage plan map. Where overburden analysis reflects toxic strata, a plan for handling and final placement for said strata shall be submitted. On critical streams where it can be documented or past mining experience has shown that surface mining will not result in significant acid production, pre-mining overburden analysis may not be required. Overburden and minesoil analysis shall be in accordance with standard procedures outlined in Environmental Protection Agency manual # 600/2-78-054 (Field and Laboratory Methods Applicable to Overburdens Minesoils) or other approved methods; and

i. Such other information as the director may require.

7A.02. Surface Water Monitoring - The operator shall submit as part of the complete mining and reclamation pre-plan a surface water monitoring

program which meets the following requirements:

a. Provides adequate data to describe the likely daily and seasonal variation in discharges from the disturbed area in terms of water flow, pH, total iron, total suspended solids and, if requested by the director, any other parameters characteristic of the discharge;

b. Provides daily monitoring by rain gauges to measure normal and abnormal variations in precipitation;

c. All water discharged from the permit area is to be monitored daily by the operator for total iron, pH and water flow and if required by the director, any other parameter. A written record of the testing dates and analytical data shall be kept current and made available for inspection at the operation;

d. Provides a monthly report of all measurements to the director;

e. In the event violations of permit conditions occur, the director shall be notified immediately after receipt of analytical results by the operator; and

f. After disturbed areas have been regraded and seeded in accordance with these regulations, the operator shall monitor surface water flow and quality. Data from this monitoring shall be used to demonstrate that the quality and quantity of runoff without treatment will be consistent with the requirement of this section to minimize disturbance to the prevailing hydrologic balance and with the requirements of these regulations to attain the approved postmining land use. This data shall provide a basis for approval by the director for removal of water quality or flow control systems and for determining when the requirements of this section are met. A

one (1) year history of meeting effluent limitations shall be adequate for demonstrating that the water has stabilized to an acceptable level. The nature of data, frequency of collection and reporting requirements will be the same as that during the mining operation.

7A.03. Ground Water Monitoring - The operator shall submit as part of the complete mining and reclamation pre-plan a procedure for monitoring ground-water levels, infiltration rates, subsurface flow and storage characteristics, and the quality of ground water to determine the effect of surface mining operations on the recharge capacity of reclaimed lands and on the quantity and quality of water in ground water systems at the mine area and in associated off-site areas. When operations are conducted in such a manner that may affect the ground water system, ground water levels and ground water quality shall be periodically monitored using wells that can adequately reflect changes in ground water quantity and quality resulting from such operations. The director may require drilling and development of additional wells if needed to adequately monitor the ground water system.

7A.04. Water Sampling - Water tests for total iron, total hot acidity, total mineral acidity, total alkalinity, total aluminum, total manganese, total sulfate, dissolved solids, pH and suspended solids shall be taken before surface mining operations begin and the results of these tests will be shown in the pre-plan. The location for these preliminary tests will be:

a. On natural drainways above proposed surface mining operations;

b. On natural drainways below proposed surface mining operation at or near the affected drainage area boundary; and

c. On natural drainways upstream from the mouth of natural drainways

affected by surface mining.

7B. Water Quality

7B.01. Acid and Toxic Materials - Drainage from acid-forming and toxic forming materials into ground and surface water shall be avoided by:

a. Identifying, burying, blending, and treating where necessary, spoil or other materials that will be toxic to vegetation or that will adversely affect water quality. Such materials shall be disposed of in accordance with the provisions of Section 9.03;

b. Preventing or removing water from contact with acid-forming or toxic-forming materials;

c. Burying or otherwise treating toxic-forming materials from coal preparation plants no later than 90 days after the cessation of the filling of the disposal area. Burial or treatment shall be in accordance with Section 9.03.;

d. Casing, sealing or otherwise managing boreholes, shafts, wells, and auger holes to prevent pollution of surface or ground water and to prevent mixing of ground waters of significantly different quality. All boreholes that are within the permit area but are outside the surface coal mining area or which extend beneath the coal to be mined and into water bearing strata shall be plugged permanently unless the boreholes have been approved for use in monitoring; and

e. Taking such other actions as required by the director.

7B.02. Water Quality Control - All reasonable measures shall be taken to intercept all surface water by the use of diversions, culverts and drainage ditches or other methods to prevent water from entering the pit area. All water accumulation into the pit shall be removed at least once in a 24-hour

period unless otherwise approved by the director.

The water leaving the permit area will not lower the water quality of the river, stream or drainway into which it is discharged below the water quality standards established for such river, stream or drainway.

7B.03. Water Quality Standards - Discharges from areas disturbed by surface mining operations must meet all applicable federal and state laws and regulations. The monitoring frequency and minimum effluent limitations shall be governed by the standards set forth in the NPDES Program under the Federal Water Pollution Control Act as amended, 33 U.S.C. 466 et. seq. and the rules and regulations promulgated thereunder. In no event shall the discharge from the permit area have a pH of less than 6.0 or greater than 9.0 and the iron shall not exceed 7 parts/million.

7B.04. Treatment Facilities for Drainage from Surface Mine Operations - The Chief of the Division of Reclamation or his duly authorized agent shall conduct such investigation as it is deemed necessary and proper in order to determine whether or not any such permit should be granted or denied. In making such investigation and determination as to any such application, the Chief of the Division of Reclamation shall consult with the Chief of the Division of Water Resources. The Chief of the Division of Water Resources shall cooperate with and assist him in carrying out the duties imposed on him by the provisions of Article 5A, Section 5 (3) and Article 6, Chapter 20 of the Code of West Virginia, as amended, and the rules and regulations of the Reclamation Commission and the Water Resources Board. Such cooperation shall include, but not be limited to a written recommendation for the approval or disapproval of the permit and the reason or reasons for such recommendation.

7B.05. Treatment of Acid Water Surface Breakthrough - Treatment of

acid water surface breakthrough shall be as follows:

a. Any surface breakthrough of water caused by the operator during the course of his operations shall be sampled immediately and analyzed for total iron, total suspended solids and pH and if requested by the director, any other parameter characteristics of the discharge. Such analysis shall be made by a competent water analyst or chemist. The original and at least one copy of such analysis shall be retained by the operator, two copies shall be submitted to the Chief of the Division of Reclamation;

b. Should said analysis indicate the water to be acid with a pH of less than 6.0 and/or contains more than 7mg/l of iron, seals shall be immediately constructed. These seals shall either:

1. prevent any air from entering the underground mine by way of the breakthrough; or

2. prevent any air from entering the breakthrough while allowing the water to flow from the breakthrough; or

3. seal the breakthrough of acid water so that it cannot flow. Such seals shall be constructed of stone, brick, block earth or similar impervious materials which are acid resistant. Any cement or concrete employed in the construction of these seals shall also be of an acid resistant, impervious type; and

c. Alternate methods of sealing and/or treating acid water may be employed as they are developed and approved.

7C. Water Rights and Replacement

7C.01. Applicability - The operator shall replace the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where the owner of interest has estab-

lished that such supply has been affected by contamination, diminution or interruption resulting from the surface mining operation. The replacement of the water supply will not be required if the owner of interest waives the replacement thereof.

7D. Daily Monitoring Exception

7D.01. Applicability - The requirements of Section 7, sub-sections 7A.02 b and 7A.02 c shall not apply where an operator demonstrates by sufficient data that there is a reasonable expectation that a violation of federal or state water discharge permits will not occur. If such a violation occurs, then the director may require daily monitoring until it has been demonstrated to his satisfaction that the violation or pollution problem has been abated.

SECTION 8.

DRAINAGE SYSTEM

SECTION 8. DRAINAGE SYSTEM

8.01. Drainage Plan - There shall be submitted as part of the complete application and pre-plan for surface mining operations, a drainage plan which will show the proposed method of drainage on and away from the area of land to be disturbed. Said plan shall indicate the directional flow of water, constructed drainways, natural waterways used for drainage, streams or tributaries receiving or to receive this discharge, location and design of sediment control structures, location of all water test sites, treatment facilities and other data as may be required.

8.02. Sediment Control - Sediment control structures shall be constructed in appropriate locations in order to control sedimentation. All such structures shall meet the following requirements:

a. All structures shall have the capacity to store 0.125 acre/ft. of sediment for each acre of disturbed area in the structures watershed; provided, however, that consideration may be given for reduced storage volume where the pre-plan reflects controlled placement, concurrent reclamation practices, use of on-site sediment control measures and access and availability of all structures for maintenance;

b. This disturbed area will include all land affected by previous surface mining operations that are not presently stabilized and all land that will be disturbed throughout the life of the permit; and

c. The structures shall be cleaned out when the sediment accumulation reaches 80% of the sediment storage volume required. Sediment removal shall be done in a manner that minimizes adverse effects on surface water due to its chemical and physical characteristics, on infiltration, on vegetation, and on surface and ground water

quality and in a manner consistent with the provisions of Section 9 (Abandonment Procedures for Sediment Control Structures) of the "Drainage Handbook for Surface Mining" published by the West Virginia Department of Natural Resources and hereby incorporated by reference.

8.03. Natural Drainways - Natural drainways in the area of land disturbed by surface mining and prospecting operations shall be kept free of overburden except where overburden placement has been approved. Overburden placement and haulageways across natural drainways shall be constructed so as not to affect the flow of the stream, or materially increase the sediment load and concentrations of toxic materials in the stream.

8.04. Intermittent or Perennial Stream - No land within 100 feet of an intermittent or perennial stream shall be disturbed by surface mining operations unless specifically authorized by the director. The area not to be disturbed shall be designated a buffer zone and marked accordingly.

8A. Constructed Drainways and Diversions

8A.01. Diversions Above Highwalls - All surface water which drains toward the pit shall be effectively intercepted on the uphill side of the highwall by diversion ditches and conveyed by approved channels or other approved means of discharge to natural drainways outside the disturbed area. The director may, in the exercise of his sound discretion, when not in conflict with Article 6, Chapter 20, Code of West Virginia, as amended, waive this regulation.

8A.02. Diversions on Benches - Diversions will be constructed on the excavated solid bench in order to carry off storm, surface or seepage water. The breaking point for diversions on the bench will fall at or near

the midpoint between natural or constructed drainways. In no case shall water be discharged over a spoil slope without adequate safeguards to prevent erosion. Removal of water from the bench shall be accomplished by use of adequate pipe, a rock riprap flume, asphalt or concrete chutes, by grading a channel to nonerosive rock, or by other approved methods.

8A.03. Diversions Below Spoil Slopes - All surface water draining off the spoil slopes, unless otherwise controlled, will be intercepted by suitable and adequate diversion ditches which will carry the water to an approved sediment control structure before discharge into a natural drainway. These diversions will be located within twenty-five (25) feet of the anticipated toe of the spoil slope. If, at any time, spoil material interferes with the flow of water in these diversions, that material shall be removed immediately. The director may, in the exercise of his sound discretion, when not in conflict with Article 6, Chapter 20, Code of West Virginia, as amended, waive this regulations.

8A.04. Temporary Diversions - Temporary diversion structures are those used during mining and reclamation. When no longer needed, these structures shall be removed and the area reclaimed. Temporary diversion structures shall be constructed to safely pass the peak runoff from a 1-year, 24-hour precipitation event, or larger event as specified by the director.

8A.05. Permanent Diversions - Permanent diversion structures are those approved diversion structures to be retained after mining and reclamation. Permanent diversion structures shall be constructed to safely pass the peak runoff from a 100-year, 24-hour precipitation event.

8A.06. Stream Channel Diversions - Flow from perennial and intermittent streams within the permit area may be diverted only when the diversions are approved by the director. When streamflow is to be diverted, the new stream channel shall be designed and constructed to meet the following requirements:

a. The average stream gradient shall be maintained and the channel designed, constructed, and maintained to remain stable and to minimize additional contributions of suspended solids to streamflow;

b. Channel bank, and flood plain configurations shall be adequate to safely pass the peak runoff of a 1-year, 24-hour precipitation event for temporary diversions and 100-year, 24-hour precipitation event for permanent diversions, or larger events if specified by the director; and

c. When the stream affected supports a fishery habitat, measures to maintain or enhance the water quality and habitat shall be reflected in the approved stream channel diversion design.

8B. Seeding

8B.01. Seeding of Drainage System - All area disturbed in the installation of the drainage system shall be seeded and mulched immediately after construction in accordance with Section 12 of these regulations.

8C. Handbook

8C.01. Drainage Handbook for Surface Mining - The guidelines for plans, design criteria and construction specifications for drainage systems are to be found in the "Drainage Handbook for Surface Mining" published by the West Virginia Department of Natural Resources. This handbook is hereby incorporated by reference in its entirety; provided, however, that other plans, design criteria and construction specifications if approved by the director, may be used in place of those specified in the handbook.

8D. Drainage Certification

8D.01. Certification Responsibility - Certification that the drainage system was constructed and installed in accordance with the approved pre-plan shall be submitted by an approved Registered Professional Engineer or other approved person.

8D.02. Filing Certification - Prior to the beginning of surface mining operations in the affected watershed, the certification of the drainage system shall be filed on forms prescribed by the director.

8E. Abandonment Procedures

8E.01. Abandonment Procedures - The pre-plan shall reflect a procedure for abandoning sediment control structures prior to final bond release. These abandonment procedures may be waived if the structures are to be immediately utilized under another permit or the landowner agrees in writing that he will assume future responsibility for said structures.

SECTION 9.

METHOD OF OPERATION

SECTION 9. METHOD OF OPERATION

9.01. Operator Responsibility - In planning and executing surface mining operations, the operator shall have, at all time, proper regard for all backfilling and regrading requirements, imposed by Article 6, Chapter 20, Code of West Virginia, as amended, and all rules and regulations adopted pursuant thereto, and all provisions of the approved pre-plan.

9.02. Topsoiling or Other Material Suitable for the Post Mining Land Use - These materials shall be removed in a separate layer and distributed over the backfilled area, or if not utilized immediately, segregated and stockpiled in a separate location as specified in the pre-plan. Topsoil not immediately utilized shall be protected from wind and water erosion. Any material used for topsoiling must be capable of supporting and maintaining the approved post mining land use.

9.03. Treatment of Toxic Material - All exposed coal seams remaining after mining and any acid-forming, toxic-forming, combustible materials, or any other waste materials that are exposed, shall be covered with a minimum of four (4) feet of nontoxic and noncombustible material; or test, treat and blend material to provide materials suitable to prevent water pollution. If necessary, this material shall be treated to neutralize toxicity in order to prevent water pollution and sustained combustion and/or to minimize adverse effects on plant growth and land uses. Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local

conditions, the director shall specify thicker amounts of cover using non-toxic material. 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.

9.04. Small Depressions - The requirement of this section to achieve approximate original contour does not prohibit construction of small depressions if they are approved by the director to minimize erosion, conserve soil moisture or promote revegetation. These depressions shall be compatible with the approved post-mining land use.

9.05. Bench Surface - The surface of the regraded bench shall be graded so as to permit the use of farm implements and machinery.

9.06. (Reserved)

9.07. Final Graded Slopes - Final graded slopes shall mean slopes backfilled and graded to eliminate the highwall which does not exceed the angle of repose or such lesser slope as is necessary to assure stability.

9.08. Grading Outer Spoil - All outer spoil shall be graded so as to blend into the adjoining undisturbed lands.

9.09. Regrading or Stabilizing Rills and Gullies - Any rills or gullies deeper than nine (9) inches forming in areas that have been regraded and the topsoil replaced but where vegetation has not yet been established will be deemed unacceptable and any such rills or gullies shall be filled, graded, or otherwise stabilized and revegetated. Rills or gullies of lesser size shall also be stabilized if they will be disruptive

to the approved postmining land use or may result in additional erosion and sedimentation.

9.10. Inactive Status - Inactive operation status will be considered for a period not to exceed one (1) year from date of approval providing that prior written approval is obtained from the director.

9.11. Keeping Operation Current - Grading, backfilling and water management practices as approved in the plans shall be kept current as follows:

a. Should the operation include only stripping (no augering or highwall mining), the grading and backfilling shall follow the mineral removal by a period not to exceed sixty (60) days or 3,000 linear feet.

b. Should the operation include stripping and augering, the augering shall follow the stripping by a period not to exceed sixty (60) days, and the grading and backfilling shall follow the augering by not more than thrity (30) days or 1,000 linear feet.

c. Should the operation include stripping and highwall mining, the highwall mining shall follow the stripping within sixty (60) days, or a reasonable time as prescribed by the director. Grading and backfilling shall follow the highwall mining by not more than thirty (30) days or 1,000 linear feet.

d. Should the operation include only augering or highwall mining, the grading and backfilling shall follow the augering or highwall mining by a period not to exceed thrity (30) days or 1,000 linear feet.

e. Should the particular site conditions or weather make adherence to these guidelines impractical the period of time or the distance re-required to be current may be reasonably extended.

9A. Requirements for Special Land Use Purposes

9A.01. Alternative Plans - Alternative plans for restoration of the disturbed area may be submitted to the director. If such restoration will be consistent with the purpose of Article 6, Chapter 20, Code of West Virginia, as amended, and if such plans are approved by the director and complied with within such time limits as may be determined by him as being reasonable for carrying out such plans, the backfilling and grading requirements heretofore contained, may be modified.

9A.02. Water Impoundments - Prior to the construction of an impounding area for the storage of water after mining, approval must be obtained from the director for such impoundment. The Division of Water Resources will cooperate with the Division of Reclamation in reviewing all portions of any plan for water impoundments as they relate to water quality and will give its recommendations therefore, to the Division of Reclamation. This plan will include but not be limited to the following:

a. Location of the impounding area;

b. Dimensions of the area as to capacity and depth (average, maximum and minimum);

c. Plot plan of impoundment area;

d. Source of water entering the impoundment;

e. Quality of the water entering the impoundment;

f. Quality of water leaving the impoundment and mechanism of discharge;

g. Coal seam or seams mined or involved with impoundment;

h. Chemical characteristics of the soils and underlying strata in the impoundment area as they relate to acid production;

i. Safety aspects considered such as spillway overflow, emergency spillway, access to area; and

j. Consent of the landowner for such impoundment with submission on specified forms.

9A.03. Sanitary Landfills - Where waste materials from a coal preparation or conversion facility or from other activities conducted outside the permit area such as municipal wastes, garbage, etc., are used for fill material, plans for such use shall be approved by the director. Such plans for sanitary landfills and/or solid waste disposal areas shall be accompanied by the written approval of the Division of Water Resources and where appropriate, the State Department of Health.

9B. Steep Slope Mining

9B.01. Applicability - On surface mining operations where the natural slope exceeds twenty degrees (20°), the provisions of this section in addition to other applicable provisions of these regulations, shall apply. On lesser slopes that require measures to protect the area from disturbance as determined by the director based on consideration of soils, climate, method

of operation, geology, and other regional characteristics, the provisions of this section, in addition to other applicable provisions of these regulations, shall also apply. These provisions do not apply where mining is done on a flat or gently rolling terrain with an occasional steep slope through which the mining procedds and leaves a plain or predominatly flat area.

9B.02. Downslope Placement - Spoil of debris including that from clearing and grubbing, shall not be placed on the downslope except as provided for in Section 9D. or 9E. of these regulations.

9B.03. Highwall Elimination - The highwall shall be eliminated and the disturbed area graded. Land above the highwall shall not be disturbed unless the director finds that the disturbance will facilitate compliance with the requirements of this section.

9B.04. Stabilization - The material used to backfill and eliminate the highwall shall be sufficiently compacted or otherwise mechanically stabilized so as to insure stability of the backfill. Woody materials may be buried in the backfilled area only when the burial does not cause or add to instability.

9C. Mountaintop Removal

9C.01. Applicability - Where the mountaintop removal technique is applied, the provisions of this section in addition to other applicable provisions of these regulations, shall apply.

9C.02. Outcrop Barrier - An outcrop barrier of sufficient width consisting of the toe of the lowest coal seam and its associated overburden shall be retained where necessary to prevent slides and erosion. Where no outcrop exists due to previsous mining, this requirement will be waived.

9C.03. The Final Graded Slopes - The final graded top plateau slopes

on the mined area shall be less than 5 horizontal to 1 vertical so as to create a level plateau or gently rolling configuration and the outslopes of the plateau shall not exceed 2 horizontal to 1 vertical except where approved by the director, but in no case shall the minimum static safety factor be less than 1.5.

9C.04. Drainage - The resulting level or gently rolling contour shall be graded to drain inward from the outslope except at specific points where it drains over the outslope in protected channels.

9C.05. Post Mining Land Use - Where the mountain top removal method is applied, the lands must be returned to industrial, commercial, agricultural, or public use and the requirements of Section 10.04. must be met.

9D. Disposal of Spoil or Toxic Forming Materials by Methods Other Than Valley or Head-Of-Hollow Fills

9D.01. Applicability - Spoil or toxic forming materials not required to achieve the approximate original contour shall be transported to and placed in a controlled manner in disposal areas other than the mine workings or excavation only if all the provisions of this section are met.

9D.02. Location of Disposal Sites - The disposal areas shall be within the permit area and they must be approved by the director as suitable for construction of fills. The disposal area shall be located on the most moderate slopes and naturally stable areas available. Where possible, fill materials suitable for disposal shall be placed upon or above a natural terrace, bench, or berm, if such placement provides additional stability and prevents mass movement.

9D.03. Certification - Certification of the fill shall be as follows:

a. The fill shall be designed using recognized professional standards and certified by an approved registered professional

engineer or other approved professional specialist;

b. The fill shall be inspected for stability by an approved registered professional engineer or other approved professional specialist after completion of the first 50-foot lift, to assure removal of all organic material and topsoil, placement of under-drainage systems, and proper construction in accordance with the approved pre-plan. The approved registered professional engineer or other approved professional specialist, shall also provide a certified report upon completion of the fill that the fill has been constructed as designed in the approved pre-plan; and

c. Where fills are placed on slopes less than twenty degrees (20°) a certification shall not be required.

9D.04. Stabilization - Where the slope in the disposal area exceeds 2.8 horizontal to 1 vertical (36 percent) or where necessary to achieve a static safety factor of 1.5, measures such keyway cuts, rock toe buttresses or other techniques shall be used. All organic material shall be removed from the disposal area and the topsoil must be removed and segregated before the overburden is placed in the disposal area. Suitable organic material may be used as mulch or may be included in the topsoil. The spoil or toxic forming materials shall be transported and placed in a controlled manner, concurrently compacted as necessary to insure long-term mass stability and prevent mass movement. The fill shall be drained and graded to allow surface and subsurface drainage to be compatible with the natural surroundings.

9D.05. Drainage - The disposal area shall not contain springs, natural water courses or wet weather seeps unless lateral drains are constructed from the wet areas to the under drains in such a manner that infiltration of the water into the fill shall be prevented. The drains shall be designed and constructed of coarse rock. If no filter is designed for the under drain,

sufficient capacity shall be provided to allow for partial plugging of the drain. No rock shall be used in under drains if it tends to disintegrate or if it is acid forming or toxic forming.

9D.06. Construction - Construction of the fill shall be as follows:

a. All areas upon which the fill is to be placed shall first be progressively cleared of all trees, brush, shrubs, and other organic material. This material shall be removed from the fill area;

b. Depositing and compacting the fill in layers shall begin at the toe of the fill. The layers shall be constructed approximately parallel with proposed finish grade. All material shall be deposited in uniform horizontal layers and compacted with haulage equipment.

c. The thickness of the layers shall not exceed four feet;

d. The outer slope shall be no steeper than 2 horizontal to 1 vertical. A 20-foot wide bench shall be installed at a maximum of every 50 feet in vertical height of the fill with a 3% to 5% slope toward the fill area, normal to such, and a 1% slope toward a rock rip-rap channel or natural drainway; and

e. When construction of each lift (maximum of every 50 feet in vertical height) of the fill is completed, topsoil or other suitable material which will support vegetation shall be spread over the completed slope and bench. The slopes and benches shall then be seeded and mulched immediately in accordance with the approved revegetation plans.

9E. Disposal of Spoil Materials in Valley or Head-of-Hollow Fills

9E.01. Applicability - Spoil not required to achieve the approximate original contour shall be transported to and placed in a controlled manner;

spoil to be disposed of in natural valleys must be placed in accordance with the following requirements.

9E.02. Location of Spoil Areas - The disposal areas shall be within the permit area and they must be approved by the director as suitable for construction of fills. The disposal area shall be located on the most moderate slopes and naturally stable areas available. Where possible, fill materials suitable for disposal shall be placed upon or above a natural terrace, bench, or berm, if such placement provides additional stability and prevents mass movement.

9E.03. Certification - Certification of the fill shall be as follows:

a. The fill shall be designed using recognized professional standards and certified by an approved registered professional engineer or other approved professional specialist; and

b. The fill shall be inspected for stability by an approved registered professional engineer or other approved professional specialist after completion of the first 50-foot lift, to assure removal of all organic material and topsoil, placement of under-drainage systems, and proper construction in accordance with the approved pre-plan. The approved registered professional engineer or other approved professional specialist, shall also provide a certified report upon completion of the fill that the fill has been constructed as designed in the approved pre-plan.

9E.04. Stabilization - Where the slope in the disposal area exceeds 2.8 horizontal to 1 vertical (36 percent) or where necessary to achieve a static safety factor of 1.5, measures such as keyway cuts, rock toe buttresses or other techniques shall be used. All organic material shall be removed from the disposal area and the topsoil must be removed and segregated before the material is placed in the disposal area. Suitable organic ma-

terial may be used as mulch or may be included in the topsoil. The spoil shall be transported and placed in a controlled manner, concurrently compacted as necessary to insure long-term mass stability and prevent mass movement. The fill shall be drained and graded to allow surface and subsurface drainage to be compatible with the natural surroundings.

9E.05. Drainage - The disposal area shall not contain springs, natural water courses or wet weather seeps unless lateral drains are constructed from the wet areas to the rock core in such a manner that infiltration of the water into the fill will be prevented. If springs, natural water courses or wet weather seeps are encountered, a system of under drains shall be constructed from each spring or seepage area as lateral drains to the rock core. If no filter is designed for the under drain sufficient capacity shall be provided to allow for partial plugging of the drain. No rock shall be used in under drains if it tends to disintegrate or if it is acid forming or toxic forming.

9E.06. Construction - Construction of the fill shall be as follows:

a. All areas upon which a valley fill is to be placed shall first be cleared progressively of all trees, brush, shrubs, and other organic material. This material shall be removed from the fill area. No more than 3.0 acres, excluding roadway for construction of fill, shall be cleared in the valley fill site until the first lift is completed;

b. A rock core shall be progressively constructed as the layers are brought up through the valley fill. The rock core shall be a minimum of 16 feet in width and composed of rock with a minimum dimension of 12 inches. The rock core shall consist of no more than 10% fines as determined by visual inspection (fines being a material with a dimension of less than 12 inches);

c. Depositing and compacting valley fill in layers shall begin at the

toe of the fill. The layers shall be constructed approximately parallel with proposed finish grade. All material shall be deposited in uniform horizontal layers and compacted with haulage equipment;

d. The thickness of the layers shall not exceed four feet;

e. During and after construction, the top of the fill shall be graded to drain back to the head of the fill on a slope no greater than 3%. A drainage pocket shall be maintained at the head of the fill at all times to intercept surface runoff. Maximum size of the drainage pocket shall be 10,000 cubic feet;

f. The outer slope shall be no steeper than 2 horizontal to 1 vertical. A minimum 20-foot wide bench shall be installed at a maximum of every 50 feet in vertical height of the fill with a 3% to 5% slope toward the fill area, normal to such, and a 1% slope toward the rock core; and

g. When construction of each lift (maximum of every 50 feet in vertical height) of the valley fill is completed, topsoil or other suitable material which will support vegetation shall be spread over the completed slope and bench excluding the rock core. The completed slope and bench shall then be seeded and mulched immediately in accordance with the approved revegetation plan.

9E.07. Variance - Where it can be demonstrated that other design criteria are justified, certain requirements of this section may be waived. The basis for justification are, but not limited to, land use potential, inavailability of durable rock, and site stability.

SECTION 10.

POSTMINING USE OF LAND

SECTION 10. POSTMINING USE OF LAND

10.01. General - All disturbed areas shall be restored in a timely manner to conditions that are capable of supporting the uses which they were capable of supporting before any mining, or to a higher or better use achievable under criteria and procedures set forth in Section 10.04 of these regulations.

10.02. Determining Premining Use of Land - The premining uses of land to which the postmining land use is compared shall be those uses which the land previously supported if the land had not been previously mined and had been properly managed.

a. The postmining land use for land that has been previously mined and not reclaimed, shall be judged on the basis of the highest and best use that can be achieved and is compatible with surrounding areas.

b. 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.

c. If the premining use of the land was changed within five (5) years of the beginning of mining, the comparison of postmining use to premining use shall include a comparison with the historic use of the land as well as its use immediately preceding mining.

10.03. Land Use Categories - Land use is categorized in the following groups. Change from one to another land use category in premining to postmining constituted an alternate land use and the operator shall meet the requirements of Section 10.04 of the section and all other applicable sections of these rules and regulations.

a. Heavy Industry - Manufacturing facilities, powerplants, airports

or similar facilities.

b. Light Industry and Commercial Services - Office buildings, stores, parking facilities, apartment houses, motels, hotels, or similar facilities.

c. Public Services - Schools, hospitals, churches, libraries, water-treatment facilities, solid waste disposal facilities, public parks and recreation facilities, major transmission lines, major pipelines, highways, underground and surface utilities, and other servicing structures and appurtenances.

d. Residential - Single - and multiple-family housing (other than apartment houses) with necessary support facilities. Support facilities may incude commercial services incorporated in and comprising less than 5 percent of the total land area of housing capacity, associated open space, and minor vehicle parking and recreation facilities supporting the housing.

e. Cropland - Land used primarily for the production of cultivated and close-growing crops for harvest alone or in association with sod crops. Land used for facilities in support of farming operations are included.

f. Rangeland - Includes rangelands and forestlands which support a cover of herbaceous or scrubby vegetation suitable for grazing or browsing use.

g. Hayland or pasture - Land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or cut and cured for livestock feed.

h. Forestland - Land with at least a 25 percent tree canopy or land at least 10 percent stocked by forest trees of any size, including

land formerly having had such tree cover and that will be naturally or artificially reforested.

i. Impoundments of water - Land used for storing water for beneficial uses such as stock ponds, irrigation, fire protection, recreation, or water supply.

j. Fish and wildlife habitat and recreation lands - Wetlands, fish and wildlife habitat, and areas managed primarily for fish and wildlife or recreation.

k. Combined uses - Any appropriate combination of land uses where one land use is designated as the primary land use and one or more other land uses are designated as secondary land uses.

10.04. Criteria for Approving Alternative Postmining Use of Land - An alternative postmining land use shall be approved by the director after consultation with the landowner or the land-management agency having jurisdiction over state or federal lands. Proposals to remove 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, must also meet these criteria.

a. The proposed land use is compatible with adjacent land use and, where applicable, with existing local, state or federal land use policies and plans. A written statement of the views of the authorities with statutory responsibilities for land use policies and plans shall accompany the request for approval. The permittee shall obtain any required approval of local, state or federal land management agencies, including any necessary zoning or other changes necessarily required for the final land use.

b. Specific plans have been prepared which show the feasibility of the proposed land use as related to needs, projected land use trends, and markets and that include a schedule showing how the proposed use will be developed and achieved within a reasonable time after mining and be sustained. The director may require appropriate demonstrations to show that the planned procedures are feasible, reasonable, and integrated with mining and reclamation, and that the plans will result in successful reclamation.

c. Provision of any necessary public facilities is assured as evidenced by letters of commitment from parties other than the permittee, as appropriate, to provide them in a manner compatible with the permittee's plans.

d. Specific and feasible plans for financing attainment and maintenance of the postmining land use including letters of commitment from parties other than the permittee as appropriate, if the postmining land use is to be developed by such parties.

e. The plans are designed under the general supervision of a registered professional engineer, or other appropriate professional, who will ensure that the plans conform to applicable accepted standards for adequate land stability, drainage, and vegetative cover, and aesthetic design appropriate for the postmining use of the site.

f. The proposed use or uses will neither present actual or probable hazard to public health or safety nor will they post any actual or probable threat of water flow diminution or pollution.

g. The use or uses will not involve unreasonable delays in reclamation.

h. Necessary approval of measures to prevent or mitigate adverse effects on fish and wildlife has been obtained from the director

and appropriate state and federal fish and wildlife management agencies.

i. Proposals to change premining land uses of range, fish and wildlife habitat, forestland, hayland, or pasture to a postmining cropland use, where the 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 director to assure that:

   1. There is a firm written commitment by the operator or by the landowner or land manager to provide sufficient crop management after release of applicable performance bonds to assure that the proposed postmining cropland use remains practical and reasonable;
   2. There is sufficient water available and committed, to maintain crop production; and
   3. Topsoil quality and depth are shown to be sufficient to support the proposed use.

j. The director has provided by public notice not less than 45 days nor more than 60 days for interested citizens and local, state and federal agencies to review and comment on the proposed land use.

SECTION 11.

PRIME FARMLANDS

SECTION 11. PRIME FARMLANDS

11.01. Applicability - Surface operations conducted on prime farmlands shall comply with all requirements set forth in Article 6, Chapter 20, Code of West Virginia, as amended, and all rules and regulations promulgated by the Reclamation Commission and in addition, must meet the special requirements of this section.

11.02. Identification of Prime Farmland - Prime Farmland shall be identified on the basis of soil surveys submitted by the applicant. The director also may require data on drainage, flood control, and subsurface water management.

The requirement for submission of soil surveys may be waived by the director if the applicant can demonstrate according to its procedure outlined in 11.03 of this section that no prime farmlands are involved. Soil surveys shall be conducted according to standards of the National Cooperative Soil Survey, which includes the procedures set forth in the U. S. Department of Agriculture Handbooks 436 (Soil Taxonomy) and 18 (Soil Survey).

11.03. Negative Determination of Prime Farmland - The land shall not be considered as prime farmland where the applicant can demonstrate one or more of the following situations:

a. Lands within the proposed permit boundaries have been used for production of cultivated crops for less than 5 years out of 20 years preceding the date of the permit application;

b. The slope of all land within the permit area is 10 percent or greater;

c. Land within the permit area is not irrigated or naturally subirrigated, has no developed water supply that is dependable and of adequate quality, and the average annual precipitation is 14 inches

or less;

d. Other factors exist, such as a very rocky surface, or the land is frequently flooded, which clearly places all land within the area outside the purview of prime farmland;

e. A written notification based on scientific findings and soil surveys that land within the proposed mining area does not meet the applicability requirements for prime farmlands and is submitted to the director by a qualified person other than the applicant, and is approved by the director.

11.04. Plan for Restoration of Prime Farmland - The applicant shall submit to the director a plan for the mining and restoration of any prime farmland within the proposed permit boundaries. This plan shall be used by the director in judging the technological capability of the applicant to restore prime farmlands. This plan shall include:

a. A description of the original undisturbed soil profile, as determined from a soil survey, showing the depth and thickness of each of the soil horizons that collectively constitute the root zone of the locally adapted crops and are to be removed, stored, and replaced;

b. The proposed method and type of equipment to be used for removal, storage, and replacement of the soil in accordance with Section 11.05 of these regulations;

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

horizon, 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 mine land and the conservation practices to control erosion and sedimentation during the first 12 months after regrading is completed. Proper adjustments for seasons must be made so that final graded land is not exposed to erosion during seasons when vegetation or conservation practices cannot be established due to weather conditions; and

f. Available agricultural school studies, company data, or other scientific data for comparable areas that demonstrate that the applicant using his proposed method of reclamation will achieve, within a reasonable time, equivalent or higher levels of yield after mining as existed before mining.

11.05. Special Requirements - For all prime farmlands to be mined and reclaimed, the applicant shall meet the following special requirements.

a. All soil horizons to be used in the reconstruction of the soil shall be removed before drilling, blasting, or mining to prevent contaminating the soil horizons with undesirable materials. Where removal of soil horizons result in erosion that may cause air and water pollution, the director shall specify methods of treatment to control erosion of exposed overburden. The operator shall:

1. Remove separately the entire A horizon or other suitable soil materials which will create a final soil having an equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material before replacement;

2. Remove separately the B horizon of the natural soil or a combination of B horizon and underlying C horizon or other suitable soil material that will create a reconstructed root zone of equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material; and

3. Remove separately the underlying C horizons or other strata, or a combination of such horizons or other strata to be used instead of the B horizon that are equal or greater thickness and that can be shown to be equal or more favorable for plant growth than the B horizon, and that when replaced will create in the reconstructed soil a final root zone of comparable depth and quality to that which existed in the natural soil.

b. If stockpiling of soil horizons is allowed by the director in lieu of immediate replacement, the A horizon and B horizon must be stored separately from each other. The stockpiles must be placed within the permit area and where they will not be disturbed or exposed to excessive erosion by water or wind before the stockpiled horizons can be redistributed on terrain graded to final contour. Stockpiles in place for more than 30 days shall be protected from erosion.

c. Scarify the final graded land before the soil horizons are replaced.

d. Replace the material from the B horizon, or other suitable material specified in Section 11.04 (2) or 11.05 (3) of these regulations in such a manner as to avoid excessive compaction of overburden and to a thickness comparable to the root zone that existed in the soil before mining.

e. Replace the A horizon or other suitable soil materials, which will create a final soil having an equal or greater productive capacity than existed prior to mining, as the final surface soil layer to the thickness of the original soil as determined in Section 11.05 (1) of these regulations in a manner that:

1. Prevents excess compaction of both the surface layer and underlying material and reduction of permeability to less than 0.06 inch per hour in the upper 20 inches of the reconstructed soil profile; and

2. Protects the surface layer from wind and water erosion before it is seeded or planted.

f. Apply nutrients and soil amendments as needed to establish quick vegetative growth.

SECTION 12.

REVEGETATION

SECTION 12. REVEGETATION

12.01. Approval of Private Revegetation Contractor - In the event the operator contracts with a private contractor to carry out the planting, the private revegetation contractor shall first submit to the director a written resume of his past experience and training. On the basis of such resume, he shall be adjudged qualified or not, as the case may be, and so notified by the director in writing. Should experience warrant, a private revegetation contractor may be adjudged disqualified and so notified by the director in writing.

12.02. Objective in Revegetation - The objective in revegetation is to quickly establish a vegetative cover on all disturbed areas to minimize erosion, provide economic benefits, and restore aesthetic appeal. Plants that will give a quick permanent cover and enrich the soil shall be given priority. A temporary or permanent cover should be established by the end of the first growing season and a permanent cover by the end of the second growing season. All plants shall be considered a tool in achieving stabilization and an appropriate land use objective.

12.03. Reference Areas - Success of revegetation shall be measured on the basis of reference areas approved by the director.

12A. Seeding and Planting

12A.01. Seasonal Feasibility - Appropriate vegetation shall be planted, seeded, aerial-seeded, or hydro-seeded in accordance with accepted agricultural and reforestation practices when the season is favorable for seed germination and plant survival except as otherwise specified in these regulations.

12A.02. Minesoil Characteristics - Surface mining of minerals and removal of overburden results in minesoil which varies greatly in fertility,

acidity, and stoniness. These three characteristics, together with steepness of slope, shall be used in determining characterization for the purpose of establishing vegetation. Premining overburden sampling and analysis or previous experience and correlation data, shall be submitted with the pre-plan for all acid-producing seams. The plan shall identify toxic strata and provide planned handling and final placement for acid strata. Overburden analysis to be in accordance with standard procedures outlined in Environmental Protection Agency Manual No. 600/2-78-054 (Field & Laboratory Methods Applicable to Overburdens and Minesoils) or other approved methods by the Department of Natural Resources. Minesoil classification shall be in accordance with Table 6.

12A.03. Minesoil Analysis - Tests for minesoil acidity, expressed as pH, shall be made after final grading and before seeding or planting. As a guide, until experience is achieved, a minimum of ten (10) random samples shall be taken at points distributed uniformly over the disturbed area. Minesoil tests may be made with accepted field indicators or other approved techniques. Minesoils with chemical characteristics that could restrict vegetation establishment and growth shall be analyzed by an approved soils laboratory. The results of these tests shall be filed with the final planting plan.

12A.04. Function of Annual and Biennial Cover Crops - On areas where excessive erosion is likely to occur, rapid establishment of vegetative cover shall be required. Seeding of annuals and biennials on such areas shall be considered as a means for achieving temporary vegetative cover only and not acceptable in the achievement of permanent cover. See Table 5.

12A.05. Development of Planting Plan - Planting plans will be a part of the premining and reclamation plan. The mining plan and the projected

configuration after mining will be the basis for classifying the area as follows:

a. A prediction of the minesoil class and the basis for the same;

b. Treatment to neutralize acidity;

c. Mechanical seed bed preparation;

d. Rate and analysis of fertilization;

e. Rates and types of mulch;

f. Perennial vegetation including herbaceous and woody plants where appropriate, rate and species;

g. Areas to be planted or seeded to trees and shrubs;

h. Land use objective;

i. Maintenance schedule if appropriate; and

j. Identify who will complete revegetation treatments.

Seeding will be concurrent with the operation as mining and backfilling progresses.

12A.06. Development of Final Planting Plan - A final planting plan shall be prepared and submitted to the director for his approval within thirty (30) days after the grading and backfilling of the operation have been approved.

12B. Plant Material Selection and Treatment

12B.01. Specifications - All planting plans for woody vegetation will include provisions for herbaceous cover using a suitable mixture from Table One. The following specifications should govern the selection and establishment of seeds and plants used in the revegetation of surface minesoil and based upon the following capability class:

a. On favorable minesoil material, prepared for perennial cover crop use, non-stony and with pH 5.5 or higher, one of the following

mixtures should be used:

1. Seed mixtures #1, 2, 3, 4, or 5 from Table One, of these regulations should be applied where annual maintenance treatment is assured. Mixture #4 should be applied where the graded portion of minesoil is to be used as a firebreak or occasionally as a haulageway.
2. Establishment of grass, legume or perennial grass cover crop should require the following treatment:
   (i) Innoculation of legume seed with proper strain;
   (ii) Triple innoculation rate if hydro-seeded;
   (iii) Protection of seeded minesoil area from grazing livestock;
   (iv) Application of lime to pH 6.0 for mixture #4, to pH 6.5 to 7.0 for all other mixtures;
   (v) Application of fertilizer will be based on a minesoil test for lime, phosphorus, and potash from a soils lab or will be a minimum of 200 lbs. ammonium nitrate and 200 lbs. triple super phosphate;
   (vi) Preparation of seed bed by harrowing, discing or other approved methods; and
   (vii) completion of fall seeding for legumes should be completed by September first.
3. Maintenance of cover crop should be carried out by the operator or his assignee until the cover crop is adjudged by the director to be satisfactorily established and may require the following treatment:
   (i) Maintain pH 6.5 - 7.0 for Mixture 1;
   (ii) Maintain pH 6.0 - 6.5 for Mixture 2, 3, 4 and 6;

(iii) Maintain pH 5.5 - 6.0 for Mixture 4;

(iv) Topdress every two years with 400 lbs. per acre 0-20-20 for Mixture 5.

b. On favorable minesoil material prepared for woodland and wildlife use, any one mixture from Table Two of this regulation, along with proportions and treatment prescribed for it, should be selected for use in the direct seeding of herbaceous species and planting of trees and seedlings.

1. Establishment of plant growth for woodland cover should require:

(i) Spring planting of seedlings not later than May 1st and preferably before April 15th; and

(ii) Spacing of shrubs and all trees in a pattern eight feet by eight feet apart of 680 trees per acre.

2. Establishment of crown vetch-rye grass or Serecia-tall Fescue mixtures for wildlife cover may be done in accordance with 12B.01, a, (2), of this regulation.

c. On moderately favorable minesoil material, prepared for woodland and wildlife use, with pH 5.5 and above, graded but stony, on moderate to steep slopes, non-stony and stony, one of the mixtures with specified proportion and treatment from Table Three, of this regulation should be used.

1. Overseeding on moderate to steep slopes on tree planting sites shall be carried out on minesoil in order to prevent siltation, establish ground cover and minimize erosion. Seed one of the mixtures from Table One.

2. Establishment of plant growth shall require innoculation of legume seed with proper strain, and shall be protected from grazing by

livestock. Triple innoculation rate if hydroseeding.

d. On favorable minesoil material prepared for woodland and wildlife use, which includes all extremely steep and/or stony minesoil, one of the mixtures with specified proportions and treatment from Table Three of this regulation should be used.

1. Establishment of plant growth should require:

(i) Broadcasting Mixture 1 and 3 before May 1st and frost seeding mixture 2 by early March.

(ii) Black Locust seed must be seventy percent (70%) or more viable. All legumes must be innoculated and must be protected from grazing by livestock. Triple innoculation rate if hydroseeding.

(iii) Mixture No. 1 of Table Three, should be used for extremely stony areas when tested acidity indicates a pH of 4.0 or better.

e. Other species of trees, shrubs, grasses, legumes or vines may be approved by the director.

12C. Mulch

12C.01. Mulch specifications - Mulch shall be used on all disturbed areas. Annual grains such as oats, rye, wheat, etc. may be used instead of mulch when it is shown to the satisfaction of the director that the substituted grains will provide adequate stability and that they will be replaced by species approved for the postmining use.

Approved materials and minimum rates to be applied are as follows:

Material	Rate/Acre
Straw or Hay	1 - 2 tons - material may be anchored with asphalt emulsion or other techniques approved by the director
Wood fiber or wood cullulose products	1,000 lbs.
Shredded bark	50 cubic yards

The following materials may be used with wood fiber or wood cellulose on a limited basis upon approval by the director or his duly authorized agent.

Material	Rate/Acre	Minimum Rate/Acre for Wood Fiber or Wood Cellulose
Genaqua 743	25 gallons	500 lbs.
Curasol AK or HA	25 gallons	500 lbs.
Aerospray 70	25 gallons	500 lbs.

Any other suitable materials including latex or plastic compounds may be approved by the director.

12D. Standards for Evaluating Vegetative Cover

12D.01. Final Planting Report - A planting report shall be prepared by the operator and filed with the director on the prescribed form when the planting of a permit area is completed. All planting reports shall be certified by the operator or by the party with which the operator contracted for planting.

12D.02. Time for Inspection - The operator shall review all areas he has under bond prior to the recognized spring and fall planting seasons. The operator shall cause those areas deficient of vegetative cover to be retreated,

graded, seeded, planted, mulched, limed, or whatever, to establish a satisfactory stand of vegetation.

12D.03. Standards for Perennials - Standards for legumes and perennial grasses shall require at least an eighty percent (80%) ground cover. Substandard areas shall not exceed one-fourth (1/4) acre (100' x 100') in size nor total more than twenty percent (20%) of the area seeded. The ground cover of living plants on the revegetated area shall be equal to the ground cover of living plants of the approved reference area for a minimum of two growing seasons. The ground cover shall not be considered equal if it is less than ninety percent (90%) of the ground cover of the reference area for any significant portion of the mined area.

12D.04. Standards for Woody Plants with Perennials - Standards for woody plants with legumes and perennial grasses overseeded shall require a sixty percent (60%) establishment of ground cover of legumes and perennial grasses, and 400 trees (included volunteer tree species) and/or planted shrubs per acre, comprising a satisfactory vegetative ground cover as determined by the director. Substandard areas shall not exceed one-fourth (1/4) acre (100' x 100') in size nor total more than twenty percent (20%) of the area seeded or planted. The ground cover of living plants on the revegetated area shall be equal to the ground cover of living plants of the approved reference area for a minimum of two growing seasons. The ground cover shall not be considered equal if it is less than ninety percent (90%) of the ground cover of the reference area for any significant portion of the mined area.

12D.05. Final Inspection Report - In no instance shall the official vegetative cover evaluation be carried out until the planting and seeding concerned has survived two growing seasons or a minimum of 18 months. A final inspection report shall be prepared and filed following inspection to determine that

the above evaluative standards have been complied with. If acceptable, the director may then cause the remainder of the bonds to be released.

SECTION 12

TABLE ONE

USE: HAY, PASTURE OR OTHER WHERE HERBACEOUS COVER IS DESIRED

1.	Alfalfa	20 lbs.
	Orchardgrass	10 lbs.
2.	Birdsfoot Trefoil	10 lbs.
	Tall Fescue	15 lbs.
3.	Birdsfoot Trefoil	10 lbs.
	Orchardgrass	10 lbs.
4.	Sericea (Hulled)	20 lbs.
	Red Top	3 lbs.
	Tall Fescue	15 lbs.
5.	Crown Vetch	15 lbs.
	Tall Fescue	20 lbs.
	**Weeping Lovegrass	3 lbs.
6.	Crown Vetch	15 lbs.
	Rye Grass	15 lbs.
	**Weeping Lovegrass	3 lbs.

* APPROVED SEED MIXTURES FOR OVERSEEDING TREE AND SHRUB SEEDLINGS

7.	Tall Fescue	30 lbs.
	Sericea	15 lbs.
8.	Tall Fescue	20 lbs.
	Rye Grass	10 lbs.
	Sericea	15 lbs.
9.	Tall Fescue	20 lbs.
	Weeping Lovegrass	3 lbs.
	Sericea	15 lbs.

FOR ELEVATIONS ABOVE 2500'

10.	Tall Fescue	20 lbs.
	Red Top	4 lbs.
11.	Tall Fescue	20 lbs.
	Weeping Lovegrass	3 lbs.
12.	Tall Fescue	20 lbs.
	Sweet Clover	10 lbs.

* Establishment of vegetation includes liming to pH range 5.5 - 7.0. Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply 600 lbs. 10-20-10 or equivalent, and protection from grazing during the seedling state.

** Red Top may be substituted for Weeping Lovegrass for late summer and fall seedings at a rate of 3 lbs. per acre.

SECTION 12

TABLE TWO

APPROVED WOODLAND PLANT MIXTURES
(Nursery Grown Seedlings)

1.	Black Locust (3000') White Pine	Plant in bands 6 rows or more in width Black Locust not to exceed 50%
2.	Black Locust (3000') Virginia Pine	Plant in bands 6 rows or more wide Black Locust not to exceed more than 50%
3.	Scotch Pine White Pine Red Pine (above 2000') Virginia Pine (below 2500')	Use mixture of two or more if available Plant in bands 6 rows or more
4.	Black Locust (below 3000') Tulip Poplar (below 3000') Sycamore (below 2500') Red Oak	Use up to one-half locust with one or more of hardwood species. Plant in bands 6 or more rows in each species
5.	Autumn Olive and adapted pines or hardwoods	Where owner's interest is wildlife improvement, plant in bands of 3 to 6 rows preferable with pines or in blocks of one-fourth acre spaced 600' apart
6.	European Black Alder (below 2500') Sycamore Indigo Bush Autumn Olive	Use these plants where protection from grazing is impractical or protection will not be maintained. For wildlife habitat improvement use 3 to 6 row bands where two or more species are planted.
7.	European Black Alder	Use European Black Alder where pH is near 5.5.
8.	Black Locust	Use only on steep erodible outslopes.
9.	Sweet Crab Apple* Washington Hawthorne*	On bench of areas where owners primary interest is wildlife habitat improvement, plant in clumps of 12 spaced 10' to 12' apart. Clumps should be spaced 200' to 300' apart, planted in between with pine, Indigo Bush or Autumn Olive.
10.	Blackberry*	Plant on bench spaced 6 X 6 in blocks 100 plants per block.
11.	Grey Dogwood* Silky Cornell*	On bench near water impoundments spaced 8 X 8.

*Should be planted only on the more favorable sites. Preferably a north or northeastern aspect with a pH of 5.5 or above.

SECTION 12

TABLE THREE

*APPROVED MIXTURES
HERBACEOUS AND WOODY SPECIES FOR DIRECT SEEDING

1.	Tall Fescue	30 lbs.	
	Sericea	15 lbs.	
	Black Locust**	3 lbs.	
2.	Tall Fescue	20 lbs.	
	Rye Grass	10 lbs.	
	Sericea	15 lbs.	
	Black Locust **	3 lbs.	
3.	Tall Fescue	20 lbs.	
	Weeping Lovegrass	3 lbs.	
	Sericea	15 lbs.	
	Black Locust**	3 lbs.	
4.	Tall Fescue	30 lbs.	Better suited to higher
	Birdsfoot Trefoil	10 lbs.	elevations above 2500'
	Black Locust	3 lbs.	
5.	Tall Fescue	20 lbs.	Better suited to higher
	Red Top	3 lbs.	elevations above 2500'
	Birdsfoot Trefoil	10 lbs.	
	Black Locust**	3 lbs.	

* Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply a minimum of 200 lbs. ammonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.

** Black Locust seed may be omitted on the bench areas or where erosion is not a serious problem, or at elevations above 2000', 1/4 lb/acre Virginia Pine; 1/4 lb/acre White Pine; and 3 lbs/acre Japonica Intermedia may be substituted for Black Locust.

SECTION 12

TABLE FOUR

*APPROVED MIXTURES FOR WATERWAYS, DIVERSIONS
DRAINAGE STRUCTURES, HAULAGEWAYS, HIGHWALL ACCESS, ETC.

1.	Tall Fescue	50 lbs.
	Birdsfoot Trefoil	10 lbs.
	Red Top	3 lbs.
2.	Perennial Rye Grass	20 lbs.
	Tall Fescue	30 lbs.
	Birdsfoot Trefoil	10 lbs.
	Red Top	3 lbs.
3.	Tall Fescue	40 lbs.
	Crown Vetch	15 lbs.
	Red Top	3 lbs.
4.	Tall Fescue	50 lbs.
	Crown Vetch	15 lbs.
5.	Tall Fescue	30 lbs.
	Reed Canarygrass	20 lbs.
	Red Top	3 lbs.

NOTE: Weeping lovegrass at 3 lbs. per acre may be substituted for Red Top for spring and early summer seedings on well drained areas.

*Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply a minimum of 200 lbs. ammonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.

SECTION 12

TABLE FIVE

*ANNUAL AND BIENNIAL COVER CROPS
FOR TEMPORARY COVER

	Suggested Rates of Application - Pounds in Acres	Seeding Season
- Grasses -		
Balbo Rye	30 - 60	Fall
Abruzzi Rye	30 - 60	Fall
Wheat	30 - 60	Fall
Oats	30 - 60	Fall
Japanese Millet	10 - 15	Summer
Millets - German, Foxtail	10 - 15	Summer
Sudan Grass - Sorghum Hybrid	10 - 20	Summer
Pearl Millet	10 - 20	Summer
Sudan Grass	10 20	Summer
Annual Rye Grass	10 - 15	Spring or Fall
-Legumes-		
Kobe Lespedeza	5 - 10	Summer
Korean Lespedeza	5 - 10	Summer
Hairy Vetch	20 - 40	Fall
Sweet Clover	10 - 20	Spring
-Forbs-		
Buckwheat	30 - 60	Summer

*Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply a minimum of 200 lbs ammonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.

SECTION 12

TABLE SIX

CLASSIFICATION OF MINESOILS WITHIN SOIL TAXONOMY

Minesoils of all ages are now being grouped under the category called spolents. This means recognition that these highly disturbed or manmade soils deserve the same attention, classification and management as other soils.

1. Fieldcrest is a family of minesoils containing a mixture of rock types. It has an acid but not extremely acid profile. Texture is loamy; mineralogy is mixed and fertility is medium. These are probably the most widespread minesoils in West Virginia.

2. Postoak is a minesoil family containing a dominance of mudstone material. It is near neutral in profile reaction; fine loamy textures and relatively fertile.

3. Widen minesoils are dominated by carbon rich coarse fragments or mine waste. They are acid in reaction but respond well to liming and revegetation.

4. Brandonville minesoils are dominated by shaly (fissile) coarse fragments. They are loamy in texture, have mixed mineralogy, are moderately acid and moderately fertile.

5. *Valley Point minesoils are dominated by sandstone coarse fragments. They are coarse loamy in texture, have siliceous mineralogy, low fertility and are extremely acid. These minesoils provide stable roadways and building sites.

6. *Birdcreek minesoils are similar to Valley Point soils but are acid instead of extremely acid.

7. Killarm minesoils contain a mixture of rock types. The profile is neutral in reaction. Texture is medium loamy. Mineralogy is mixed and fertility (except nitrogen) is relatively high.

8. Overfield minesoils contain a mixture of rock types. The profile is extremely acid (pH is below 4 at 10 inches). Texture is medium loamy. Mineralogy is mixed. Fertility is medium but acid related toxicity must be remedied by topsoiling or massive liming in order to get desirable plant growth.

9. Shawneetown minesoils have less than 10% rock fragments in the profile. The reaction is neutral; texture is fine loamy; mineralogy is mixed and fertility is relatively high except for nitrogen. These minesoils are suitable for cultivated cropping, but may not be present in mappable units in West Virginia.

10. Pursglove minesoils are like Widen except that they are extremely acid and require covering with favorable material or massive liming for satisfactory revegetation.

*Soils 5 and 6 frequently occur together in complex patterns.

These ten spolents cover most but not all minesoils in West Virginia. Other named minesoils have been identified and described and can be classified on request.

SECTION 13.

~~OTHER MINING OPERATIONS ON SURFACE MINED AREAS~~

RESERVED

SECTION 13. OTHER MINING OPERATIONS ON SURFACE MINED AREAS

13.01.--Director's Approval.--Reclamation plans for other mining operations to be carried out on a surface mined area on which the regrading, backfilling or revegetation have not been completed, shall require prior approval by the director.

13.02.--Application Requirements.--Application for approval of such reclamation plans shall be accompanied by the following:

a.--Application form to be prescribed by the director,

b.--A map of the surface mining permit area, showing the portion of land to be disturbed by the other mining operations, including haulageways or access roads,

c.--A performance bond or equivalent, as provided in Section 16, Article 6, Chapter 20, Code of West Virginia, as amended, the requirement for the first acre or fraction thereof of disturbed lands being one thousand dollars ($1,000) and for each additional acre or fraction thereof disturbed land an additional one thousand dollars ($1,000);

d.--Written permission for other mining operations from the owner of the surface rights and/or the owner of the mineral rights or the controlling parties of the same.

13.03.--Applicability of Code and Regulations.--All requirements for haulageways or access roads, drainage, blasting, backfilling regrading, revegetation, and bond release procedures as set forth in Article 6, Chapter 20, Code of West Virginia, as amended, and all regulations of the Reclamation Commission shall apply with equal force to the reclamation of disturbed areas from other mining operations.

SECTION 14.

~~SURFACE-MINING-OTHER-THAN-COAL~~

COAL REFUSE DISPOSAL REGULATIONS

SECTION 14. ~~SURFACE-MINING-OTHER-THAN-COAL~~ COAL REFUSE DISPOSAL REGULATIONS

All requirements as set forth in ~~Article-6,-Chapter-20-of-the-Code of-West-Virginia,-as-amended~~, and ~~all~~ the rules and regulations of the Reclamation Commission ~~shall-apply-with-equal-force-for-the-surface-mining-of-clay,-flagstone, gravel,-manganese,-shale,-iron-ore-and-any-other-metal-or-metallurgical-ore,~~ regarding coal refuse disposal as promulgated on July 22, 1981 are hereby incorporated by reference.

SECTION 15.

~~SURFACE-MINING-OF-LIMESTONE,-SANDSTONE-AND-SAND~~

SECTION 15. ~~SURFACE-MINING-OF-LIMESTONE,-SANDSTONE-AND-SAND~~

~~All-requirements-as-set-forth-in-Article-6,-Chapter-20,-Code-of-West Virginia,-as-amended,-excepting-those-covering-bonding-and-reclamation and-all-rules-and-regulations-of-the-Reclamation-Commission-with-the exception-noted,-shall-apply-with-equal-force-for-the-surface-mining-of limestone,-sandstone-and-sand.~~

SECTION 16.

SURFACE EFFECTS OF UNDERGROUND MINING OPERATIONS

SECTION 16. SURFACE EFFECTS OF UNDERGROUND MINING OPERATIONS

16.01. Applicability - The ~~Where~~ surface effects of underground mining operations ~~are incident to a mine as defined in Chapter 22, Article 1, Code of West Virginia, as amended,~~ shall be subject to all applicable requirements set forth in ~~Chapter 22, Article 6, Section 63,~~ Chapter 20, Article 6, Section 1 et. seq. of the Code of West Virginia, as amended; ~~excepting Chapter 20, Article 6, Sections 8, 11a, 13, 13a, 17, 18, 18a, 19, 20a, 20b and 31 shall apply.~~ All rules and regulations promulgated pursuant to Chapter 20, Article 6, Subseries A, excepting Section 4.01, 4.12, 6 and 10 shall apply.

16.02. Director's Approval - A reclamation plan for the surface effects of underground mining operations shall require written approval of the director prior to any surface disturbance.

16.03. Certification - The certification that the access roads or haulageways and the drainage systems were constructed and installed in accordance with the approved underground opening reclamation plan, shall be submitted to the director of the Department of Natural Resources by an approved registered professional engineer or other approved person prior to mine opening or reopening.

16.04. Notification - The director, Department of Natural Resources, shall notify the director, Department of Mines, of the satisfactory installation of all haulageways or access roads, drainage systems, and site preparations incident to the mine opening or reopening.

16.05. Bonding - Each operator who shall make application for an underground Opening ~~Approval~~ Permit under Chapter ~~22~~ 20, Article ~~2~~ 6, Section ~~63~~ 9, Code of West Virginia, as amended, shall ~~at the time the approval plan is submitted~~ furnish bonds in accordance with provisions of Chapter 20, Article 6, Section ~~16~~ 12, Code of West Virginia, as amended.

16.06. Mine Closure - Upon completion of mining, the director, Department of Mines shall certify to the director, Department of Natural Resources, approval for mine closure. The director, Department of Natural Resources, shall have jurisdiction and control of final restoration and reclamation of the surface effects of underground mining operations including the release of all bonds.

16.07. Surface Effects of Existing Underground Mining Operations - The surface effects of all active underground mining operations in existence prior to the effective date of these rules and regulations shall comply with all applicable requirements set forth in ~~Chapter 22, Article 2, Section 63,~~ Article 6, Chapter 20, Code of West Virginia, as amended, and all rules and regulations of the Reclamation Commission shall apply with the exception of Subseries A, Sections 4.01, 6. and 10.

SECTION 17.

MODIFICATIONS

SECTION 17. MODIFICATIONS

Should the director determine that modifications are necessary because of geologic structure, topography, particular watershed or permit conditions, the director may at his discretion with the approval of the Reclamation Commission, make such modifications if the same are in conformity with Article 6, Chapter 20, Code of West Virginia, as amended.

SECTION 18.

STATE AND FEDERAL COMPLIANCE

SECTION 18. STATE AND FEDERAL COMPLIANCE

The issuance of a prospecting or surface mining permit pursuant to Article 6, Chapter 20, Code of West Virginia, as amended, and any rules and regulations promulgated thereunder authorizes the operations covered by said permit, but does not release the permit holder from any other legal duties imposed by the laws of this state or these United States.

SECTION 19.

VALIDITY OF REGULATIONS

SECTION 19. VALIDITY OF REGULATIONS

The various sections of these rules and regulations shall be construed as seperable and severable and should any of the sections, sentences, clauses or parts thereof be construed and held unconstitutional or for any reason be invalid, the remaining sections of these rules and regulations shall not be thereby affected.

WEST VIRGINIA SURFACE MINING RECLAMATION REGULATIONS

DEPARTMENT OF NATURAL RESOURCES

CHAPTER 20-6

SERIES VII
Subseries B
1982

INDEX

WEST VIRGINIA SURFACE MINING RECLAMATION REGULATIONS
Department of Natural Resources
Chapter 20-6
Series VII
(1982)

Sub Series A
Subject: Rules and regulations pertaining to areas disturbed by prospecting, surface mining operations, and surface effects of underground mining operations, particularly with regards to requirements for permit requirements, performance bonds, haulageways or access roads, blasting, protection of the hydrologic system, drainage system, method of operation, backfilling and regrading, postmining use of land, prime farmlands, revegetation, ~~other-mining-operations on-disturbed-surface-mined-areas,-surface-mining-other-than-coal, surface-mining-of-limestone,-sandstone-and-sand,~~ modifications, and state and federal compliance and validity of regulations.

Sub Series B
Subject: Rules and regulations pertaining to definitions, general permit requirements, transportation facilities, drainage systems, blasting, post mining land use, fish and wildlife considerations, revegetation, prime farmlands, bonding, prospecting, additional permit requirements and performance standards for surface mining operations, additional permit requirements and performance standards for surface effects of underground mining operations, subsidence control, additional permit requirements and performance standards for facilities incidental to coal mining, additional permit requirements and performance standards for coal removal incidental to development, exemptions, additional permit requirements and performance standards for coal mine waste piles, reprocessing, impoundments, small operators assistance program, notice of citizens' suits, citizens' inspections, designation of areas unsuitable for coal mining, inspections, enforcement, open meetings and Reclamation Board of Review appeals.

SECTION 1. GENERAL

1.01 A. Scope - These Subseries A regulations establish general and specific rules for permits, for haulageways or access roads for blasting, for protection of the hydrologic system, for drainage systems, for methods of operation, for postmining use of lands, for prime farmlands, for revegetation of lands disturbed by prospecting and surface mining operations, for ~~other-mining-operations-on-surface-mined-areas,-for-surface-mining-other-than-coal,-for~~ bonds ~~and-permits,~~

~~for quarries, for surface mining of limestone, sandstone and sand,~~ for modifications, for state and federal compliance and for validity of regulations.

1.01 B. Scope - These subseries B regulations establish general and specific rules for general permit requirements, transportation facilities, drainage systems, blasting, post mining land use, fish and wildlife considerations, revegetation, prime farmlands, bonding, prospecting, additional permit requirements and performance standards for surface mining operations, additional permit requirements and performance standards for surface effects of underground mining operations, subsidence control, additional permit requirements and performance standards for facilities incidental to coal mining, additional permit requirements and performance standards for coal removal incidental to development, exemptions, additional permit requirements and performance standards for coal mine waste piles, reprocessing, impoundments, small operators assistance program, notice of citizens' suits, citizens' inspections, designation of areas unsuitable for coal mining, inspections, enforcement, open meetings and Reclamation Board of Review appeals.

1.02 A. Applicability - The interim rules and regulations contained in Subseries A:

(a) Apply on March 12, 1982 to all permits, underground approvals, existing mine permits issued or modified by the Director between August 14, 1978 and February 13, 1982. These operations must continue to comply with these regulations until the Director has made his decision whether to grant or deny a modification to an interim or permanent program permit which requires compliance with Subseries B.

(b) Apply on March 12, 1982 to all surface mining operations as defined by Section 3 (t) of the Act which do not have a permit, underground approval or existing mine (EM) permit from the Director. This group consists primarily of underground mines opened or reopened before July 1, 1976 and most facilities

incidental to coal mining. The interim regulations apply to these operations until the date specified in a permit which has been approved or denied by the Director in conformity with the Act.

(c) Apply on March 12, 1982 to all surface mining operations who receive conditionally approved permits under the Act issued after February 13, 1982. Those interim regulations apply until the date which shall be specified in the permit requiring compliance with the permanent regulations in Subseries B.

1.02 B. Applicability - The permanent rules and regulations contained in Subseries B:

(a) Apply, once the Director has made his decision to grant or deny a modification which requires compliance with Subseries B to operations presently under permit or approval issued or modified between August 14, 1978 and February 13, 1982.

(b) Apply on September 22, 1982, to any new operation which does not have any permit or approval issued or modified persuant to Chapter 20, Article 6 by that date.

(c) Apply to all operations which received conditionally approved permits after February 13, 1982 from the Director on the date specified in the permit.

(d) Sections 4C.01 and sections 11 - 16 apply on the date these regulations become effective.

1.03 A. The interim regulations (Subseries A) apply generally until September 22, 1982 to daily activities at the mine site. Once a permit is modified or a permit is obtained which requires compliance with the permanent regulations (Subseries B), then those regulations govern the daily activities at the mine site.

1.03 B. Phased Submittal - Chapter 20, Article 6, Section 9, of the West Virginia Code provides that:

"Within two months after the secretary of the interior approves a

permanent state program for West Virginia, all surface mining operations shall file an application for a permit or modification of a valid existing permit or underground opening approval relating to those lands to be mined eight months after that approval. "No later than eight months after the secretary's approval of a permanent state program for West Virginia, no person may engage in or carry out, on lands within this state, any surface-mining operations unless such person has first obtained a permit from the Director."

The two-month period referred to above expires on March 22, 1982. The eight-month period expires on September 22, 1982. Because of the extensive workloads imposed upon the industry in preparation of and the Reclamation Division in the review of permit applications, phased submittals shall be accepted.

No later than March 22, and upon the initial filing with the local DNR office, the Department of Natural Resources shall begin and maintain a file on that permit application. When the file is complete and all relevent information has been reviewed, the applicant shall forward the complete application to the Charleston office for final action on the application.

If the initial submittal is incomplete, the applicant shall submit a statement and schedule of dates for the remaining submittals.

1.04. Authority - These regulations are issued under the authority of Article 6, Chapter 20, Code of West Virginia, as amended.

1.05. Effective Date - These regulations were promulgated on the 16th day of June, 1982.

1.06. Filing Date - These regulations were filed in the Office of the Secretary of State on the 16th day of June, 1982.

2. DEFINITIONS: UNLESS THE CONTEXT IN WHICH USED CLEARLY REQUIRES A DIFFERENT MEANING, AS USED IN THESE REGULATIONS OR AS REFERRED TO IN ARTICLE 6, CHAPTER 20, CODE OF WEST VIRGNIA, AS AMENDED:

2.01 - Abandoned Coal Waste Disposal Area means any coal refuse disposal facility which is located on the surface of either public or private property, or both, which has not been operated in whole or in part since the third day of August, one thousand nine hundred seventy-seven, which was inadequately reclaimed and there is no continuing responsibility on the part of any operator, permittee, or agent of the operator or permittee, or the State as a result of a bond forfeiture to reclaim it under State or Federal Law.

2.02 -Acidity means the quantitative capacity of an aqueous medium to donate protons in a reaction with hydroxyl ions.

2.03 - Acid Mine Drainage means water with a pH of less than 6.0 discharged from active or abandoned mines and from areas affected by surface mining operations.

2.04 -Acid-Forming Materials means earth materials that contain sulfide mineral or other materials which may create acid mine drainage.

2.05 -Acid-Producing Overburden means material which upon chemical analysis, shows a pH of 4.0 or less. Seams commonly associated with such material may include, but are not be limited to Waynesburg, Washington, Freeport, Sewickley, Redstone, Pittsburgh, Kittanning, Elk Lick, Peerless, No. 2 Gas, Upper Eagle, No. 5 Block and Stockton Lewiston.

2.06 - Acid-test Ratio means the relation of quick assets to current liabilities.

2.07 - Act means West Virginia Code, Chapter 20, Article 6.

2.08 - Active Surface Mining Operation means an operation where land is being disturbed or mineral is being removed and where grade release has not been approved.

2.09 - Asset Ratio means the relation of total assets to total liabilities.

2.10 - Auger Mining means a method of mining coal at a cliff or highwall by drilling holes into an exposed coal seam from the highwall.

2.11 - Buffer Zone means an undisturbed border along or around an intermittent or perennial stream.

2.12 - Bearing Capacity means a measure of the ability of a foundation material to carry loads imposed by an embankment or other structure as determined by standard engineering evaluations.

2.13 -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 currently available anywhere as determined by the director, even if they are not in routine use. The term includes, but is not limited to, construction practices, site requirements, vegetative selection and planting requirements, animal stocking requirements, scheduling of activities and design of sedimentation ponds. Within the constraints of the Act, the director shall have the discretion to determine the best technology currently available on a case-by-case basis, as authorized by the Act and these rules and regulations.

2.14 - Capital Assets means those assets such as land, buildings and equipment held for use in the production or sale of other assets or services.

2.15 -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 investment such as stocks, bonds, notes, and certificates of deposit, where the intent and ability to sell them in the near future is established by the operator.

2.16 -Cemetery means any area of land where human bodies are interred.

2.17 - Channel Protection means any measures taken to prevent or control erosion, cavitation, or other destructive processes in channels such as diversion ditches and spillways.

2.18-Coal Processing Plant means a collection of facilities where run-of-the-mine coal is subjected to chemical or physical processing and separated from its impurities. The processing plant may consist of, but is not limited to, the following 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, railroads and other transportation facilities.

2.19 - Coal Refuse Disposal Area means all deposits of coal processing waste or coal waste on or buried in the earth.

2.20 - Coal Waste means any waste coal, rock shale, slurry, culm, gob, boney, slate, clay, and related materials associated with or near a coal seam, which are either brought above ground or otherwise removed from a mine in the process of mining coal, or which are separated from coal during the cleaning or preparation operations.

2.21 - Coarse Coal Refuse means coal processing waste predominately within a size range greater than the #28 sieve size.

2.22 - Collateral Bond means an indemnity agreement in sum certain deposited with the director executed by the permittee and supported by one or more of the following:

(1) The deposit of cash in one or more federally insured accounts, payable only to the director upon demand;

(2) Negotiable bonds of the United States, a State, or a municipality, endorsed to the order of, and in the possession of, the director;

(3) Negotiable certificates of deposit, payable only to the director, and in his possession;

(4) An irrevocable letter of credit of any bank organized or authorized to transact business in the State of West Virginia, payable only upon presentation by the director;

(5) A perfected, first-lien security interest in real or personal property, in favor of the director;

(6) Investment-grade rated securities, having the highest rating issued by a nationally recognized securities rating service, endorsed to the order of, and in the possession of, the director, excluding all issues of the type traded on a commodity exchange such as contracts for future delivery of goods.

2.23 - Combined Coal Refuse means a mixture of coarse coal refuse and dewatered fine coal refuse which is combined in the coal preparation process.

2.24 - Combustible Materials means organic materials that are capable of burning by fire or through oxidation, accompanied by the evolution of heat and a significant temperature rise.

2.25 - Common-size Comparative Balance Sheet means item amounts from a number of the permittee's or applicant's successive yearly balance sheets arranged side by side in a single statement followed by common-size percentages whereby: (1) the asset total is assigned a value of 100 percent; (2) the total of liabilities and owner equity is also assigned a value of 100 percent; and (3) each individual asset, liability, and owner equity item is shown as a fraction of one of the 100 percent totals.

2.26 - Common-size Comparative Income Statement means an operator's income statement amounts for a number of successive yearly periods arranged side by side in a single statement followed by common-size percentages whereby net sales are assigned a 100 percent value, and then each statement item is shown as a percentage of net sales.

2.27 - Community or Institutional Building means any structure, other than a public building or an 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 or sewage treatment.

2.28 - Compaction means the densification of a soil or soil-like material by means of mechanical manipulation.

2.29 -Complete application means an application for a notice of intent to prospect or for a surface mining permit which contains all information required under the Act and all Rules and Regulations.

2.30 -Completion of Mining means an operation where no mineral or overburden has been removed for a period of two consecutive months, unless the operator, within thirty (30) days of receipt of the director's notification declaring completion, submits sufficient evidence that the operation is in fact not completed.

2.31 - Completion of Reclamation means that the total bond has been released after approval of the final inspection report provided for in section 4F.11.

2.32 - Construction Pore Pressures means water pressures generated in foundation soils or embankments due to compression by loads imposed by construction of an embankment or other structure.

2.33 -Current Assets means cash and assets that are reasonably expected to be realized in cash or sold or consumed within one year.

2.34 - Current Liabilities means debts or other obligations that must be paid or liquidated within a short period of time, usually a year. This shall also include dividends payable on preferred stock within one year.

2.35 - Current Ratio means the relation of current assets to current liabilities.

2.36 - Density means the weight of soil or soil-like solids per unit of total volume of soil or similar mass.

2.37 - Design Storm means predicted precipitation of given intensity, frequency, and duration based on United States Weather Bureau data.

2.38 - Director and/or His Authorized Agent means the director of the department of natural resources, deputy directors, the chief of the division of reclamation, the assistant chiefs of the division of reclamation and all duly authorized surface mining reclamation supervisors, or inspectors and inspectors-in-training.

2.39 - Downslope means the land surface between the projected outcrop of the lowest coal seam being mined or any mining related construction and the valley floor.

2.40 - Embankment means a man-made deposit of earth or waste materials, usually exhibiting at least one sloping face.

2.41 - Embankment Stability means the degree of safety relative to a structural failure of the embankment.

2.42 - Emergency Spillway means a hydraulic structure designed to discharge water in excess of that which an impoundment is designed to store or which cannot be passed through a principal spillway.

2.43 - Excess Material - Reserved

2.44 - Existing Coal Refuse Area means a refuse disposal facility which has been operated in whole or in part after August 3, 1977 or has a continuing reclamation responsibility as of that date.

2.45 -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 Secretary's approval of a permanent program for West Virginia.

2.46 - Face-Up means the result of an excavation where a vertical or near vertical highwall is created that exposes the overburden and/or the mineral face.

2.47 - Fine Coal Refuse means coal processing waste predominately within a size range less than the #28 sieve which may be disposed of in a slurry form or as a dewatered fine refuse.

2.48 - Foundation means soil, bedrock, or other earth material on or against which an embankment or other structure is placed.

2.49 - Fragile lands means geographic areas containing natural, ecologic, scientific or esthetic resources that could be damaged or destroyed by surface coal mining operations. Examples of fragile lands include valuable habitats for fish or wildlife, critical habitats for endangered or threatened species of animals or plants, uncommon geologic formations, National Natural Landmark sites, 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 22(d) of the Act and Section 13 of these regulations.

2.50 - Freeboard means 1) the vertical distance between the lowest point of the crest of the embankment of a dam and the reservoir water surface or 2) the vertical distance between the top of a ditch or channel and the water surface during the design flow.

2.51 - Fugitive Dust means that particulate matter not emitted from a duct or stack which becomes airborn due to forces of wind or surface mining operations or both. During surface mining operations the term may include emissions from haulroads; wind erosion of exposed surfaces, storage and spoil piles; reclamation operations; and other activities in which material is either removed, stored, transported, or redistributed.

2.52 - General Area means, with respect to hydrology, the topographic and ground water basin surrounding a permit area which is of sufficient size, including areal extent and depth, to include one or more watersheds containing perennial streams and ground water zones and to allow assessment of the probable cumulative impacts on the quality and quantity of surface and ground water systems in the basins.

2.53 - Geotechnical Engineering means the application of soil mechanics, rock mechanics, and geology to the solution of problems involving engineering structures and their interaction with surrounding earth materials.

2.54 - Growing Season means one (1) year.

2.55 - Groundwater means subsurface water in the zone of saturation.

2.56 - Haulageway or Access Road means any road constructed, improved, maintained or used by the operator with the exception of state maintained roads.

2.57 - Hazard Potential means a classification rating assigned to a structure based on engineering evaluations and judgement predicting the damage to human life, property and environment should a failure of the structure occur.

2.58 - Highwall means the face of exposed overburden or coal in an open cut of a surface mining operation or for entry to an underground mining operation.

2.59 - Highway, Primary means those roadways which are designated as interstates, U. S. numbered highways or West Virginia numbered highways and

Secondary means those roadways which are designated by the West Virginia Department of Highways as county numbered routes.

2.60 - Historic Lands means historic or cultural districts, places, structures or objects, including archeological and paleontological sites, National Historic Landmark sites, sites listed on or eligible for listing on 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.

2.61 - Hydraulics means the study of the physical behavior of liquids, especially water, in natural or man-made systems or processes.

2.62 - Hydrological Analysis means a determination, using standard engineering methods, to establish surface water runoff for a specified design storm.

2.63 - 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 resevoir. It encompasses the dynamic relationships among precipitation, runoff, evaporation, and changes in ground and surface water storage.

2.64 - Hydrology means the science that deals with the occurrence and behavior of water in the atmosphere, on the ground and underground.

2.65 - Hydrologic Regime means the entire state of water movement in a given area. It is a function of the climate 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 or into the ground surface, and returns to the atmosphere as vapor by means of evaporation and transpiration.

2.66 - Impoundment means a closed basin constructed for the retention of water, sediment or waste.

2.67 - Infiltration means the flow or movement of water through the surface of soil or soil-like material into the ground.

2.68 - Intermittent Stream means a stream or portion of a stream that flows continuously for at least one month of the calendar year as a result of ground water discharge or surface runoff.

2.69 -Inspection shall mean a visual review of prospecting, surface, or other mining operations to insure complete compliance with any applicable law or rules and regulations or permit conditions under jurisdiction of the director.

2.70 - Irreparable Damage to the Environment means any damage to the environment that cannot be corrected by actions of the operator.

2.71 - Leachate means a liquid that has percolated through soil, rock, or waste and has extracted dissolved or suspended materials.

2.72 - Lightly Buffered Stream means any stream or its tributaries that contains less than 15 ppm methyl orange alkalinity (to pH 4.5) and a conductivity of less than 50 micro MHO.

2.73 - Liquefaction means a phenomenon wherein a saturated granular soil or soil-like material loses strength and flows in a manner resembling a liquid.

2.74 - Liquidity Ratio means the relation of cash to current liabilities.

2.75 - Mine means the shaft, slopes, drifts or inclines connected with excavations penetrating coal seams or strata and the surface structures or equipment connected therewith which contributes directly or indirectly to the mining, preparation or handling of coal.

2.76 - Mineral Face means the exposed vertical cross-section of the natural coal seam or mineral deposit.

2.77 - Natural Drainway means any natural water course which may carry water to the tributaries and rivers of the watershed.

2.78 - Natural hazard lands 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, and areas of unstable geology.

2.79 - Net profit means the bottom line of the income statement after taxes, including taxes based on income, adjustments, all extraordinary income and expense, but before preferred and common stock dividends.

2.80 - Net worth means preferred and common stock, all surplus accounts, and retained earnings.

2.81 - Occupied Dwelling means any building that is currently being used on a regular or temporary basis for human habitation.

2.82 - Outer Spoil or Outer Slope means the disturbed area extending from the outer point of the bench to the extreme lower limit of the disturbed land.

2.83 - Overburden means material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil.

2.84 - Peak Runoff means the maximum flow at a specified location resulting from a design storm.

2.85 - Perennial Stream means a stream or portion of a stream that flows continuously.

2.86 - Principal Shareholder means any person who is the record or beneficial owner of 10 percent or more of any class of voting stock.

2.87 - Phreatic Surface means the upper surface of a zone of saturation where a body of groundwater is not confined by an overlying impermeable strata.

2.88 - Piping means a process of internal erosion which occurs when water transports soil or soil-like materials through unprotected exits, developing unseen channels or pipes through an embankment or its foundation.

2.89 - Pit means that part of the surface mining operation from which the mineral is being actively removed or where the mineral has been removed and the area has not been backfilled.

2.90 -Potential Hazard means the existence of any condition or practice or any violation of a permit or other requirements of the Act in an operating or an abandoned refuse area which might reasonably be expected to cause physical harm to persons, property, or the environment inside or outside the permit area.

2.91 - Pre-Application means a preliminary survey [illegible] authorized agent of a pre-plan and the proposed area to be [illegible].

2.92 -Pre-Plan means the total application submitted to the director including the application forms, mining and reclamation plan, drainage plan, blasting plan, [illegible] plan, maps, drawings, data, [illegible] other information [illegible] to be required to obtain a permit.

2.93 -Principal Spillway means the hydraulic structure designed to discharge water stored between normal pool and the emergency spillway invert elevations.

2.94 - Probable Maximum Precipitation means the depth-duration-area rainfall for a particular area that represents the maximizing of the most critical meteorological conditions that are considered possible of occurrence.

2.95 - Public Building means any structure that is owned by a public agency or used primarily for public business, meetings or other group gatherings.

2.96 - 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.

2.97 - Quick Assets means cash and current assets that can be quickly turned into cash.

2.98 - Recharge Capacity means the ability of the soils and underlying materials to allow precipitation to infiltrate and reach the zone of saturation.

2.99 - Reclamation means the process of converting disturbed land to a stable form for productive use.

2.100 - Renewable Resource Lands means aquifers and areas for the recharge of aquifers and other underground waters, areas for agricultural or silvicultural production of food and fiber, and grazinglands.

2.101 - Retained Earnings means stockholder's equity that has arisen from retained assets from earnings in the business. This shall include only earnings from normal operations and not gains from such transactions as the sale of plant assets or investments.

2.102 - Return On Investment means the relation of net profit for the last yearly period to ending net worth.

2.103 - Sediment means solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water gravity, or ice and has come to rest on the earth's surface.

2.104- 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.

2.105 -Sediment Control Structure means a primary structure designed, constructed and maintained in accordance with Section 4B of these regulations and includes barriers, dams, excavations or other structures placed in suitable locations which slows down water runoff to allow sediment to settle out, Provided that such secondary sediment control structures including hay or straw bales, check dams, rip-rap, or mulch are not considered primary sediment control structures.

2.106 - Seepage means 1) the appearance or disappearance of water at the surface of natural ground or embankments or 2) the slow movement of water through soil or soil-like materials.

2.107 - Self-bond means an indemnity agreement in a sum certain payable to the director, executed by the permittee and by each individual and business organization capable of influencing or controlling the investment or financial practices of the permittee by virtue of his authority as an officer or ownership of all or a significant part of the permittee, and supported by agreements granting the director a security interest in real or personal property pledged to secure performance by the permittee.

2.108 -Significant Aquifer means a zone stratum or group of strata that can store and transmit water in sufficient quantities for a specific use.

2.109 - Significant Forest cover means an existing plant community consisting predominantly of trees and other woody vegetation.

2.110 - Sizeable Quantity of Water means an accumulation of storm or any other water in excess of 5,000 cubic feet not provided for in the pre-plan.

2.111 -Slope Protection means any measures taken to control erosion on slopes.

2.112 - Slope Stability means the degree of safety relative to the development of a landslide in the slope, as defined by one or more standard engineering methods of analysis.

2.113 - Spoil means overburden that has been removed during surface coal mining operations.

2.114 - Stabilize means to control movement of soil, spoil piles, or areas of disturbed earth by modifying physical or chemical properties, such as by providing a protective surface coating.

2.115 - Standard Engineering means sound engineering practice based upon the technology currently available to the engineering profession.

2.116 - Stoniness means a characteristic of earth, overburden or spoil reflecting its relative proportion of sizeable aggregate content as opposed to its sand, silt, clay or rock fragment content.

2.117 - Storm Water means any water flowing over the surface of the ground caused by precipitation; generally, surface runoff.

2.118 - Structure means but is not be limited to gas lines, water lines, towers, airports and dams. This shall not include operational facilities of the surface mining operation for purposes of Section 4C.04(f).

2.119 - Strength Parameters mean those engineering values obtained from standard engineering shear strength tests of soil or soil-like material.

2.120 - Sub-drainage System means a designed and constructed system provided for the conveyance of subsurface water.

2.121 - Subsidence means a sinking, collapsing or cracking of a portion of the earth's surface resulting from the presence of a void or voids beneath the surface.

2.122 - 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.

2.123 - Substantially Disturb means, for purposes of prospecting, to impact significantly upon land, air, or water resources by such activities as blasting, mechanical excavation, drilling, or altering coal or water exploratory holes or wells, construction of roads and other access routes, and the placement of structures, excavated earth, or other debris on the surface of land.

2.124 - Successor in interest means any person who succeeds to rights granted under a permit, by transfer, assignment, or sale of those rights.

2.125 - Surety Bond means an indemnity agreement in a sum certain payable to the director executed by the permittee which is supported by the performance guarantee of a corporation licensed to do business as a surety in the State of West Virginia.

2.126 - Surface Water means water on the surface of the earth.

2.127 - Topsoil means the A-horizon soil layer of the three major soil horizons.

2.128 - 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, air or water that are detrimental to the environment.

2.129 - Transfer, Assignment, or Sale of Rights means a change in ownership or other effective control over the right to conduct surface coal mining operations under a permit issued by the director.

2.130 - Toxic Mine Drainage means water that is discharged from active, abandoned and other areas affected by surface mining or prospecting operations and which contains a substance which 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.

2.131 - Valid Existing Rights - means that a person had valid existing rights as of August 2, 1977 as referenced in the Act if:

1. That person was mining coal as of that date; or

2. That person had obtained or made a good faith attempt to obtain all permits necessary for such mining; or

3. The designation or the limitation provided for in Section 22(d) of the Act would result in an unconstitutional taking of that person's rights after an opportunity for appellate review of the designation.

2.132 - Valley or Head of Hollow Fill means a fill structure consisting of any material, other than organic material, placed in a valley 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°.

2.133 -Woodlands means commercial woodlands, where the post-mining land use would be a commercial product where flat or gently rolling land is essential for the operation and harvesting: Provided, that environmental benefits would occur from such a woodland, post-mining land use.

2.134 - Working Capital means the excess of the operator's current assets over its current liabilities.

2.135 - Zone of Saturation means the zone below the piezometric surface in which all voids are filled with groundwater. Piezometric surface means the surface to which the water from a given aquifer will rise under its full head.

3A. PERMIT APPLICATION

3A.01 General Requirements for Format and Contents.

a. Applications for permits to conduct surface coal mining and reclamation operations shall be filed in the format required by the director. The application shall be complete excluding bond.

b. Information set forth in the application shall be current, presented clearly and concisely, and supported by appropriate references to technical and other written material available to the director.

c. All technical data submitted in the application shall be accompanied by -

1. Names of persons or organizations which collected and analyzed such data;
2. Dates of the collection and analyses; and
3. Descriptions of methodology used to collect and analyze the data.

d. The application shall state the name, address and position of officials of each private or academic research organization or governmental agency consulted by the applicant in preparation of the application for information on land uses, soils, geology, vegetation, fish and wildlife, water quantity and quality, air quality, and archeological, cultural, and historic features.

e. If the applicant proposes to conduct the surface mining activities in excess of 5 years, the application shall;

1. Be complete for the specified longer term, and
2. Show that a specified longer term is reasonably needed to allow the applicant to obtain necessary financing of equipment and the opening of the operation, and this need is confirmed, in writing, by the applicant's proposed source for the financing.

a. For permits of longer than five year terms, a review by the director of the permit shall be made no less frequent than the permit midterm or every five years, whichever is more frequent.

b. Extensions of time granted under this sub-section shall:

1. Be set forth in the permit;
2. And notice of the extension shall be made to the public.

3A.02 General Requirements for Permit Applications or Modifications pursuant to 20-6-9(a) of the Act.

a. Within two months of approval of the permanent state program all surface mining operators shall file an application for a permit or modification of a valid existing permit or underground opening approval.

1. If the director approves such action applicants may submit partial or phased applications and maintain compliance with 3A.02(a).
2. If the applicant is authorized to submit a partial or phased application pursuant to 3A.02 a complete application must be received by the director no later than eight (8) months after approval of the permanent state program.

3. Applicable information already on file with the director may be incorporated into the application by reference.

b. Existing permits which do not propose to conduct operations eight months after approval of a permanent state program need not comply with 3A.02.

c. Applicants which have made a good faith attempt to submit a complete application and have an interim program permit or approval and are operating in compliance with interim program standards may be granted reasonable extensions by the director upon written findings beyond the eight (8) months specified in 3A.02(a)(2).

3A.03 New or Revised Regulations -Within thirty (30) days after a new or revised regulation becomes effective, all active operations shall submit a schedule to the director demonstrating how and when the operator expects to comply with such regulation. The director shall review the schedule and either approve it or return it to the operator with suggested revisions and set a reasonable time for compliance not to exceed ninety (90) days.

3B. LEGAL ADVERTISEMENT

3B.01 Surface Mine Application Number - Prior to the publication of the advertisement for a surface mining permit, the applicant shall submit a complete surface mining permit application and obtain a surface mining application (SMA) file number.

3B.02 Contents of Advertisements

a. The surface mining application (SMA) file number shall be made a part of the legal advertisement.

b. A clear and accurate location map shall be made a part of the legal advertisement. A map of a scale and detail found in the West Virginia General Highway maps will be the minimum standard for acceptance. The map size will be at a minimum 2" x 2". Longitude and latitude lines shall be indicated on the map and such lines will cross at or near the center of the proposed permit area.

c. At a minimum, the legal advertisement shall contain the information required by Subsections (a) (1) through (a) (10), Section 10 of the Act and shall specify that comments on the permit application must be filed with the director in Charleston.

d. The legal advertisement shall be published once a week for four consecutive weeks. Each advertisement shall be separated by a period of not less than six (6) nor more than seven (7) days.

e. The legal advertisement and publication dates shall be certified and notarized by the publishing newspaper. The certificate of publication shall be made a part of the completed permit application.

f. If an applicant seeks a permit to mine within 100 feet of the outside right-of-way of a state maintained road or to relocate a state maintained road, the advertisement shall include a concise statement describing the road and, if applicable, the particular part to be relocated, where the relocation is to occur, and the duration of the relocation.

3C. MAPS

3C.01 Scale for Reclamation Pre-plan Map - Except as otherwise noted in these rules and regulations, the scale required for all maps prepared for submission with an application for a permit shall be as follows:

a. The preferred Scale of maps proposed from U.S. geological survey topographic maps on 7.5-minute quadrangle shall be enlarged to 500 feet or less to the inch; and

b. Lesser scales may be used where improved clarity and accuracy are necessary.

3C.02 Scale for Drainage, Progress and Final Maps -The scale on the drainage, progress and final maps shall be of the same scale as the approved pre-plan map, provided that the scale of final maps for prospecting operations be 1" = 500'.

3C.03 Map Size - All maps and plans shall be submitted on standard print paper, 24 inches by 36 inches or less. If supplementary maps or plans are attached, match lines shall be used.

3C.04 Color Code - A color code shall be used in preparing all maps to indicate critical features of the permit area as follows:

a. Red shall indicate mineral to be removed;

b. Yellow shall indicate the total disturbed land;

c. Blue shall indicate water and drainage patterns;

d. Brown shall indicate special uses;

e. Green shall indicate areas regraded; and

f. Purple shall indicate adjacent mining permits.

3D. INSURANCE

3D.01 The minimum amount of insurance coverage for bodily injury shall be $300,000 for each occurrence and $500,000 aggregate; and minimum insurance for property damage shall be $300,000 for each occurrence and $500,000 aggregate with no exclusion for landslides and water wells: provided that blasting insurance will continue as long as blasting activities occur.

3D.02 The policy shall be maintained in full force during the life of the permit or any renewal thereof until completion of all reclamation operations.

3E. APPROVED PERSONS

3E.01 Any person may upon approval by the director unless otherwise provided in the Act and these regulations may prepare, sign or certify all permit applications, maps, plans and design specifications or other similar materials necessary to complete an application and pre-plan. Provided however, that for purposes of Sections 10(a)(13) & 13(b)(10) of the Act an approved person shall be a registered professional engineer who may be assisted by experts in related fields such as geology, land surveying and landscape architecture.

3E.02 The director's approval shall be in writing and shall be based on the following:

a. A resume of the persons prior experience and training relating to the preparation of permit application materials, provided that registered professional engineers, registered mining engineers and licensed land surveyors currently registered or licensed in the State of West Virginia may in lieu of a resume submit a copy of their registration; and

b. Any person seeking an approval must demonstrate that he posesses adequate knowledge of the Act and rules and regulations promulgated thereunder and possess such other skills and qualifications as may be necessary to complete an application and pre-plan by successfully passing an examination administered by the director. Such examinations will be given upon request by the person seeking approval.

3F. COMPLIANCE INFORMATION

3F.01 Each application shall contain:

a. A statement of whether the applicant, any subsidiary, affiliate, or persons controlled by or under common control with the applicant has:

1. Had a Federal or State mining permit suspended or revoked in the last 5 years; or
2. Forfeited a mining bond or similar security deposited in lieu of bond.

a. If any such suspension, revocation, or forfeiture has occured, a statement of the facts involved including:

(1) Identification number and date of issuance of the permit and date and amount of bond or similar security involved;

(2) Identification of the authority that suspended or revoked a permit or forfeited a bond and the stated reasons for that action;

(3) The current status of the permit, bond, or similar security involved;

(4) The date, location and type of any administrative or judicial proceedings initiated concerning the suspension, revocation or forfeiture; and

(5) The current status of these proceedings.

b. A listing of each violation notice received by the applicant in connection with any surface coal mining operation during the 3-year period before the application date, for violations of any law, rule, or regulation of West Virginia, or of any State law, rule, or regulation enacted pursuant to Federal law, rule, or regulation, or of any provision of the Act pertaining to air or water environmental protection which resulted in a bond forfeiture, a permit revocation, a cessation order or a permanent suspension of the applicant's authorization to mine. The application shall also contain a statement regarding each violation notice, including:

1. The date of issuance and identity of the issuing regulatory authority, department, or agency;
2. A brief description of the particular violation alleged in the notice;
3. The date, location, and type of any admininstative 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;
4. The current status of the proceedings and of the violation notice; and
5. The actions, if any, taken by the applicant to abate the violation.

c. If the director determines from either the schedule submitted as part of the application or from other available information, that any surface mining operation owned or controlled by the applicant is currently in violation 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, or of any provision of the Act, the director shall require the applicant, before the issuance of the permit, to either :

1. Submit to the director proof 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:
2. Establish to the director reviewing such application that the applicant 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 a stay applied for in the appeal or affirms the violation, then any surface coal mining operations being conducted under a permit issued according to this paragraph shall be immediately terminated, unless and until the provisions of Paragraph (c)(1) above are satisfied.

d. A form listing all other licenses and permits applied for or obtained by the applicant to conduct the proposed surface mining activities.

e. The name of the proposed mine and the Mine Safety and Health Administration identification number for the mine and all sections, if any.

3F.02 A permit application is officially submitted when the operator is notified by the director that the permit is complete. At that time the operator will publish the required advertisement.

3F.03 A permit application shall be deemed complete when all required maps, plans, designs and other application materials (excluding bonds) have been supplied to the director.

3G. OPERATION PLANS, MAPS, AND CROSS SECTIONS

3G.01 In addition to other plans required by the Act, the application shall contain plans describing:

a. How the applicant will case, seal or otherwise manage boreholes, shafts, wells and open holes;

b. How the applicant will remove, store, and redistribute topsoil, subsoil, and other materials;

c. How the applicant will handle acid-forming and toxic-forming materials, and materials constituting a fire hazard;

d. How the applicant will comply with the requirements of other federal and state environmental laws which exceed those required by the Act and these regulations; and

e. The results of the geotechnical investigation of excess spoil disposal areas as provided for in the Technical Handbook for surface mining.

3G.02 In addition to other maps required by the Act, the permit application shall include maps showing:

a. The location of all buildings including explosive storage and handling facilities on and within 1,000 feet of the proposed permit area, with identification of the current use of the buildings; and location of each facility that will remain on the proposed permit area as a permanent feature, after the completion of mining activities.

b. Each state maintained road located in or within 100 feet of the proposed permit area;

c. The boundaries of any public park and locations of any cultural or publically owned historical resource listed in the National Register of Historic Places and known archeological sites within the permit or adjacent areas.

d. Each public or private cemetery and Indian burial ground located in or within 100 feet of the proposed permit area;

e. 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 the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act.

f. The location of all pre-existing structures to be used for surface mining operations conducted under the Act for which an exemption will be sought from design standards.

3G.03 Each application shall state;

a. 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 over the total life of the permit when incremental bonding is proposed; and

b. The size, sequence and timing of the sub-areas of the permit area for which it is anticipated that individual areas for mining will be requested over the estimated total life of the proposed mining.

3G.04 The application shall contain cross-sections which accurately depict the existing pre-mining surface configuration and the final surface configuration that will be achieved as proposed in the reclamation plan and/or as required by these regulations.

3G.05 The application shall contain information supporting the applicant's claim that it made substantial legal and financial commitments prior to January 4, 1977 which would exempt the applicant from section 22(a) of the Act, if the applicant requests such an exemption.

3H. GENERAL ENVIRONMENTAL RESOURCES INFORMATION

3H.01 In addition to other required information each application shall contain:

a. A description of the nature of cultural and historic resources including those listed on the National Register of Historic Places and known archeological sites within the proposed permit area and adjacent areas. The description shall be based on all available information, including, but not limited to, data of State and local archeological, historic, and cultural preservation agencies.

b. A statement as to the timing and sequence of mining and projected mining in relation to possible future impacts on cultural, historical, and known archeological sites on proposed and adjacent areas, and

c. A statement describing the measures to be used to minimize or prevent adverse impacts by proposed surface mining operations which may adversely affect public parks or historic places.

3H.02 Pre-existing Structures -

a. The application shall with respect to pre-existing structures:

1. Specify which pre-existing structures shall be used for surface mining operations to be conducted under this Act;

2. Specifically request an exemption for each such structure from the design criteria required by the Act, and

3. Contain plans, designs, etc. or cross-reference to such plans, etc. in the possession of the director wherein such existing structures are described.

4. Demonstrate that no significant harm to the environment or public health or safety will result from use of the structure.

b. The applicant shall submit the necessary modifications in the event he fails to qualify for the exemption provided for in this subsection.

3H.03 Pre-Existing Facilities- All facilities used in connection with or to facilitate a coal exploration or surface coal mining and reclamation operation shall comply with all performance standards in accordance with these rules and regulations and all design requirements in accordance with the Technical Handbook, unless the applicant demonstrates that existing:

a. Sediment control structures shall meet the guidelines set forth in Chapter 21 of the Technical Handbook

b. Valley or Head of Hollow Fills shall meet the guidelines set forth in chapter 21 of the Technical Handbook

c. Haulageways or access roads shall meet the guidelines set forth in Chapter 13, Section 13.19 of the Technical Handbook

d. Coal mine waste piles shall meet all the requirements in accordance with section 10 of these rules and regulations.

3H.04 Experimental practices -All experimental practices shall have the prior approval of the director of OSM before the beginning of operation.

3I. NOTIFICATION OF LOCAL AGENCIES

3I.01 The director shall notify all appropriate local agencies of the issuance, renewal or significant revisions of any permit.

3J. EXISTING VEGETATION

3J.01 If required by the director the application shall contain:

a. A map that delineates existing vegetative types and a description of the plant communities within the proposed permit area. This description shall include information adequate to predict the potential for reestablishing vegetation.

b. When a map [or aerial photograph] is required, sufficient adjacent areas shall be included to allow evaluation of vegetation as important habitat for fish and wildlife.

3K. BONDING

3K.01 Surety Bonds

a. When surety bonds are used by the operator, the bond must be executed by the operator and a corporate surety licensed to do business in the State of West Virginia.

3L. ENDANGERED SPECIES

3L.01 The applicant shall demonstrate all control measures, management techniques, and monitoring methods to be used to protect or enhance threatened or endangered species of plants or animals listed by the Secretary of the Interior under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) and their critical habitats if they are to be affected by the proposed activities.

3M. OCCUPIED DWELLINGS

3M.01 Where the proposed surface coal mining operation would be conducted within 300 feet measured horizontally of any occupied dwelling, the applicant shall submit with the application a written waiver from the owner of the dwelling, consenting to such operations within a closer distance of the dwelling as specified in the waiver. The waiver must be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver: Provided that if a waiver was obtained prior to August 3, 1977 a new waiver need not be obtained, Provided further, that valid waivers shall remain in any subsequent transfer, sale or reassignment of the permit.

3N. FEDERAL RECLAMATION FEES

3N.01 The application shall include a statement whether the applicant is current with all federal reclamation fees.

30. VERIFICATION OF APPLICATION

30.01 Application for permits shall be verified under oath, by a responsible official of the applicant, that the information contained in the application is true and correct to the best of the official's information and belief.

3P. TRANSFER, ASSIGNMENT OR SALE OF PERMIT RIGHTS AND OBTAINING APPROVAL

3P.01 The director shall not grant approval of the transfer, assignment or sale of the rights granted under any permit unless and until the following conditions are met.

a. The permittee and the party to whom the permit rights are being transferred, assigned or sold have mutually agreed to such a transaction in writing. Such agreement shall be in the form of a legal document binding on each party and shall be made a part of the permit file.

b. It shall be affirmatively demonstrated to the director that a bond in the full amount of that required for the permit will be kept in full force and effect before, during and after the transfer, assignment, or sale of the permit rights.

c. The applicant shall Set forth on forms prescribed by the director the information required in the following sections of the Act, 10-(a)(1) thru 10-(a)(6) and 10-(a)(9),10(d), 10(f), 11(a)10, 18(b)5 and sections 3D, 3M, and 3K of these rules and regulations.

3P.02 If the director finds, based on the information set forth in 3P.01 and other information made available to him, that the person to whom the permit rights are being assigned, transferred, or sold will conduct mining operations in accordance with the purpose and intent of the Act, these regulations and the terms and conditions of the permit, the approval of the assignment, transfer or sale of the permit rights may be granted.

3P.03 A permitee who wishes to assign the mining operation through an agreement, contract, job contract, etc, to another party but retain the permit must request prior written approval on forms prescribed by the director. Under this arrangement the permittee remains subject to all provisions of the Act, these rules and regulations and the terms and conditions of the permit.

3P.04 Any person seeking to succeed by transfer, assignment or sale to the rights granted by a permit issued under the Act shall, prior to the date of such transfer, assignment or sale, comply with the following:

a. Obtain the performance bond coverage of the original permittee by

1. Obtaining transfer of the original bond;
2. 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 regulatory authority. If such an agreement is reached, the director may authorize for each previous successor and the original permittee the release of any remaining amount of bond in excess of that required by the agreement; and

3. Providing sufficient bond to cover the original permit in its entirety from inception to completion of reclamation operations; or

a. 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. Provide the director with an application for approval of such proposed transfer, assignment, or sale, including-

1. The name and address of the existing permittee; and

2. 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.

c. Obtain the written approval of the director for transfer, assignment or sale of rights, according to Paragraph 3P.02 of this Section.

3P.05 Advertisement

a. The person applying for approval of such transfer, assignment or sale of rights granted by a permit shall advertise (as specified in Section 3B) 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, the number and particular geographic location of the permit, and the address to which written comments may be sent under this Paragraph.

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 director within thirty (30) days of the last day of publication.

3P.06 The director may, upon the basis of the applicant's compliance with the requirements of Paragraphs (01) and (02) of this Section, grant written approval for the transfer, sale, or assignment of rights under a permit, if he first finds, in writing, that-

a. The person seeking approval will conduct the operations covered by the permit in accordance with the requirements of law;

b. The applicant has submitted a performance bond or other guarantee at least equivalent to the bond or other guarantee of the original permittee; and

c. The applicant will continue to conduct the operations involved in full compliance with the terms and conditions of the original permit, unless and until it has obtained a new permit.

3Q. RENEWALS

3Q.01 Application for renewal shall be on forms prescribed by the director and contain the following:

a. The name and address of the permittee, location of the permit area including the county, the magisterial district, the nearest post office, and the permit number;

b. A Statement that the terms and conditions of the pre-plan are being satisfactorily met and that any requirements which have become applicable after the original date of the permit issuance are being complied with, provided that if compliance with such requirements requires an additional time period the applicant shall set forth a reasonable time schedule and description of the measures to be taken to meet these requirements;

c. A statement that the operation is in compliance with the applicable environmental protection standards of the Act and these rules and regulations;

d. A statement that the performance bond and insurance policy for the operation will continue in effect;

e. A progress map of the same size and scale as the proposal map.

f. A statement that the information set forth in the form and progress map is true and accurate;

g. A notarized signature of one of the principal officers of the permittee; and

h. A copy of a public notice of permit renewal and proof of publication in accordance with Section 19(a) of the Act and Section 3B.02 of these regulations.

3Q.02 The director shall send copies of his decision to the applicant, any persons who filed objections or comments to the renewal, and to any persons who were parties to any informal conference held on the permit renewal.

3R. REVISIONS

3R.01 Any revision to a permit will be subject to review and approval by the director and if deemed to be a significant revision, must meet all requirements of the Act and these rules and regulations. A revision will not be deemed to be significant unless it is determined that the information set forth in the legal advertisement as required by 20-6-10(a)(6) of the Act must of necessity be altered as a result of the revision or unless it is determined that the environmental impact or the welfare and safety of the public will be altered from that reflected in the

approved pre-plan. All revisions reviewed by the director which have been deemed not to be significant shall be approved in writing and will be made a part of the approved pre-plan.

3R.02 No significant revision to a permit may be implemented by any operator until the written approval of the director has been granted.

3R.03 Permit revision -The director shall approve or disapprove the complete application for revision, in accordance with the requirements of Section 18 of the Act. Upon a complete review of a request for a revision the director shall not grant approval of the revision if, based upon information contained within the request for revision or on other information made available to him, the director finds that the proposed revision would not be in accordance with the intent and purpose of the Act.

3R.04 Incidental Boundary Revisions shall not be deemed to be significant revisions and shall be limited to redistribution of the undisturbed portions of the permit area where such redistribution does not of necessity alter the legal advertisement as required by the Act or adversely impact on the environment or welfare and safety of the public, provided that the incidental boundary revision will not result in expanding the permit acreage provided however, that with regard to underground mining operations incidental boundary revisions may not be granted for spoil or refuse storage areas, topsoil preservation areas or haulageways and shall include but not be limited to such ancillary facilities necessary for the conduct of underground operations such as: ventilation shafts, escapeways, belt lines, fanways, infrequently used access roads, etc.

3R.05 Application Revisions - Any revisions to an application for a permit shall be filed for public review in the same Reclamation Division Field Office as the original application.

3S. FINDINGS

3S.01 Before deciding to approve or deny a permit, and subject to the requirements of the Act, the director shall review the complete application and written comments, written objections submitted, and records of any informal conference.

3S.02 Where the proposed surface coal mining operation may adversely affect any public park or any publicly owned places listed on the National Register of Historic Places, the director shall transmit to the Federal, State or local agencies with jurisdiction over the park or historic place a copy of the completed permit application containing the following:

a. A request for that agency's approval or disapproval of the operations; and

b. A notice to the appropriate agency that it must respond within 30 days from receipt of the request.

c. A permit for the operation shall not be issued unless jointly approved by all affected agencies.

3S.03 Along with other written determinations required by the Act and these regulations, the director shall:

a. Made a written determination that the proposed surface mining operation will not affect the continued existance of or the critical habitat of any species referred to in Section 3L.01.

b. Make a written determination that pre-existing structures qualify for the exemption provided for in this section.

3S.04 Where the proposed mining operation is to be conducted within 100 feet measured horizontally of the outside right-of-way line of any state maintained road (except where mine access roads or haulage roads join such right-of-way line) or where the applicant proposes to relocate any state maintained road, the director shall --

a. Require the applicant to obtain necessary approvals of the authority with jurisdiction over the state maintained road;

b. Provide notice in a newspaper of general circulation in the affected locale of a public hearing at least 2 weeks before the hearing;

c. Provide an opportunity for a public hearing at which any member of the public may participate in the locality of the proposed mining operations for the purpose of determining whether the interests of the public and affected landowners will be protected; and

d. Make a written finding based upon information received at the public hearing within 30 days after completion of the hearing as to whether the interests of the public and affected landowners will be protected from the proposed mining operations.

30.05 Upon receipt of a complete application for a surface mining permit, the director shall review the application to determine whether the surface coal mining operation is limited or prohibited under Section 22 of the Act on the lands which would be disturbed by the proposed operation.

Where the proposed operation would be located on any lands listed in Section 22 (d), (1) and (d) (4) of the Act, the director shall reject the application if the applicant had no valid existing rights for the area on August 3, 1977, or if the operation did not exist on that date.

If the director is unable to determine whether the proposed operation is located within the boundaries of any of the lands in Section 22 (d) (1) of the Act, or closer than the limits provided in Section 22 (d) (4) of the Act , the director shall transmit a copy of the relevant portions of the permit application to the appropriate Federal, State or local government agency for a determination or clarification of the relevant boundaries or distances, with a notice to the appropriate agency that it must respond within 30 days of receipt of the request.

Where the proposed operation would include Federal lands within the boundaries of any national forest, and the applicant seeks a determination that mining is permissible under Section 22 (d) (5) of the Act, the applicant shall submit a permit application to the OSM Regional Director.

3S.06 If the director determines that the proposed surface coal mining operation is not prohibited under Section 22 (d) of this Act and these regulations, he may nevertheless, pursuant to appropriate petitions, designate such lands as unsuitable for all or certain types of surface coal mining operations.

3S.07 Within 10 days after the granting of a permit the director shall notify the Clerk of the County Commission in which the area of land to be affected is located that a permit has been issued and shall describe the location of the lands within the permit area.

4A. TRANSPORTATION FACILITIES

4A.01 All surface mining applications shall contain a detailed description of each road, conveyor, or rail system to be constructed, used, or maintained. The description shall include a map, appropriate cross sections, and the following conditions:

a. Plans, design data, construction specification and maintenance procedures;

b. Specifications for each road width, road gradient, road surface, road cut, fill embankment, culvert, bridge, drainage ditch and drainage structure;

c. Report of appropriate geotechnical analysis for alternative specifications for road cuts, a description of measures to be taken to protect the inlet end of culvert; and a description of each road, conveyor or rail system to be constructed, used or maintained shall be in accordance to the Technical Handbook.

d. This shall include any railroad over which the applicant has a reasonable opportunity to exercise control. This shall include any part of a railroad system where ownership or control has been determined at the applicant's direction and the applicant had a real opportunity to retain control. This shall not include railroad lines not under the applicant's control if the railroad is subject to applicable environmental protection and health and safety requirements of the West Virginia Public Service Commission and the Interstate Commerce Commission. If the railroad system is controlled by a bona fide railroad corporation, the operator will be presumed not to have had a reasonable opportunity to exercise control over the rail system, subject to rebuttal by evidence submitted to the director by any person.

4A.02 Location - The centerline location of the proposed haulageways or access roads shall be identified on the site by visible markings at one hundred (100) foot intervals, which are in place at the time of pre-inspection, provided that, pre-existing haulageways or access roads shall be exempted from this requirement.

4A.03 Construction - All construction of haulageways or access roads shall be done in accordance with the following provisions:

a. The grading of a haulageway or access road shall be such that:

1. No sustained grade shall exceed 10%;
2. The maximum pitch grade shall not exceed 15% for 300 feet in each 1,000 feet of road constructed; and
3. The surface shall pitch toward the ditchline at the minimum rate of 1/2 inch per foot of surface width or crowned at the minimum rate of 1/2 inch per foot of surface width as measured from the centerline of the haulageway or access road.

b. Road Fills -

1. All fill sections on roads shall be constructed utilizing compaction, stabilization and controlled placement techniques as required for all fills on other permit areas.
2. Where a fill is to be placed on side slopes exceeding thirty-six percent (36%), the following additional conditions shall be required:

(a) All vegetative material and topsoil shall be removed from the embankment foundation to increase stability, and no vegetative material or topsoil shall be placed beneath or in any embankment.

(b) A keyway cut shall be required at the proposed toe of the fill so as to increase stability; said keyway shall be at a minimum 10 feet in width and shall be sloped inward.

(c) The fill shall be constructed in uniform compacted layers not to exceed 24 inches.

(d) Fill slopes shall not exceed 1.5 horizontal to 1 vertical.

c. Curves - The grade on switchback curves shall be reduced to less than the approach grade and should not be greater than ten percent (10%).

d. Cut Slopes - Cut slopes should not be more than 1:1 in soils or 1/4:1 in rock.

e. Ditches - A ditch shall be provided on both sides of a through-cut and on the inside shoulder of a cut-fill section. Water shall be intercepted before reaching a switchback or fill and led off.

f. Culverts shall be installed wherever necessary to convey water beneath or through the haulageway or access road. These culverts shall be located and installed according to the following provisions:

1.

Road Grade in Percent	Spacing of culverts in Feet
0 - 5	300 - 800
6 - 10	200 - 300
11 - 15	100 - 200

2. The culvert shall cross the haulageway or access road at a 30 degree angle downgrade with a minimum grade of 3% from inlet to outlet, except in intermittent or perennial streams where the pipe shall be straight and coincident with the normal flow;

3. The inlet end shall be protected by a headwall of suitable material and the slope at the outlet end shall be protected with an apron of suitable material.

4. The culvert shall be covered by compacted fill to a depth of one foot or half the culvert diameter, whichever is greater;
5. The diameter of culverts installed on haulageways or access roads shall be such that the cross sectional area is not less than one hundred (100) square inches and all culvert diameters shall be adequate to carry the peak discharge capacity of a one-year, 24-hour precipitation event.
6. All culverts shall receive necessary maintenance to function properly at all times.
7. Alternate culvert design may be submitted where the aforementioned design criteria is not practical or necessary.

4A.04 Stream Crossings - Culverts, bridges or other structures shall be used to cross intermittent or perennial streams. Consideration shall be given to such factors as weather conditions, season of the year, time period for construction, etc. with regard to using measures to minimize adverse effects to the water quality and stream channel. In no event shall the sediment load of the stream be significantly increased or the water quality be significantly decreased during the construction period. All design and construction criteria shall be in accordance with Section 13 of the Technical Handbook for Surface Mining.

4A.05 Seeding of Slopes - All fill and cut slopes shall be seeded and mulched immediately after the construction of a haulageway or access road and maintained thereafter in accordance with subsection 4F of these regulations.

4A.06 Surfacing - Haulageways or access roads shall be surfaced with durable material which is not acid-producing or toxic forming.

4A.07 Fugitive Dust Control - All reasonable means shall be employed to control dust from the surface of haulageways or access roads.

4A.08 Sediment Control - Sediment control shall be provided in accordance with subsection 4B, section 4 of these regulations.

4A.09 Tolerance - All grades referred to in this section shall be subject to a tolerance of two percent (2%). All linear measurements referred to in this section shall be subject to a tolerance of ten percent (10%). All angles referred to in this section shall be measured from the horizontal and shall be subject to a tolerance of five percent (5%).

4A.10 Removal of Drainage Structures - Bridges, culverts, stream crossings, etc., necessary to provide access to the operation, shall not be removed until reclamation is completed and approved by the director. The same precautions as to water quality are to be taken during removal of drainage structures as those taken during construction and use.

4A.11 Abandonment of Haulageways or Access Roads - In addition to the requirements set forth in the approved pre-plan, haulageways or access roads shall be abandoned in accordance with the following requirements:

a. Control erosion by the use of culverts, water bars or other devices. Water bars shall be installed according to the following table of spacings in terms of percent of haulageway or access road grade, prior to the abandonment.

Percent of Haulageway	Spacing of Water Bars in Feet
2	250
5	135
10	80
15	60
20	45
Above 20	25

b. Revegetation shall be accomplished in accordance with subsection F of Section 4 of these regulations.

4A.12 Existing Haulageways or Access Roads - Where existing roads are to be used for access or haulage compliance with, the provisions of this section shall be required with the exception of Subsections 4A.03(a)(1-2), 4A.03(c), 4A.03(f)(1-2).

4A.13 Infrequently Used Access Roads - Access roads constructed for and used only to provide infrequent service to surface facilities shall be exempt from the requirements of this Section with the exception of Subsections 4A.05 and 4A.11.

4A.14 Railroad loops, spurs, sidings, surface conveyor systems, chutes, aerial tramways, or other transportation facilities shall unless exempted under Section 4A.01b be designed, constructed and maintained, and the area restored, to:

a. Prevent to the extent possible using the best technology currently available-

1. Damage to fish, wildlife, and related environmental values; and
2. 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;

b. Control and minimize diminution or degradation of water quality and quantity;

c. Control and minimize erosion and siltation;

d. Control and minimize air pollution; and

e. Prevent damage to public or private property.

4B. DRAINAGE SYSTEM

4B.01 Drainage Plan

a. The drainage plan as reflected on the proposal map shall indicate the following:

1. The directional flow of water on and away from the land to be affected;
2. Constructed drainways, natural drainways, streams or tributaries receiving or to receive this discharge;
3. Location of sediment control structures;
4. Location of all water test sites, treatment facilities, and
5. Other data as may be required.

b. The guidelines for plans, design criteria and construction specifications for drainage systems are to be found in the "Technical Handbook for Surface Mining" and published by the West Virginia Department of Natural Resources. This handbook is hereby incorporated by reference in its entirety; provided, however, that other plans, design criteria and construction specification, if approved by the director, may be used in place of those specified in the handbook.

4B.02 Natural Drainways - Natural drainways in the area of land disturbed by surface mining and prospecting operations shall be kept free of overburden except where overburden placement has been approved. Overburden placement and haulageways across natural drainways shall be constructed so as not to affect the flow of the stream, or materially increase the sediment load and concentrations of toxic materials in the stream.

4B.03 Intermittent or Perennial Stream - No land within 100 feet of an intermittent or perennial stream shall be disturbed by surface mining operations unless specifically authorized by the director. The area not to be disturbed shall be designated a buffer zone and marked accordingly.

4B.04 Diversions Structure(s) shall be designed to collect, transport or convey runoff from a 10 year, 24-hour precipitation event.

4B.05 Stream Channel Diversions - Flow from perennial and intermittent streams within the permit area may be diverted only when the diversion is approved by the director in accordance with Section 4B.08(a) . When streamflow is to be diverted, the new stream channel shall be designed and constructed, and removed in accordance with Chapter 12 of the Technical Handbook.

4B.06 Sediment Control - Sediment control structures shall be constructed in appropriate locations in order to control sedimentation. All runoff from the disturbed area shall pass through a sedimentation pond(s) such as, but not limited to, earth embankment, excavated ponds, gabions, cribs, and bench control systems. All such structures shall be designed, constructed and maintained using the best technology currently available and shall meet the following requirements:

a. All structures shall have the capacity to store 0.125 acre/ft. of sediment for each acre of disturbed area in the structures watershed; provided that consideration may be given for reduced storage volume where the pre-plan and site conditions reflects controlled placement, concurrent reclamation practices, use of on-site sediment control measures and access

and availability of all structures for maintenance. The disturbed area for which the structure is to be designed will include all land affected by previous surface mining operations that are not presently stabilized and all land that will be disturbed throughout the life of the permit;

b. The structures shall be cleaned out when the sediment accumulation reaches 60% of the sediment storage volume required. Sediment removal shall be done in a manner that minimizes adverse effects on surface water due to its chemical and physical characteristics on infiltration, on vegetation, and on surface and ground water quality;

c. Prior to grade release, all sediment control structures shall be cleaned out so as to meet design storage capacity for all areas not revegetated and stabilized.

d. All structures shall be located as near as possible to the disturbed area and out of perennial streams unless the applicant demonstrates and the director finds that there is no other suitable location for such structures; and

e. Those structures to be left in place after final release of surface mining shall be considered permanent impoundments and shall be left in accordance with the following requirements:

   1. The request to leave the structure will be made on forms prescribed by the director;
   2. The request will contain a statement as to the conditions of the impoundment; and
   3. The request will contain a statement signed by the landowner and the operator asserting that the landowner assumes all liability for the structure and will inspect it periodically and maintain it in a safe condition.

4B.07 Drainage System Certification -Certification that the drainage system was constructed and installed in accordance with the approved pre-plan shall be submitted by a person approved by the director prior to the beginning of surface mining operations in the affected watershed. The certification shall be filed on forms prescribed by the director.

4B.08 Stream buffer zones

a. No land within 100 feet of a perennial stream or a stream with a biological community determined according to Paragraph (c) below shall be distrubed by surface mining activities, except in accordance with Section 4B.05, unless the director specifically authorizes surface mining activities closer to or through such a stream upon finding-

   1. That the original stream channel will be restored; and
   2. during and after the mining, the water quantity and quality from the stream section within 100 feet of the surface mining activities shall not be adversely affected.

b. The area not to be disturbed shall be designated a buffer zone and marked as specified in Section 6B.01c.

c. A stream with a biological community shall be determined by the existence in the stream at any time of an assemblage of two or more species of arthropods or mulluscan animals which are:

   1. Adapted to flowing water for all or part of their life cycle;
   2. Dependent upon a flowing water habitat;
   3. Reproducing or can reasonably be expected to reproduce in the water body where they are found; and
   4. Longer than 2 millimeters at some stage of the part of their life cycle spent in the flowing water habitat.

4C. BLASTING

4C.01 General Requirements - Each person who conducts surface mining activities shall submit a plan describing how they comply with all applicable state and federal laws in the use of explosives. All blasts that use more than 5 pounds of explosives or blasting agents shall be conducted in accordance with the provisions of this sub-section.

4C.02 Public Notice of Blasting Operations - At least 10 days, but not more than 20 days prior to any blasting operations, the operator shall publish on a form prescribed by the director, a blasting schedule in a newspaper of general circulation in the county of the proposed permit area. Copies of the schedule shall be distributed by certified mail to each resident within one-half mile of the permit area, excluding the drainage structures, haulroads and access roads, unless there will be blasting on or near such structures or roads. The operator shall publish and distribute in a similar manner a modified schedule at least 10 days but not more than 20 days prior to any change in the blasting schedule. The schedules shall not be so general as to cover all working hours but shall identify as accurately as possible the location of the blasting sites and the time periods when blasting will occur. The schedule shall contain at a minimum:

a. Identification of the specific areas in which blasting will take place. The specific blasting areas described shall not be larger than 300 acres with a generally contiguous border;

b. Dates and times when explosives are to be detonated. Time frames shall not exceed an aggregate of 4 hours in any one day;

c. Methods to be used to control access to the blasting area;

d. Types of audible warning and all clear signals to be used before and after blasting.

4C.02 Blasting schedule publication. 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 permit area described in the schedule. For the purposes of this Section, the permit area does not include haul or access roads, 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. The person who conducts the surface mining activities shall republish and redistribute the schedule by mail at least every 12 months.

4C.03 Blast Record -The format for the arrangement and the recording of items in the blasting log book is to be on forms prescribed by the director. A blasting log book shall be kept current daily and is to be made available at the operation for inspection by the director and upon written request, by the public. The blasting log shall include any seismograph reports and shall be retained for three (3) years and shall include at a minimum the following data:

a. Name of permittee, operator, or other person conducting the blast;

b. Location, date and time of blast;

c. Name, signature and certification number of blaster-in-charge;

d. Direction and distance, in feet, to nearest structure not owned or leased by the operator;

e. Weather conditions;

f. Type of material blasted;

g. Number of holes, burden, and spacing;

h. Diameter and depth of holes;

i. Types of explosives used;

j. Total weight of explosives used;

k. Maximum weight of explosives detonated within any 8 millisecond period;

l. Method of firing and type of circuit;

m. Type and length of stemming;

n. If mats or other protections were used;

o. Type of delay detonator used and delay periods used;

p. Seismograph records, shall include but not be limited to:

1. Seismograph reading, including exact location of seismograph and its distance from the blast;

2. Name of person taking the seismograph reading; and

3. Name of person and firm analyzing the seismograph record.

q. Shot location;

r. Sketch of delay pattern;

s. Maximum number of holes detonated within any eight (8) millisecond period; and

t. Number of persons in blasting crew.

4C.04. Blasting Procedures

a. All blasting shall be conducted only during daytime hours, between sunrise and sunset. Provided that based on public requests or other consideration, including the proximity to residential areas, the director may specify more restrictive time periods. No blasting shall be conducted on Sunday. Blasting may not be conducted at times different than those announced in the blasting schedule except in emergency situations where rain, lightning or other atmospheric conditions, or operator or public safety requires unscheduled detonations.

b. Safety precautions

1. Three (3) minutes prior to blasting, a warning signal audible to within a range of 1/2 mile from the blast site will be given. This pre-blast warning shall consist of three (3) short warning signals of five (5) seconds duration each with five (5) seconds between each signal. One (1) long warning signal of twenty (20) seconds duration shall be the "all clear" signal;
2. All approaches to the blast area shall be guarded against unauthorized entry prior to and immediately after blasting; and
3. All charged holes awaiting firing shall be guarded and posted against unauthorized entry.

c. A maximum air blast level of 128 decibel linear peak shall not be exceeded at any residence or occupied structure within 1/2 mile of the blasting site other than operational facilities of the mine.

d. Use of explosives: Surface blasting requirements.

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 bounds of the area under permit, or beyond the area of regulated access required under paragraph (b) of this Section.

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 mining activities has reasonably determined;

1. That no unusual circumstances, such as imminent slides or undetonated charges, exist; and
2. That access to and travel in or through the area can be safely resumed.

e. Air blast levels will be measured by an instrument with a linear frequency response range of 6 Hz to 200 Hz or greater.

f. Except where lesser distances are approved by the director based upon a pre-blast survey, seismic investigation or other appropriate investigation , blasting shall not be conducted within:

1. 1,000 feet of any building used as a dwelling, school, church, hospital or nursing facility;

2. 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 wells, gas or oil-collection lines, or water and sewage lines; provided that lesser distances may be approved by the director except for facilities subject to Article 4 of Chapter 22 of the Code;
3. 500 feet of an underground mine not totally abandoned except with the concurrence of the West Virginia Department of Mines and the operator of the underground mine; and
4. The director may prohibit blasting on specific areas where it is deemed necessary for the protection of public or private property or the general welfare and safety of the public.

g. A particle velocity of two (2) inches per second in any one of the three mutually perpendicular directions shall not be exceeded at the nearest residence, building, or structure, other than operational facilities of the mine. The mutually perpendicular directions are identified as transverse, vertical and longitudinal.

h. The maximum weight of explosive to be detonated within any 8 millisecond period shall be determined by the formula $W = (D/60)^2$ where W represents the maximum weight of explosives, in pounds, that can be detonated in any 8 millisecond period, and D represents the distance, in feet, from the nearest residence, building or structure, other than operational facilities of the mine.

i. Where a seismograph is used to monitor the velocity of ground motion and the peak particle velocity limit of two (2) inches per second is not exceeded, the equation in Section 4C.04 (h) need not be used. However, if the equation is not being used, a seismograph record at the nearest structure to the blast site shall be obtained for every blast and a record maintained thereof. The director, based on the physical conditions of the site and in order to prevent injury to persons or damage to property, may require a seismograph recording of any or all blasts.

4C.05 Certified Blasting Personnel - Each person responsible for blasting operations shall possess a valid certification from the director of the West Virginia Department of Mines.

4C.06 Pre-blasting Survey - Requirements for a pre-blasting survey shall be governed by the following:

a. Upon a request to the director by a resident or owner of a man-made dwelling or structure that is located within one-half mile of the permit area, the operator shall conduct a pre-blasting survey of the dwelling or structure and submit a report of the survey to the director. For purposes of this section, drainage structures, haulroads and access roads are not considered part of the permit area unless blasting is necessary for construction. If a structure is renovated or added to subsequent to a pre-blast survey, then upon request a survey of such additions and/or rennovation shall be performed in accordance with this section.

b. The applicant or permittee shall conduct the survey to determine the condition of the dwelling or structure, and to document any pre-blasting damage and to document other physical factors that could reasonably be affected by the blasting. Assessments of the pre-blasting condition of structures such as pipes, cables, transmission lines, wells and water systems shall be based on the exterior or ground surface conditions and other readily available data. Special attention shall be given to the pre-blasting condition of wells and other water systems used for human, domestic, animal, or agricultural purposes and to the quantity and quality of the water.

c. A written report of the survey shall be prepared and signed by the person or persons who conducted the survey. The report shall include recommendations of any special conditions or proposed adjustment to the blasting procedures 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 to the director.

4D. POSTMINING LAND USE

4D.01 General - All disturbed areas shall be restored in a timely manner to conditions that are capable of supporting an equal or better use under criteria and procedures set forth in Section 4D.04 of these regulations.

4D.02 Determining Premining Use of Land

a. The premining uses of land to which the postmining land use is compared shall be those uses which the land previously supported if the land had not been previously mined and had been properly managed.

1. The postmining land use for land that has been previously mined and not reclaimed, shall be judged on the basis of the highest and best use that can be achieved and is 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 manangement; and
3. If the premining use of the land was changed within five (5) years of the beginning of mining, the comparison of postmining use to premining use shall include a comparison with the historic use of the land as well as its use immediately preceding mining.

b. The applicant shall submit a narrative of land capability and productivity, which analyzes the land-use description under Paragraph (a) of this section. The narrative shall be set forth in the application and shall provide analyses of:

1. 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
2. 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 resource or agricultural agencies.

c. The application shall state whether the proposed permit area has been previously mined, and, if so, the following information, if available:

1. The type of mining method used;
2. The coal seams or other mineral strata mined;
3. The extent of coal or other minerals removed;
4. The approximate dates of past mining; and
5. The uses of the land preceding mining.

d. The application shall contain a description of the existing land uses and land use classifications under local law, if any, of the proposed permit and adjacent areas.

4D.03 Land Use Categories -Land use is categorized in the following groups. Change from one land use category to another in premining to postmining constituts an alternate land use and the operator shall meet the requirements of Section 4D.04 and all other applicable sections of these rules and regulations.

a. Heavy Industry -Manufacturing facilities, powerplants, airports or similar facilities.

b. Light Industry and Commercial Services -Office buildings, stores, parking facilities, apartment houses, motels, hotels, or similar facilities.

c. Public Services -Schools, hospitals, churches, libraries, water-treatment facilities, solid waste disposal facilities, public parks and recreation facilities, major transmission lines, major pipelines, highways, underground and surface utilities, and other servicing structures and appurtenances.

d. Residential- Single and multiple-family housing (other than apartment houses) with necessary support facilities. Support facilities may include commercial services incorporated in and comprising less than 5 percent of the total land area of housing capacity, associated open space, and minor vehicle parking and recreation facilities supporting the housing.

e. Cropland - Land used primarily for the production of cultivated and close-growing crops for harvest alone or in association with sod crops. Land used for facilities in support of farming operations are included.

f. Rangeland - Includes rangelands and forestlands which support a cover of herbaceous or scrubby vegetation suitable for grazing or browsing use.

g. Hayland or pasture - Land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or cut and cured for livestock feed.

h. Forestland - Land with at least a 25 percent tree canopy or land at least 10 percent stocked by forest trees of any size, including land formerly having had such tree cover and that will be naturally or artificially reforested.

i. Commercial Woodland - Where forest cover is managed for commercial production of timber products.

j. Impoundments of water - Land used for storing water for beneficial uses such as stock ponds, irrigation, fire protection, recreation, or water supply.

k. Fish and wildlife habitat and recreation lands - Wetlands, fish and wildlife habitat, and areas managed primarily for fish and wildlife or recreation.

l. Combined uses - Any appropriate combination of land uses where one land use is designated as the primary land use and one or more other land uses are designated as secondary land uses.

4D.04 Criteria for Approving Alternative Postmining Use of Land - An alternative postmining land use shall be approved by the director after consultation with the landowner or the land-management agency having jurisdiction over state or federal lands. Proposals to remove 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, must also meet these criteria.

a. The proposed land use is compatible with adjacent land use and, where applicable, with existing local, state or federal land use policies and plans. A written statement of the views of the authorities with statutory responsibilities for land use policies and plans shall accompany the request for approval. The permittee shall obtain any required approval of local, state or federal land management agencies, including any necessary zoning or other changes necessarily required for the final land use.

b. Specific plans have been prepared which show the feasibility of the proposed land use as related to needs, projected land use trends, and markets and that include a schedule showing how the proposed use will be developed and achieved within a reasonable time after mining and be

sustained. The director may require appropriate demonstrations to show that the planned procedures are feasible, reasonable, and integrated with mining and reclamation, and that the plans will result in successful reclamation.

c. Provision of any necessary public facilities is assured as evidenced by letters of commitment from parties other than the permittee, as appropriate, to provide them in a manner compatible with the permittee's plans.

d. Specific and feasible plans for maintenance of the postmining land use including letters of commitment from parties other than the permittee as appropriate, if the postmining land use is to be developed by such parties.

e. The plans are designed under the general supervision of a registered professional engineer, or other appropriate professional, who will ensure that the plans conform to applicable accepted standards for adequate land stability, drainage, and vegetative cover, and aesthetic design appropriate for the postmining use of the site.

f. The proposed use or uses will neither present actual or probable hazard to public health or safety nor will they post any actual or probable threat of water flow diminution or pollution.

g. The use or uses will not involve unreasonable delays in reclamation.

h. Necessary approval of measures to prevent or mitigate adverse effects on fish and wildlife has been obtained from the director and appropriate state and federal fish and wildlife management agencies.

i. Proposals to change premining land uses of range, fish and wildlife habitat, forestland, hayland, or pasture to a postmining cropland use,

where the 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 director to assure that:

1. There is a firm written commitment by the operator or by the landowner or land manager to provide sufficient crop management after release of applicable performance bonds to assure that the proposed postmining cropland use remains practical and reasonable;
2. There is sufficient water available and committed, to maintain crop production; and
3. Topsoil quality and depth are shown to be sufficient to support the proposed use.

j. Proposal must meet all other applicable requirements of the Act.

4E. FISH AND WILDLIFE CONSIDERATIONS

4E.01. Prior to the issuance of an SMA number and as a part of the lands unsuitable inquiry, the director, after consultation with other appropriate agencies, shall make a determination as to the necessity for a study of the potential impacts of the proposed operation on the fish and wildlife resources of the affected area.

a. If such a study is determined to be necessary, the Reclamation Division in consultation with the Wildlife Division and such other agencies as deemed necessary, shall determine the level of detail and area of such studies.

4E.02. Protection of fish, wildlife, and related environmental values .

a. Any person conducting surface mining activities shall, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts of the activities on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable.

b. A person who conducts surface mining activities shall promptly report to the director the presence in the permit area of any critical habitat of a threatened or endangered species listed by the Secretary, any plant or animal listed as threatened or endangered by the State, or any bald or golden eagle, of which that person becomes aware and which was not previously reported to the director by that person.

c. A person who conducts surface mining activities shall ensure that the design and construction of electric power lines and other transmission facilities used for or incidental to the surface mining activities on the permit area are in accordance with the guidelines set forth in Environmental Criteria for Electirc Transmission System (USDI, USDA (1970)), or in alternative guidance manuals approved by the director.

d. Each person who conducts surface mining activities shall, to the extent possible using the best technology currently available:

1. Fence roadways where specified by the director to guide locally important wildlife to roadway underpasses. No new barrier shall be created in known and important wildlife routes;
2. Locate and/or operate haulroads or access roads so as to avoid or minimize impacts to important fish and wildlife species or other species protected by state or federal law;
3. Restore, enhance where practicable or maintain natural riparian vegetation on the banks or streams, lakes, and other wetland areas;
4. Adequately protect wildlife from access to ponds which contain hazardous concentrations of toxic-forming materials;
5. Afford protection to aquatic communities by avoiding stream channels as required, or restore stream channels as required.
6. Restore, enhance where practicable, or avoid disturbance of habitats of unusually high value for fish and wildlife;
7. Protect aquatic communities by maintaining adequate buffer zones where possible. If disturbance of aquatic communities is unavoidable, restoration must be provided for as set forth in the pre-plan;
8. Not use persistent pesticides on the area during surface mining and reclamation activities, unless approved by the director; and
9. To the extent possible prevent, control, and suppress range, forest, and coal fires which are not approved by the director as part of a management plan.

4E.03. Habitat Development - Where fish and wildlife habitats are proposed as the post mining land use, the following will be required:

a. All applicable requirements of sub-section 4F shall be met with regard to adequate vegetation cover for bond release purposes;

b. Plant species shall be selected on the basis of the following; and

1. Nutritional value for wildlife;

2. Uses for cover value for wildlife;

3. Ability to support and enhance habitat after bond release; and

4. Distribute plant groupings to maximize habitat improvement such as edge effect and cover or such other benefits that may be desired.

c. Experimental wildlife planting may be conducted in lieu of the above when approved by the director and conducted under the guidance of an approved wildlife biologist.

4F. REVEGETATION

4F.01 General

a. Objective - To quickly establish a vegetative cover on all disturbed areas to minimize erosion, provide economic benefits and restore aesthetic appeal. Revegetation will be concurrent with the operation as mining and backfilling progresses and be carried out in a manner that encourages a prompt vegetative cover and recovery of productivity levels compatible with the approved postmining land use.

b. Achievement - Plants that will give a quick permanent cover and enrich the soil shall be given priority. A temporary cover shall be established as contemporaneously as practicable with backfilling and grading until a permanent cover is established in accordance with the Act and these rules and regulations. A temporary or permanent cover shall be established by the end of the first growing season, and a permanent cover shall be established by the end of the second growing season.

c. General Requirements - Each operator shall establish on all affected land a diverse, effective, and permanent vegetation cover of an appropriate seasonal variety native to the area of disturbed land or species that supports the approved postmining land use. Each operator who conducts surface coal mining operations on prime farmland shall meet those revegetation requirements as set forth in Section 4G.

d. All revegetation shall be in accordance with the pre-plan and carried out in a manner that encourages a prompt vegetative cover and recovery of productivity levels compatible with the approved postmining land use and in accordance with the accepted technical guides as approved by the director.

e. All disturbed land, except water areas and surface areas of roads that are approved as a part of the postmining land use, shall be seeded or planted to achieve a permanent vegetative cover of the appropriate seasonal variety native to the area of disturbed land.

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

g. Vegetative cover shall be considered of the appropriate seasonal variety when it consists of a mixture of species 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.

h. If both the premining and postmining land uses are cropland, planting of the crops normally grown will meet the requirements of paragraph 4F.01(a)

i. The person who conducts surface mining activities shall;

1. Maintain any necessary fences and proper management practices and
2. Conduct periodic measurements of vegetation, soils, and water prescribed or approved by the director to identify conditions during the applicable period of liability specified in Paragraph (b) of this section.

4F.02 Minesoil Characteristics

a. Surface mining of minerals and removal of overburden results in minesoil which varies greatly in fertility, acidity, and stoniness. These three characteristics, together with steepness of slope, shall be used in determining characterization for the purpose of establishing vegetation. Premining overburden sampling and analysis or previous experience and correlation data, shall be submitted with the pre-plan for all acid-producing seams. The plan shall identify toxic strata and provide planned handling and final placement for acid strata.

Overburden analysis is to be in accordance with standard procedures outlined in Environmental Protection Agency Manual No. 600/2-78-054 (Field & Laboratory Methods Applicable to Overburdens and Minesoils) or other methods approved by the Department of Natural Resources. Minesoil classification shall be in accordance with Table 1.

4F.03 Minesoil Analysis

a. Tests for minesoil acidity, expressed as pH, shall be made after final grading and before seeding or planting. A minimum of ten (10) random samples shall be taken at points distributed uniformly over the disturbed area. Minesoil tests may be made with accepted field indicators or other approved techniques. Minesoils with chemical characteristics that could restrict vegetation establishment and growth shall be analyzed by a soil laboratory approved by the director. The results of these tests shall be filed with the final planting plan.

4F.04 Function of Annual and Biennial Cover Crops

a. On areas where excessive erosion is likely to occur, rapid establishment of vegetative cover shall be required. Seeding of annuals and biennials on such areas shall be considered as a means for achieving temporary vegetative cover and not acceptable as permanent cover. See Table 2D.

4F.05. Development of Planting Plan - Planting plans will be a part of the premining and reclamation plan. The mining plan and the projected configuration after mining will be the basis for classifying the area as follows:

a. A prediction of the minesoil class and the basis for the same;

b. Treatment to neutralize acidity;

c. Mechanical seed bed preparation;

d. Rate and analysis of fertilization;

e. Rates and types of mulch;

f. Perennial vegetation including herbaceous and woody plants where appropriate, rate and species;

g. Areas to be planted or seeded to trees and shrubs;

h. Land use objective; and

i. Maintenance schedule if appropriate.

4F.06. Development of Final Planting Design - A final planting plan shall be prepared and submitted to the director for his approval within thirty (30) days after the grading and backfilling of the operation have been approved.

4F.07. Plant Material Selection and Treatment:

a. All planting plans including woody vegetation will include provisions for herbaceous cover using a suitable mixture from Table 2, 2A and 2-B. The selection of seeds and plant species shall be based on job description, elevation, soil conditions, and land use.

b. Establishment of grass, legume or perennial grass cover crop shall require the following treatment:

1. Innoculation of legume seed with proper strain;
2. Triple innoculation rate if hydroseeded;
3. Protection of seeded minesoil area from grazing livestock;
4. Application of lime to proper pH for mixture shall be in accordance with Table 2, 2A and 2-B;
5. Preparation of seedbed by harrowing, discing or other approved methods; and
6. Fall seeding for legumes should be completed by September 1st.

c. Maintenance of cover crop shall be carried out by the operator or his assignee until the cover crop is adjudged by the director to be satisfactorily established in accordance with sub-section 4F.09 of this section.

d. On minesoil material prepared for woodland and/or wildlife use, one of the mixtures with specified proportions and treatment from Table 2, 2-A and 2B of these regulations should be used.

1. Establishment of plant growth should require:
   (a) Black locust seed must be seventy percent (70%) or more viable. All legumes must be innoculated and must be protected from grazing livestock. Triple innoculation rate if hydroseeding.
2. Spring planting of seedlings shall be completed prior to May 1st.

e. After appopriate field trials other species of trees, shrubs, grasses, legumes or vines may be substituted for native species if approved by the director and meet the following conditions:

1. The species are necessary to achieve a quick, temporary, and stabilizing cover that aids in controlling erosion; and measures to establish permanent vegetation are included in the approved plan;
2. The species are compatible with the plant and animal species of the region and will achieve the approved postmining land use; and
3. The species meet the requirements of applicable state and federal seed or introduced species statues.

4F.08. Mulch

1. Mulch Specifications: Mulch shall be used on all disturbed areas. Approved materials and minimum rates to be applied are as follows:

Material	Rate/Acre
Straw or hay	1-1/2 - 2 tons materials may be anchored with asphalt emulsion or other techniques approved by the director.
Wood Fiber or Wood Cellulose Products	1,500 lbs.
Shredded Bark	50 cubic yards
Paper Shredded	1,500 lbs.
Argro - Mulch	1,500 lbs.

The following materials may be used with wood fiber or wood cellulose on a limited basis upon approval by the director.

Material	Rate/Acre	Minimum Rate/Acre for Wood Fiber or Wood Cullulose
Genaqua 743	25 gallons	500 lbs.
Curasol AK or HA	25 gallons	500 lbs.
Aerospray 70	25 gallons	500 lbs.

4F.09. Standards for Evaluating Vegetative Cover

a. Final Planting Report - A planting report shall be prepared by the operator and filed with the director on the prescribed form when the planting of a permit area is completed. All planting reports shall be certified by the operator or by the party which the operator contracted for planting.

b. Time for Inspection - Prior to the recognized spring and fall planting seasons, the operator shall review all disturbed areas. The operator shall then cause those areas deficient of vegetative cover to be retreated, graded, seeded, planted, mulched, limed, etc., to establish a satisfactory stand of vegetation.

c. Standards for success -Success of revegetation shall be measured by techniques approved by the director.

   1. Comparison of ground cover shall be made based on technical procedures and standard random sampling techniques approved by the director; and

   2. Productivity for revegetated areas shall be assessed on a comparison basis utilizing the following criteria as the standard:

      a. Productivity for the revegetated species must equal 90% of what is considered normal productivity for that species under normal conditions.

d. Standards for Perennials -Standards for legumes and perennial grasses shall require at least a ninety percent (90%) ground cover. Substandard areas shall not exceed one-fourth (1/4) acre in size nor total more than ten percent (10%) of the area seeded. The period of extended responsibility under the performance bond requirements starts after the last year of augmented seeding, fertilizing, irrigation or other work and continues for not less than five growing seasons; Provided that, exceptions may be authorized by the director under the following standards:

1. For areas to be developed for industrial or residential use less than two years after regrading is completed, the ground cover of living plants shall not be less than required to control erosion, and;
2. For areas to be used for cropland, success in revegetation of cropland shall be determined on the basis of crop production from the mined area. Crop production from the mined area shall be equal to or greater than that of the approved standard for the last two consecutive growing seasons of the five growing season liability period. The applicable five growing season period of responsibility for revegetation shall commence at the date of initial planting of the crop being grown.

e. Standards for Woodland and/or Wildlife - On areas to be developed for woodland and/or wildlife use, success of vegetation shall be determined on the basis of tree and shrub survival and ground cover. Standards for woody plants shall require a seventy percent (70%) establishment of ground cover of legumes and perennial grasses, and 450 trees (including volunteer tree species) and/or planted shrubs per acre, comprising a satisfactory vegetation ground cover sufficient to control erosion. Substandard areas shall not exceed one-fourth (1/4) acre in size nor total more than twenty percent (20%) of the area seeded or planted. Provided that where a wildlife planting plan has been approved by a professional wildlife biologist and proposes a stocking rate of less than 450 trees or shrubs per acre the standard for revegetation shall meet those standards contained in 4F.09 d.

f. Standards for Commercial Woodland -This subsection sets forth forest resource conservation standards for reforestation operations to ensure that a cover of commercial tree species, sufficient for adequate use of the available growing space, is established after surface mining activities.

1. Stocking, i.e. the number of stems per unit area, will be used to determine the degree to which space is occupied by well-distributed, countable trees.

(a) Root crown or root sprouts over 1 foot in height shall count as one toward meeting the stocking requirements. Where multiple stems occur only the tallest stem will be counted;

(b) A countable tree means a tree that can be used in calculating the degree of stocking under the following criteria; and

(1) The tree shall be in place at least two growing seasons,

(2) The tree shall be alive and healthy; and

(3) The tree shall have at least one-third of its length in live crown.

(c) Certain areas, such as permanent roads and surface water drainage ways on the revegetated area, shall not require stocking.

2. The following are the minimum performance standards for areas where commercial woodland is the approved postmining land use;

(a) The area shall have a minimum stocking of 600 trees per acre;

(b) A minimum of seventy-five percent (75%) of countable trees shall be commercial tree species as reflected in the approved planting plan; and

(c) Upon request for bond release, the number of trees and the ground cover shall be determined approved by the director when the survival is equal to or greater than 450 trees per acre and there is 70% herbaceous cover.

4F.10 Vegetation Inspection Report - In no instance shall the official vegetative cover evaluation be carried out until the planting and seeding concerned has survived two years after the last augmented seeding. A vegetation inspection report shall be prepared and filed following inspection to determine that the above evaluative standards have been complied with. If acceptable, the director may then release an additional twenty-five percent (25%) of the bond or collateral.

4F.11 Final Inspection Report - Upon expiration of five growing seasons following the date of the last augmented seeding or planting and upon report by the operator for final bond release, a final vegetation evaluation shall be made by the inspector. If it is determined at that time that the provisions of subsection 4F.10 have been met, a final inspection report shall be filed by the inspector and the remainder of the bond released.

TABLE ONE

CLASSIFICATION OF MINESOILS WITHIN SOIL TAXONOMY

Minesoils of all ages are now being grouped under the category called spolents. This means recognition that these highly disturbed or manmade soils deserve the same attention, classification and management as other soils.

1. Fieldcrest is a family of minesoils containing a mixture of rock types. It has an acid but not extremely acid profile. Texture is loamy; mineralogy is mixed and fertility is medium. These are probably the most widespread minesoils in West Virginia.

2. Postoak is a minesoil family containing a dominance of mudstone material. It is near neutral in profile reaction; fine loamy textures and relatively fertile.

3. Widen minesoils are dominated by carbon rich coarse fragments or mine waste. They are acid in reaction but respond well to liming and revegetation.

4. Brandonville minesoils are dominated by shaly (fissile) coarse fragments. They are loamy in texture, have mixed mineralogy, are moderately acid and moderately fertile.

5. *Valley Point minesoils are dominated by sandstone coarse fragments. They are coarse loamy in texture, have siliceous mineralogy, low fertility and are extremely acid. These minesoils provide stable roadways and building sites.

6. *Birdcreek minesoils are similar to Valley Point soils but are acid instead of extremely acid.

7. Killarm minesoils contain a mixture of rock types. The profile is neutral in reaction. Texture is medium loamy. Mineralogy is mixed and fertility (except nitrogen) is relatively high.

8. Overfield minesoils contain a mixture of rock types. The profile is extremely acid (pH is below 4 at 10 inches). Texture is medium loamy. Mineralogy is mixed. Fertility is medium but acid related toxicity must be remedied by topsoiling or massive liming in order to get desirable plant growth.

9. Shawneetown minesoils have less than 10% rock fragments in the profile. The reaction is neutral; texture is fine loamy; mineralogy is mixed and fertility is relatively high except for nitrogen. These minesoils are suitable for cultivated cropping, but may not be present in mappable units in West Virginia.

10. Pursglove minesoils are like Widen except that they are extremely acid and require covering with favorable material or massive liming for satisfactory revegetion.

*Soils 5 and 6 frequently occur together in complex patterns. These ten spolents cover most but not all minesoils in West Virginia. Other named minesoils have been identified and described and can be classified on request.

TABLE TWO

APPROVED WOODLAND PLANT MIXTURES
(Nursery Grown Seedlings)

1.	Black Locust (3000') White Pine	Plant in bands 6 rows or more in width Black Locust not to exceed 50%
2.	Black Locust (3000') Virginia Pine	Plant in bands 6 rows or more wide Black Locust not to exceed more than 50%
3.	Scotch Pine White Pine Red Pine (above 2000') Virginia Pine (below 2500')	Use mixture of two or more if available Plant in bands 6 rows or more
4.	Black Locust (below 3000') Tulip Poplar (below 3000') Sycamore (below 2500') Red Oak	Use up to one-half locust with one or more of hardwood species. Plant in bands 6 or more rows in each species
5.	Autumn Olive and adapted pine or hardwoods	Where owner's interest is wildlife improvement, plant in bands of 3 to 6 rows preferable with pines or in blocks of one-fourth acre spaced 600' apart
6.	European Black Alder (below 2500') Sycamore Indigo Bush Autumn Olive	Use these plants where protection from grazing is impractical or protection will not be maintained. For wildlife habitat improvement use 3 to 6 row bands where two or more species are planted.
7.	European Black Alder	Use European Black Alder where pH is near 5.5
8.	Black Locust	Use only on steep erodible outslopes.
9.	Sweet Crab Apple* Washington Hawthorne*	On bench of areas where owners primary interest is wildlife habitat improvement, plant in clumps of 12 spaced 10' to 12' apart. Clumps should be spaced 200' to 300' apart, planted in between with pine, Indigo Bush or Autumn Olive.
10.	Blackberry*	Plant on bench spaced 6 x 6 in blocks 100 plants per block.
11.	Grey Dogwood* Silky Cornell*	On bench near water impoundments spaced 8 x 8.

*Should be planted only on the more favorable sites. Preferably a north or northeastern aspect with a pH of 5.5 or above.

TABLE 2 - A

Mixture	Species	Seeding Rate #/Acre	Soil Treatment Requirements	pH Requirement	Drought Tolerance	Wet Soil Tolerance	HAY, PASTURE or other where herbaceous cover is desired	For HANDPLANTING tree and shrub seeding BELOW 2500'	For HANDPLANTING tree and shrub seedings ABOVE 2500'
1	Alfalfa Orchardgrass	20 10	Establishment of vegetation includes liming to pH range 6.0-7.0. Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test a complete fertilizer, containing nitrogen, phosphate and potassium shall be applied. 600 pounds of 10-20-10 or 10-20-20 or equivalent is the minimum amount acceptable. The seeded area shall be protected from grazing during the seeding stage.	6.5-7.0	Good	Poor	XX		
2	Birdsfoot trefoil Tall fescue	10 15		6.0-6.5	Fair	Good	XX	XX	XX
3	Birdsfoot trefoil Orchardgrass	10 10		6.0-6.5	Fair	Good	XX		
4	Sericea (hulled) Redtop Tall fescue	20 3 15		5.5-6.0	Good	Poor	XX		
5	Crown vetch Tall fescue ** Weeping lovegrass	15 20 2	** Redtop may be substituted for Weeping Lovegrass for late summer and fall seedings at a rate of 3 lbs. per acre.	6.0-6.5	Fair	Fair/Poor	XX		
6	Crown vetch Perennial ryegrass ** Weeping lovegrass	15 15 2		6.0-6.5	Fair	Good	XX		
7	Birdsfoot trefoil Deer tongue	10 12		6.0-6.5	Good	Good	XX		
8	Deer tongue	15		5.0-6.0	Good	Fair/Good	XX		
9	Sericea Tall fescue	30 15		5.5-6.0	Good	Fair		XX	

TABLE 2-A (Con't)

xture	Species	Seeding Rate #/Acre	Soil Treatment Requirements	pH Requirement	Drought Tolerance	Wet Soil Tolerance	HAY, PASTURE or other where herbaceous cover is desired	For HANDPLANTING tree and shrub seeding BELOW 2500'	For HANDPLANTING tree and shrub seedings ABOVE 2500'
10	Sericea Tall fescue Perennial ryebrass	15 20 10	Establishment of vegetation includes liming to pH range 6.0-7.0. Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test a complete fertilizer, containing nitrogen, phosphate and potassium shall be applied. 600 pounds of 10-20-10 or 10-20-20 or equivalent is the minimum amount acceptable. The seeded area shall be protected from grazing during the seeding stage.	5.5-6.0	Good	Fair		XX	
11	Sericea Tall fescue Weeping lovegrass	15 20 2		5.5-6.0	Good	Fair/Poor		XX	
12	Tall fescue Red top	20 4		5.5-6.0	Fair	Fair/Good		XX	XX
13	Tall fescue Weeping lovegrass	20 2		5.5-6.0	Fair	Fair/Poor		XX	XX
14	Sweet clover	10		6.0-7.0	Fair	Fair		XX	XX

TABLE 2 - B

Mixture	Species	Seeding Rate #/Acre	Soil Treatment Requirements	pH Requirement	Drought Tolerance	Wet Soil Tolerance	Harbaceous and woody species for DIRECT SEEDING and hand planting BELOW 2500'	Harbaceous and woody species for DIRECT SEEDING and hand planting ABOVE 2500'	CRITICAL AREAS including waterways divisions, drainage structures, haulage-ways, highway access etc.
15	Tall fescue Sericea Black locust**	20 15 3	Application of fertilizer shall be based on soil test results from a soils laboratory. Without soil test, apply a minimum of 200 lbs. amonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.	5.5-6.0	Fair	Fair/Good	XX		
16	Tall fescue Perennial ryegrass Sericea Black locust**	20 10 15 3		5.0-5.5	Good	Poor	XX		
17	Tall fescue Weeping lovegrass Sericea Black locust**	20 2 15 3		5.0-5.5	Good	Good	XX	XX	
18	Tall fescue Birdsfoot trefoil Black locust	30 10 3	** Black locust seed may be omitted on the bench areas or where erosion is not a serious problem or at elevations above 2000', $\frac{1}{4}$ lb/acre Virginia Pine; $\frac{1}{4}$ lb/acre Japonica Intermedia may be substituted for Black Locust	5.5-6.0	Fair	Good	XX	XX	
19	Tall fescue Redtop Birdsfoot trefoil Black locust	20 3 10 3		5.5-6.0	Fair	Good	XX	XX	
20	Tall fescue Birdsfoot trefoil Redtop	30 10 3		6.0-6.5	Fair	Good			XX
21	Perennial ryegrass Tall fescue Birdsfoot trefoil	20 30 10	Note: Weeping lovegrass at 2 lbs. per acre may be substituted for redtop for spring and early summer seedings on well drained areas.	6.0-6.5	Fair	Good			XX
22	Tall fescue Crown vetch Redtop	40 15 3		6.0-6.5	Fair	Fair			XX

TABLE 2-B (Con't)

Mixture	Species	Seeding Rate #/Acre	Soil Treatment Requirements	pH Requirement	Drought Tolerance	Wet Soil Tolerance	Harbaceous and woody species for DIRECT SEEDING and hand planting BELOW 2500'	Harbaceous and woody species for DIRECT SEEDING and hand planting ABOVE 2500'	CRITICAL AREAS including waterways divisions, drainage structures, haulage-ways, highway access etc.
23	Tall fescue Crown vetch	50 15	Application of fertilizer shall be based on soil test results from a soils laboratory. Without soil test, apply a minimum of 200 lbs. amonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.	6.0-6.5	Fair	Fair			XX
24	Tall fescue Reed canary grass Redtop	30 20 3		5.5-6.0	Fair	Good			XX
25	Flat pea Tall fescue	40 20		6.0-6.5	Good	Poor			XX
26	Flat pea Domestic ryegrass	40 20		6.0-6.5	Good	Poor			XX

TABLE 2 C

xture	Species	Seeding Rate #/Acre	Soil Treatment Requirements	pH Requirement	Drought Tolerance	Wet Soil Tolerance	Species for vegetative cover on DEEP MINE REFUSE after suitable treatment	ACCESS ROADS	SOIL STACK STORAGE Long term - More than 1 year	Vegetative cover on disturbance around AUXILLARY FACILITIES such as offices, garages, etc.
20	Tall fescue Birdsfoot trefoil Redtop	50 10 3	Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test apply a minimum of 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable. Minimum pH 6.0.	6.0-6.5	Fair	Good	XX	XX		XX
21	Perennial ryegrass Tall fescue Birdsfoot trefoil Redtop	20 30 10 3		6.0-6.5	Fair	Good	XX	XX		XX
22	Tall fescue Crown vetch Redtop	40 15 3		6.0-6.5	Fair	Fair		XX		XX
23	Tall fescue Crown vetch	50 15	Note: Weeping lovegrass at 2 lbs per acre may be substituted for redtop for spring and early summer seedlings on well drained areas.	6.0-6.5	Fair	Fair		XX		XX
24	Tall fescue Reed canary grass Redtop	30 20 3		5.5-6.0	Fair	Good		XX		XX
25	Flat pea Tall fescue	40 20		6.0-6.5	Good	Poor		XX		XX
26	Flat pea Domestic ryegrass	40 20		6.0-6.5	Good	Poor		XX		XX
27	Tall fescue White clover	40 2		6.0-6.5	Fair	Good			XX	
28	Tall fescue Birdsfoot trefoil	40 5		6.0-6.5	Fair	Good			XX	

TABLE 2 D

Mixture	Species	Seeding Rate #/Acre	Soil Treatment Requirements	pH Requirement	Drought Tolerance	Wet Soil Tolerance	Annual and biennial species for TEMPORARY cover	SOIL STACK STORAGE Temporary Less Than 1 Year
29	Rye	30-60	Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test apply a minimum of 200 lbs. ammonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable. Minimum pH 5.5.	> 5.0	Poor	Fair	XX	XX
30	Wheat	30-60		> 5.0	Poor	Poor	XX	XX
31	Oats	30-60		> 5.0	Poor	Fair	XX	XX
32	Millets Japanese, German Foxtail, Pearl	10-15		> 5.0	Fair	Poor	XX	XX
33	Sundangrass or Sudan-sorghum hybrids	15-20		> 5.0	Fair/Good	Poor	XX	XX
34	Annual ryegrass	10-15		> 5.0	Poor	Fair	XX	XX
35	Lespedeza Kobe or Korean	5-10		> 5.0	Fair	Poor	XX	XX
36	Hairy vetch	20-40		> 5.0	Poor	Fair	XX	XX
37	Sweet clover	10-20		> 5.0	Fair	Fair/Poor	XX	XX
38	Buckwheat	30-60		> 5.0	Fair/Poor	Poor	XX	XX

TIME OF SEEDING

Surface Mine Reclamation Areas

Optimum Times to Seed Are --

February 1 to March 15: Broadcast seed on surface with no mechanical tillage.

April 15 to June 15: Broadcase or seed with a drill on prepared seedbed; mulch following seeding where required.

August 1 to August 31: Broadcase or seed with a drill on prepared seedbed; mulch following seeding.

On disturbed areas where it is difficult to prepare a seedbed, lime should be applied as needed as soon as regrading is complete. Fertilizer and seed can be applied together in a hydroseeder promptly after final grading and preferably before much rainfall. The area should be mulched according to specifications in the rules and regulations. Areas where stand is not satisfactory should be seeded again in six to twelve months.

If backfilling and final grading is completed out of a favorable seeding time apply the required lime and fertilizer and seed with an annual species to stabilize the area until a favorable seeding time is reached. The area should then be tilled and a perennial grass-legume mixture seeded on the area. Annual species are only temporary and will not replace the perennial grasses as required in the rules and regulations.

Best Seeding Times for Legume and Grass Species

	Spring Seeding (March-April)	Late Summer Seeding (August)
Perennial Legumes		
Alfafa	Yes	Yes
Birdsfoot trefoil	Yes	Yes
Crown vetch	Yes	Yes
Sericea lespedeza	Yes	No
Perennial Grasses		
Deer Tongue	Yes	No
Orchardgrass	Yes	Yes
Perennial ryegrass	Yes	Yes
Redtop	Yes	Yes
Tall fescue	Yes	Yes
Weeping lovegrass	Yes	No

Annuals	
Oats	March-April-May
Wheat	August-September-October
Rye	September-October-November
Sudangrass	May-June-July
Buckwheat	June-July
Annual ryegrass	March-April-May-June August-September
Hairy vetch	August-September
Sweet Clover	March-April

4G. PRIME FARMLANDS

4G.01 Applicability - Surface operations conducted on prime farmlands shall comply with all requirements set forth in the Act and these regulations.

4G.02 Identification of Prime Farmland - Prime farmland shall be identified on the basis of soil surveys submitted by the applicant. The director also may require data on drainage, flood control, and subsurface water management.

The requirement for submission of soil surveys may be waived by the director if the applicant can demonstrate according to the procedure outlined in 4G.03 of this section that no prime farmlands are involved. Soil surveys shall be conducted according to standards of the National Cooperative Soil Survey, which includes the procedures set forth in the U. S. Department of Agriculture Handbooks 436 (Soil Taxonomy) and 18 (Soil Survey).

4G.03. Negative Determination of Prime Farmland - The land shall not be considered as prime farmland where the applicant can demonstrate one or more of the following situations:

a. Lands within the proposed permit boundaries have been used for production of cultivated crops for less than 5 years out of 20 years preceding the date of the permit application; provided that for lands obtained after passage of the Act and retired from farming, the twenty years shall precede the date of acquisition, including purchase, lease or option, of lands, for the purpose of mining.

b. The slope of a land within the permit area is 10 percent or greater;

c. Other factors exist, such as a very rocky surface, or the land is frequently flooded during the spring or fall season more often than once in two years, which clearly places all land within the area outside the purview of prime farmland; or

d. A written notification based on scientific findings and soil surveys that land within the proposed mining area does not meet the applicability requirements for prime farmlands and is submitted to the director by a qualified person other than the applicant, and is approved by the director.

4G.04 Plan for Restoration of Prime Farmland - The applicant shall submit to the director a plan for the mining and restoration of any prime farmland within the proposed permit boundaries. This plan shall be used by the director in judging the technological capability of the applicant to restore prime farmlands. This plan shall include:

a. A description of the original undisturbed soil profile, as determined from a soil survey, showing the depth and thickness of each of the soil horizons that collectively constitute the root zone of the locally adapted crops and are to be removed, stored, and replaced;

b. The proposed method and type of equipment to be used for removal, storage, and replacement of the soil in accordance with Section 4G.05 of these regulations;

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 horizon, 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 mine land and the conservation practices to control erosion and sedimentation during the first 12 months after regrading is completed. Proper adjustments for seasons must be made so that final graded land is not exposed to erosion during seasons when vegetation or conservation practices cannot be established due to weather conditions; and

f. Available agricultural school studies, company data, or other scientific data for comparable areas that demonstrate that the applicant using his proposed method of reclamation will achieve, within a reasonable time, equivalent or higher levels of yield after mining as existed before mining.

4G.05 Special Requirements - For all prime farmlands to be mined and reclaimed, the applicant shall meet the following special requirements.

a. All soil horizons to be used in the reconstruction of the soil shall be removed before drilling, blasting or mining to prevent contaminating the soil horizons with undesirable materials. Where removal of soil horizons result in erosion that may cause air and water pollution, the director shall specify methods of treatment to control erosion of exposed overburden. The operator shall;

1. Remove separately the entire A horizon or other suitable soil materials which will creat a final soil having an equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material before replacement;
2. Remove separately the B horizon of the natural soil or a combination of B horizon and underlying C horizon or other suitable soil material that will create a reconstructed root zone of equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material; and
3. Remove separately the underlying C horizons or other strata, or a combination of such horizons or other strata to be used instead of the B horizon that are equal or greater thickness and that can be shown to be equal or more favorable for plant growth than the B horizon, and that when replaced will create in the reconstructed soil a final root zone of comparable depth and quality to that which existed in the natural soil.

b. If stockpiling of soil horizons is allowed by the director in lieu of immediate replacement, the A horizon and B horizon must be stored separately from each other. The stockpiles must be placed within the permit area and where they will not be disturbed or exposed to excessive erosion by water or wind before the stockpiled horizons can be redistributed on terrain graded to final contour. Stockpiles in place for more than 30 days shall be protected from erosion.

c. Scarify the final graded land before the soil horizons are replaced.

d. Replace the material from the B horizon, or other suitable material specified in Section 4G.04(d) or 4G.05(a)(2) of these regulations in such a manner as to avoid excessive compaction of overburden and to a thickness comparable to the root zone that existed in the soil before mining.

e. Replace the A horizon or other suitable soil materials, which will create a final soil having an equal or greater productive capacity than existed prior to mining, as the final surface soil layer to the thickness of the original soil as determined in this subsection.

1. Prevents excess compaction of both the surface layer and underlying material and reduction of permeability to less than 0.06 inch per hour in the upper 20 inches of the reconstructed soil profile; and

2. Protects the surface layer from wind and water erosion before it is seeded or planted.

f. Apply nutrients and soil amendments as needed to establish quick vegetative growth.

4G.06. Revegetation - Each person who conducts surface coal mining and reclamation operations on prime farmland shall meet the following revegetation requirements during reclamation:

a. Following soil replacement, that person shall establish a vegetative cover capable of stabilizing the soil surface with respect to erosion. All vegetation shall be in compliance with the plan approved pursuant to Section 4F and carried out in a manner that encourages prompt vegetative cover and recovery of productive capacity. Seeding and planting of disturbed areas shall be conducted during the first normal period for favorable planting conditions after final preparation. Suitable mulch and other soil stabilizing practices shall be used on all regraded and top-soiled areas.

b. 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 director 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. The level of management shall be equivalent to that on which the target yields are based.

c. Measurement of success in prime farmland revegetation will be determined based upon the techniques approved in the permit. As a minimum, the following standards shall be met:

1. Average annual crop production shall be determined based upon a minimum of 3 years data. Crop production shall be measured for the three years immediately prior to release of bond;
2. 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 predetermined target level of crop production specified in the permit; and
3. Adjustment for weather induced variability in the annual mean crop production may be permitted by the director.

4H. BONDING

4H.01 An operator shall not conduct surface mining operations which result in disturbed area prior to such area being bonded in accordance with Section 12 of the Act and this section.

4H.02 Form of the Performance Bond

a. The form of the performance bond shall be approved by the director in accordance with the provisions of Section 4H.03 and 4H.04. The director shall allow at the option of the operator:

1. A surety bond,
2. A collateral bond,

5. Combined surety/escrow bonding, or

6. A combination of any of these bonding methods.

4H.03 Period of Liability

a. Liability under performance bond(s) shall continue until all reclamation, restoration and abatement work required by the Act, these regulations, and the approved pre-plan are completed.

b. In addition to the requirements set forth above, a percent of liability as set forth in Section 26(c) of the Act shall continue for a minimum of five (5) growing seasons beginning after the last year of augmented seeding, irrigation, fertilization or other work except as approved in subsections (c) & (d), of this section.

c. The director may approve selective husbandry practices, excluding augmented seeding, fertilization, or irrigation, without extending the period of bond liability, if the permittee can demonstrate that discontinuance of such measures after the liability period expires will not reduce the probability of permanent revegetation success. Approved practices may include pest and vermin control, pruning, and repair of any rills and gullies and any reseeding and/or transplanting specifically necessitated by such actions, but shall be normal conservation practices within the region for unmined lands having land uses similar to the approved postmining land use of the area covered by the bond.

d. A portion of a bonded area requiring extended liability because of augmentation may be separated from the original area and bonded separately upon approval by the director. Before determining that extended liability should apply to only a portion of the original bonded area, the director shall determine that such portion --

1. Is not significant in extent in relation to the entire area under the bond; and
2. Is limited to isolated, distinguishable, and contiguous portions of the bonded area and does not comprise scattered or intermittent occurrences throughout the bonded area.

e. If an area is separated under Subsection (d) of this Section, that portion shall be bonded separately and the applicable period of liability shall commence anew. The period of liability for the remaining area shall continue in effect without extension.

f. If the director issues a written finding approving a long-term intensive agricultural land use, the operation shall be exempt from the requirements of 4F. Such a finding shall not constitute a grant of an exception of the bond-liability periods of this Section.

4H.04 Terms and Conditions of the Bond

a. Surety bonds shall be subject to the following conditions:

1. The director shall not accept the bond of a surety company unless the bond is not be cancellable by the surety 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 with the consent of the director; provided, the surety gives at least sixty days notice to both the permittee and the director of the intent to cancel prior to cancellation. Such notice shall be by certified mail and shall not be effective until received by both the permittee and director. Cancellation shall

not be effective for lands subject to bond coverage which are disturbed after receipt of notice, but prior to approval by the director. The director may approve such cancellation only if a replacement bond is filed by the permittee prior to the cancellation date, or the permit is amended so that the surface coal mining operations approved under the permit are reduced to the degree necessary to cover all the costs attributable to the completion of reclamation operations on the reduced permit area in accordance with Section 12 of the Act and the remaining performance bond liability.

2. The director shall not accept a surety company's bond in excess of the company's maximum single obligation as provided by State law unless the surety company satisfies State law for exceeding that limit.
3. The director 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 company's maximum single obligation as provided by State law.
4. The director shall provide in the bond that the amount shall be confessed to judgment upon forfeiture.
5. The bond shall provide that the surety and the permittee shall be jointly and severally liable; and
6. The bond shall provide that:
   (a) The surety will give prompt notice to the permittee and the director of any notice received or action filed alleging the insolvency or bankruptcy of the surety, or alleging any violations of regulatory requirements which could result in suspension or revocation of the surety's license to do business;

(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 director.

(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 Section 12 of the Act. The director shall issue a notice of violation against any operator 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 director shall conduct weekly inspections to ensure continuing compliance with other permit requirements, the regulatory program, and the Act. Such notice of violation, if abated within the period allowed, shall not be counted as a notice of violation for purposes of determining a "pattern of willful violation" and need not be reported as a past violation in permit applications if such a notice of violation is not abated in accordance with the schedule, a cessation order shall be issued.

b. Collateral bonds, except for letters of credit, shall be subject to the following conditions:

1. The director shall obtain possession of and keep in custody all collateral deposited by the applicant, until authorized for release or replacement.

2. The director shall value collateral at their current market value, not face value.

3. The director shall require that certificates of deposit be assigned to the Department of Natural Resources, in writing, and upon the books of the bank issuing such certificates.
4. The director shall not accept an individual certificate for a denomination in excess of maximum insurable amount as determined by F.D.I.C. and F.S.L.I.C.
5. The director shall require the banks issuing these certificates to waive all rights of setoff or liens which it has or might have against those certificates.
6. The director shall only accept automatically renewable certificates of deposit in a bank in this state.
7. The director shall require the applicant to deposit sufficient amounts of certificates of deposit, to assure that he will be able to liquidate those certificates prior to maturity, upon forfeiture, for the amount of the bond required.

c. Letters of credit shall be subject to the following conditions:
1. The letter may only be issued by a bank organized or authorized to do business in the State of West Virginia.
2. Letters of credit shall be irrevocable during their terms. The director may approve the use of letters of credit as security in accordance with a schedule approved with the permit. Any bank issuing a letter of credit for the purposes of this paragraph shall notify the director in writing at least 90 days prior to the maturity date of such letter of credit or the expiration of the letter of credit agreement. Letters of credit utilized as securities in areas requiring continuous bond coverage shall be forfeited and collected by the Office of Attorney General, if not replaced by other

suitable evidence of financial responsibility at least 30 days before the expiration date of the letter of credit agreement.

3. The letter must be payable to the Department of Natural Resources in part or in full upon demand and receipt from the director of a notice of forfeiture.
4. The director 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.
5. The director shall not accept letters of credit from a bank for any person, on all permits held by that person, in excess of three times the company's maximum single obligation as provided by State law.
6. The director shall provide in the indemnity agreement that the amount shall be confessed to judgment upon forfeiture.
7. The bond shall provide that --
   (a) The bank will give prompt notice to the permittee and the director of any notice received or action filed alleging the insolvency or bankruptcy of the bank, 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 director.
   (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 bond coverage in violation of Section 12 of the Act The director shall issue a notice

of violation against any operator 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 director shall conduct weekly inspections to ensure continuing compliance with other permit requirements, the regulatory program, and the Code of West Virginia. Such notice of violation, if abated within the period allowed, shall not be counted as a notice of violation for purposes of determining a "pattern of willful violation" and need not be reported as a past violation in permit applications. If such a notice of violation is not abated in accordance with the schedule, a cessation order shall be issued.

d. Real and personal property posted as a collateral bond shall meet the following criteria:

1. The applicant shall grant the Department of Natural Resources a mortgage or perfected first-lien security interest in real or personal property.

2. The instrument creating such mortgage or security interest shall vest such interest in the Department of Natural Resources so as to secure the right and power in the director to immediately attach said property concurrent with the issuance of a notice of forfeiture and to sell or otherwise dispose of the property by a public or private transaction, and to establish the Department of Natural Resources as the sole secured creditor with respect to such property, so as to assure the director of a preferred claim over all other creditors in case of bankruptcy. For classes of property with respect to which a

preferred claim cannot be maintained against subsequent bona fide purchasers for value, the instrument shall require possession of the property by the director. 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. The instrument creating the security interest in personal property shall be recorded in accordance with, and otherwise conform to, the requirements of the Uniform Commercial Code for perfecting a security interest in the State of West Virginia . In order for the director to evaluate the adequacy of the property offered to satisfy this requirement, the applicant shall submit a schedule of the real or personal property which shall be pledged to secure the obligations under the indemnity agreement. The schedule shall include:

(a) A description of the property;

(b) The fair market value as determined by at least two independent appraisals conducted by appraisers certified in the State of West Virginia. The reasonable expense of the appraisals shall be borne by the permittee, and final acceptance of the value of property for bonding purposes shall be subject to the director's determination and shall be based on findings by appointed appraisers when deemed necessary;

(c) Proof of the mortgagor'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 interest arises under a Federal or State lease, a status report prepared by a non-affiliated attorney competent to evaluate the asset, and an affidavit from the owner in fee establishing that the leasehold can be transferred to the Department of Natural Resources upon forfeiture; and

(2) If the title is in fee, a title certificate or similar evidence of title and encumbrances prepared by an abstract office authorized to transact business within the State.

3. The property may include land which is part of the permit area only after reclamation standards are met on such land. The bonding value of land within a permit area may not exceed 85 percent of the appraised value based on the value of surrounding land less the value for any coal in place and the current uses of the land. Land pledged as security shall not be mined under any permit.

4) Proof that 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 permittee under the bond. Evidence of such ownership shall be submitted in a form satisfactory to the director. The director may accept a perfected first-lien security interest in negotiable bonds of the U.S. Government, general revenue bonds of the State, municipal bonds, or rated marketable securities,

excluding commodity issues, of non-affiliated companies registered under the Federal Securities Act, which are rated at the highest rating offered by a nationally recognized securities rating service. The ratio of bond value to market value of each security or bond shall be determined on the basis of its marketability and a financial analysis. The personal property offered shall not include--

(a) Property in which a security interest is held by any other person;

(b) Goods which the operator 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.

(d) Certificates of deposit which are not federally insured or are issued by a depository that is unacceptable to the director.

e. The estimated bond value of all collateral posted as bond assurance under 4H.04(b)(c) and (d) shall be subject to a margin -bond value to market value ratio as determined by the director. This margin shall reflect legal and liquidation fees, as well as value depreciation, marketability, and fluctuations which might affect the net cash available to the director in performing reclamation. The bond value of collateral may be evaluated at any time, but shall be evaluated as part of permit renewal. In no case shall the bond value exceed the market value.

4H.05 Escrow Bonding

a. The director may authorize the operator to supplement a bonding program through the establishment of an escrow account deposited in one or more federally insured accounts payable on demand only to the director or deposited with the director directly. Contributions to the account may be based on acres affected or tons of coal produced or any other rate approved by the director. In all cases, the total bond including the escrow amount, as determined by the director in the bonding schedule, shall not be less than the amount required under Section 12 of the Act.

b. Escrow funds deposited in federally insured accounts shall not exceed the maximum insured amount under applicable Federal insurance programs such as by FDIC or FSLIC.

c. Interest paid on an escrow account shall be retained in the escrow account and applied to the bond value of the escrow account unless the director has approved that the interest be paid to the operator. In order to qualify for interest payment, the operator shall request such action in writing during the permit application process.

d. Certificates of deposit may be substituted for escrow accounts upon approval of the director.

4H.06 Self-bonding

a. The director may accept a self-bond from the applicant under the following conditions:

1. The applicant shall designate the name and address of a suitable agent to receive service of process in the State where the surface coal mining operation is located.

2. The applicant, or the applicant's parent organization in the event the applicant is a subsidiary corporation, has a net worth, certified by a certified public accountant, of no less than six times the total amount of self-bond obligations on all permits issued to the applicant in the United States for surface coal mining and reclamation operations.

3. The applicant grants the director a mortgage or security interest in real or personal property located in the State which shall have a fair market value equal to or greater than the obligation created under the indemnity agreement.

4. The instrument creating such mortgage or security interest shall vest such interest in the Department of Natural Resources so as to secure the right and power in the director to immediately attach said property concurrent with the issuance of a notice of forfeiture and to sell or otherwise dispose of the property by a public or private transaction, and to establish the Department of Natural Resources as the sole secured creditor with respect to such property, so as to assure the director of a preferred claim over all other creditors in case of bankruptcy. For classes or property with respect to which a preferred claim cannot be maintained against

subsequent bona fide purchasers for value under the Uniform Commercial Code, the instrument shall require possession of the property by the director. 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. The instrument creating the security interest in personal property shall be recorded in accordance with, and otherwise conform to, the requirements of the Uniform Commercial Code for perfecting a security interest in the State. In order for the director to evaluate the adequacy of the property offered to satisfy this requirement, the applicant shall submit a schedule of the real or personal property which will be pledged to secure the obligations under the indemnity agreement. The schedule shall include --

(a) A description of the property;

(b) 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 director. The appraisal shall be expeditiously made, and a copy thereof furnished to the director and the permittee. The reasonable expense of the appraisal shall be borne by the permittee; and

(c) Proof of the mortgagor'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 interest arises under a Federal or State lease, a status report prepared by an attorney, satisfactory to the director as disinterested and competent to so evaluate the asset, and an affidavit from the owner in fee establishing that the leasehold could be transferred to the director upon forfeiture;

(2) If title is in fee, a title certificate or similar evidence of title and encumbrances prepared by an abstract office authorized to transact business within the State and satisfactory to the director; and

(3) The property shall not include any lands in the process of being mined, reclaimed, or the subject of this application. The operator may offer any lands the bonds for which have been released. In addition, any land used as security shall not be mined while it is security.

(d) Proof that 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 permittee under the bond. Evidence of such ownership shall be submitted in a form satisfactory to the director. The personal property offered shall not include --

(1) Property in which a security interest is held by any person;

(2) Fixtures;

(3) Goods which the operator sells in the ordinary course of his or business;

(4) Securities which are not negotiable bonds of the U.S. Government or general revenue bonds of the State;

(5) Certificates of deposit which are not federally insured or are issued by a depository that is unacceptable to the director.

5. The applicant, or the applicant's parent organization in the event the applicant is a subsidiary corporation, shall have demonstrated to the satisfaction of the director a history of financial solvency and continuous operation as a business entity for 10 years prior to filing the application. For purposes of this Paragraph, such demonstration shall include a financial statement in sufficient detail to allow the director to determine whether it is reasonable to predict from the ownership patters and financial history of the applicant that it will be financially capable of completing all reclamation requirements throughout the life of the surface coal mining and reclamation operation. Such statement shall include, at the minimum --

(a) Identification of operator by --

(1) For corporations, name, address, telephone number, State of incorporation, principal place of business, principal office in the State where the operation is located, the name, title, and authority of persons signing the application, and a statement of authority to do business in the State where the operation is located; and

(2) For all other forms of business enterprises, name, address, and telephone number and statement of how the enterprise is

organized, law of the State under which it is formed, place of business, relationship and authority of the person signing the application, and principal office in the State where the operation is located;

(b) Estimated amount of bond likely to be required after approval of the permit.

(c) History of other bonds procured by the operator for mining operations in any State, including --

(1) Names of sureties, if any, for outstanding bonds;

(2) Amounts of outstanding bonds;

(3) Name of any surety which denied any bond; and

(4) Unsatisfied claims against any bond,

(d) Brief chronological history of business operations conducted within the last 10 years, including information showing --

(1) Continuous operation for the 10-year period, and

(2) The jurisdiction within which each operation has been conducted;

(e) A financial statement, including --

(1) Audited financial statements prepared and certified by a disinterested independent certified public accountant. All statements shall be prepared following generally accepted principles of accounting and shall include --

-i- A common size comparative balance sheet which shows assets, liabilities, and owner's equity for the preceding 10-year period. The director shall have the discretion to increase this length of time to any period which is necessary to show financial solvency

and continuous operation. The common size comparative balance sheet shall be detailed with regard to owner's equity, especially retained earnings, so as to set forth a series of retained-earnings statements showing the changes that have occurred in retained earnings during the required period of time;

-ii- A common-size comparative income statement which shows all revenues and expenses for the preceding 10-year period or for such longer time as is required for the common-size comparative blanace sheet; and

-iii- A statement of the operator's working capital and an analysis of assets and liabilities which shall include the following calculation for each year covered by the common-size comparative balance sheet and income statement, A schedule showing the percentage of each classification of current assets to total current assets; the current ratio; the acid-test ratio; the liquidity ratio; the asset ratio; and the return on investment;

-iv In addition to the above, all ratios must be calculated with the bond amount added to the operator's current or total liabilities; and

-v- A ratio of the operator's capital assets subject to a mortgage or security interest to those liabilities to which the assets are subject. If the offer of real property or collateral for the bond will alter this ratio, this shall be illustrated;

(2) A satisfactory basis to compare all ratios submitted pursuant to (A) above.

(3) The director shall have the right to challenge, prohibit, or prescribe the inclusion of any specific item or the value thereof within any of the above statements or ratios. If the value is challenged, the director shall appoint an appraiser or appraisers to value the item. Any such appraisal shall be expeditiously made, and a copy thereof furnished to the director and the permittee. The reasonable expense of the appraisers shall be borne by the operator. The findings of the appraisal shall be final and binding.

(4) A final determination by an independent certified public accountant regarding the operator's ability to satisfactorily meet all obligations and costs under the proposed reclamation plan for the life of the mine, and

(5) If the director deems necessary, evidence of financial responsibility through letters of credit or a rating of securities issued to the applicant by a recognized national securities rating company;

(f) A statement listing any liens filed on the assets of the permittee or applicant in any jurisdiction in the United States, actions pending or judgments rendered within the last 10 years against the permittee or applicant but not satisfied, and petitions or actions in bankruptcy including actions for reorganization. Each such lien, action petition, or judgment shall be identified by the named parties, the jurisdiction in which the matter was filed, and the case, file, and final disposition or current status of any action still pending; and

(g) A statement listing any notices issued by the Securities and Exchange Commission or proceedings initiated by any party alleging a failure to comply with any public disclosure or reporting requirement under the securities laws of the United States. Such statement shall include a summary of each such allegation, including the date, the requirement alleged to be violated, the party making the allegation, and the disposition or current status thereof.

(6) (a) The indemnity agreement has been executed by the applicant, and said agreement has also been executed by --

(1) If a corporation, two corporate officers who are authorized to sign the agreement by a resolution of the board of directors, a copy of which shall be provided;

(2) To the extent that the history or assets of a parent organization are relied upon to make the showings of this part, the parent organization and every parent organization of which it is a subsidiary, whether first-tier, second-tier, or further removed, in the form of (a) above;

(3) If the applicant is a partnership, all of its general partners and their parent organization or principal investors; and

(4) If the applicant is a married individual, the applicant's spouse;

(b) The name of each person who signs the indemnity agreement shall be typed or printed beneath the signature. Any person who occupies more than one of the specified positions shall indicate each capacity in which he or she signs the indemnity agreement;

(c) The indemnity agreement shall be a bindng obligation, jointly and severally, on all who execute it;

(d) For purposes of this Paragraph, principal investor or parent organization means anyone with a 10-percent or more beneficial ownership interest, directly or indirectly, in the applicant.

7. If at any time the conditions upon which the self-bond was approved no longer prevail, the director shall require the posting of a surety or collateral bond before mining operations may continue.

4H.07 Combined Surety/Escrow Bonding

a. The director may accept a combined surety/escrow bonding schedule provided that --

1. A surety bond payable to the director is posted in the amount determined under Chapter 20, Article 6, Section 12 of the Code of West Virginia for reclamation of each successive increment, and
2. An interest-bearing escrow account payable to the director with a predetermined deposit amount and frequency is established.

b. Conditions of the combined surety/escrow bonding method shall be as follows:

1. Surety bond.

(a) The term of the surety bond shall be not less than 2 years.

(b) The amount of the surety bond shall always be sufficient to cover the difference between the escrow balance and the total reclamation cost.

(c) The surety bond may be reduced in amount, but the liability remaining shall depend on the escrow-deposit rate which shall be subject to provisions of 4H.05 and 4H.06.

(d) The surety bond shall be noncancellable by the surety during the bond term.

(e) Surety-bond coverage may be released by the director without applying the bond-release criteria of the Act and Section 4I of these regulations, at any time during the bond term, provided provisions of Paragraph (b)(2)(e) of this subsection are met or are in accordance with the provisions of bond replacement under 4H.05.

(f) The surety bond is subject to the conditions of bond forfeiture including noncompliance with the escrow-account provisions of Paragraph (b)(2) of this subsection.

2. Escrow account.

(a) The terms and conditions of the escrow account shall be developed jointly by the operator, surety, and director. For the purposes of this Section, the development of the the escrow account shall be based on a production basis in an amount not less than that required to make th escrow account equal to or greater than the bond requirement within the term of the surety bond as agreed on jointly by the operator, the surety, and the director. Deposits to the escrow account by the operator shall be made monthly and so reported to the director. Failure to make deposits on schedule shall be just cause for action by the director.

(b) A certified escrow-account balance statement shall be provided quarterly to the surety and the director.

(c) Provisions of the escrow account shall be in accordance with subsection 4H.05 of these regulations.

(d) The escrow account shall be subject to the bond-forfeiture.

(e) The escrow-account balance shall equal the initial bond amount, plus any adjustments required by Paragraph (b)(2)(a), of this subsection 120 days prior to surety-bond termination, unless the total bond amount required has been previously reduced through the bond-release procedures.

(f) Release of liability under the escrow account shall be subject to the provisions of the Act and Section 4I of these regulations.

c. Provisions of the Act and Section 4I of these regulations may be applied to both surety and escrow-bond coverage during the bond term.

d. The surety-escrow combination may be repeated successively or amended during the term by replacing the escrow account with a surety bond, and reestablishing the escrow terms and deposit rate, subject to director approval.

4H.08 Incremental Bonding

a. When the applicant elects to bond in increments as specified in the Act, the following conditions shall apply:

1. A cumulative bond schedule listing the areas covered by the bond and the sequence for release of acreage as it progresses through varying reclamation phases and for the addition of other acreage as it is affected. The amount of bond required to obtain a permit shall include the full reclamation cost of the initial area being affected.

2. When the applicant elects to "increment" the amount of the performance bond during the term of the permit, he shall identify the initial and successive incremental disturbed areas which shall be indiciated on the proposal map and made part of the pre-plan, and shall specify the proportion of the total bond amount required for the term of the permit which will be filed prior to commencing operations on each incremental area. The scheduled amount of each performance bond increment shall be filed in the sequence approved in the permit, and shall be filed with the director at least 30 days prior to the commencement of surface coal mining and reclamation operations in the next incremental area.

3. The amount, duration, form, conditions and terms of the performance bond shall conform to Sections 4H.03 and 4H.04 of these regulations.

4I. PROCEDURES, CRITERIA AND SCHEDULE FOR RELEASE OF PERFORMANCE BOND

4I.01 Procedures for Seeking Release of Performance Bond

a. Bond release application and contents. The permittee or any person authorized to act on his behalf, may file an application with the director for release of all or part ofthe performance bond liability applicable to a particular permit after all reclamation restoration and abatement work in a reclamation phase as defined in subsection 4I.02 (e) has been completed on the entire permit area or on an area approved pursuant to subsection 4H.01 for the incremental filing and release of bond liability.

1. Applications may only be filed at times or seasons that allow the director to evaluate properly the reclamation operations alleged to have been completed. The times or seasons appropriate for the evaluation of certain types of reclamation shall be identified in the pre-plan.
2. The application shall include copies of letters sent to adjoining property owners, surface owners, local government bodies, planning agencies, and sewage and water treatment facilities or water companies in the locality of the permit area, notifying them of the permittee's intention to seek release of performance bond(s). These letters shall be sent before the permittee files the application for release.
3. Within 30 days after filing the application for release the permittee shall submit proof of publication of the advertisement required by paragraph (b) of this subsection. Such proof of publication shall be considered part of the bond release application.

b. Newspaper advertisement of application. At the time of filing an application under this subsection, the permittee shall advertise the filing of the application in a newspaper of general circulation in the locality of the permit area. The advertisement shall --

1. Be placed in the newspaper at least once a week for four (4) consecutive weeks;
2. Show the name of the permittee, including the number and date of issuance or renewal of the permit;
3. Show the precise location and the number of acres of the lands subject to the application;
4. Show the total amount of bond in effect for the permit area and the amount for which release is sought;
5. Summarize the reclamation, restoration or abatement work done, including, but not limited to, backstowing or mine sealing, if applicable, and give the dates of completion of that work;
6. Describe the reclamation results achieved, as they relate to compliance with the Act, these regulations, and the approved pre-plan,
7. State that written comments, objections, and requests for a public hearing or informal conference may be submitted to the office of the director, provide the address of that office, and the closing date by which comments, objections, and requests must be received.

c. Objections and requests for hearing. Written objections to the proposed bond release and requests for an informal conference may be filed with the director by any affected person within thirty (30) days following the last advertisement of the filing of the application. For the purpose of this subsection, an affected person is --

1. Any person with a valid legal interest which might be adversely affected by bond release; and
2. The responsible officer or head of any Federal, State or local government agency which --
   (a) Has jurisdiction by law or special expertise with respect to any environmental, social or economic impact involved, or
   (b) Is authorized to develop and enforce environmental standards with respect to surface coal mining and reclamation operations.

d. Inspection by director. The director shall inspect and evaluate the reclamation work involved within 30 days after receiving a completed application for bond release, or as soon thereafter as weather conditions permit. The surface owner, or agent, or lessee shall be given notice of such inspection and may participate with the director in making the bond release inspection.

e. Informal conferences. The director shall schedule a conference if written objections are filed and a conference is requested. The conference shall be held in the locality of the permit area for which bond release is sought.

1. 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.

2. The informal conference shall be held within 30 days from the date of the notice.

3. 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.

f. Director review and decision

1. The director shall consider, during inspection evaluation, hearing and decision --

(a) Whether the permittee has met the criteria for release ofthe bond under subsection 4I.02.

(b) The degree of difficulty in completing any remaining reclamation, restoration or abatement work; and

(c) Whether pollution of surface and subsurface water is occurring, the probability of future pollution or the continuance of any present pollution, and the estimated cost of abating any pollution.

2. If no informal conference has been held, the director shall notify the permittee and any other interested parties in writing of its decision to release or not to release all or part of the performance bond or deposit within sixty (60) days from the receipt of the completed application, or within thirty days from the close of the public comment period if comments were received, whichever occurs last.

3. If there has been an informal conference held, the notification of the decision shall be made to the permittee and all interested parties within thirty days after conclusion of the conference.

4. The notice of the decision shall state the reasons for the decision, recommend any corrective actions necessary to secure the release, and notify the permittee and all interested parties of their right to request a public hearing in accordance with Paragraphs (g) and (h) of this subsection.

5. The director shall not release the bond until:

(a) The town, city or other municipality nearest to, or the county in which the surface mining operation is located has received at least thirty days notice of the release by certified mail; and

(b) The right to request a public hearing pursuant to Paragraph (g) of this subsection has not been exercised, or a final decision by the hearing authority approving the release has been issued pursuant to Paragraph (h) of this subsection.

g. Administrative review public hearings. Following receipt of the decision of the director under Paragraph (f) of this subsection, the permittee or any affected person may request a public hearing on the reasons for that decision. Requests for hearing shall be filed within 30 days after the permittee and other parties are notified of the decision of the director under Paragraph (f).

h. Public hearings. Public hearings required under this subsection shall be conducted as follows:

The director shall inform the permittee, local government, and any objecting party of the time, date, and place of the hearing and publish notice of the hearing in a newspaper of general circulation in the locality of the permit area twice a week for two consecutive weeks before the hearing. The hearing shall be adjudicatory in nature and be

held within 30 days of the receipt of the request, in the town or city nearest the permit area, or the State capital, at the option of the objector. The director may subpoena witnesses and printed materials and compel the attendance of witnesses and production of the materials at the hearing. A verbatim record of the hearing shall be made and the transcript made available on the motion of any party or by order of the director. The decision of the hearing authority shall be made within 30 days of the hearing. Parties seeking to reverse the decision or any part of the decision of the director which is the subject of the hearing shall have the burden of presenting a preponderance of evidence, to persuade the hearing authority that the decision cannot be supported by the reasons given in the notification of the director's decision.

41.02 Criteria and Schedule for Release of Performance Bond.

a. The director may release portions of the liability under performance bonds applicable to the permit area following the completion of reclamation phases as defined in Paragraph (e) of this subsection.

b. The maximum liability of performance bonds applicable to an increment or permit area which may be released shall be calculated on the following basis:

1. Release of an amount not to exceed 60 percent of the total bond amount on the increment or permit area upon completion of phase I reclamation.

2. Release of an additional amount not to exceed 25 percent of the total original bond amount on the permit area or an increment upon completion of phase II reclamation, but in all cases the amount remaining shall be sufficient to reestablish vegetation and reconstruct any drainage structures.

3. Release of the remaining portion of the total performance bond on the increment or permit area after standards of phase III reclamation have been attained and final inspection and procedures of 4I.01 have been satisfied.

c. The director may choose to release all bond coverage for an increment if the phase III reclamation of the increment is complete. The portion of the permit area being released from bond coverage shall be capable for supporting the proposed postmining land use independent of the successful completion of the reclamation of portions of the permit area still under bond or not yet initially disturbed. No increment shall be totally released from the permit area until conditions of phase III reclamation for the last increment of the permit area have been met.

d. The director shall require performance-bond liability, applicable to the permit area of an increment, in the amount necessary to --

1. Allow someone other than the operator to complete the approved reclamation plan;

2. Allow someone other than the operator to abate any significant environmental harm to air, water, or land resources, or danger to public health and safety prior to release of the land under the terms of the permit;

3. Achieve the capability of supporting any alternative postmining land-use plan proposed in the permit, including such measures as may be necessary in the event the permittee fails to undertake development within 2 years; and

4. Fulfill the minimum bond amount of $10,000.

e. For the purpose of this Part --

1. Reclamation phase I shall be deemed to have been completed when the permittee completes backfilling, topsoil replacement, regrading, and drainage control in accordance with the approved reclamation plan; and

2. Reclamation phase II shall be deemed to have been completed when --

(a) Revegetation has been established in accordance with the approved reclamation plan and the standards for the success of revegetation are met;

(b) The lands are not contributing suspended solids to stream flow or runoff outside the permit area in excess of the requirements of the Act, these regulations and the pre-plan;

(c) With respect to prime farmlands, soil productivity has been returned to the level of yield as required by the Act, these regulations and the pre-plan; and

(d) The provisions of a plan approved by the director for the sound future management of any permanent impoundment by the permittee or landowner have been implemented to the satisfaction of the director.

3. Phase III reclamation shall be deemed to have been completed when -

(a) The permittee has successfully completed all surface coal mining and reclamation operations in accordance with the approved reclamation plan so that the land is capable of supporting any postmining land use approved.

(b) The permittee has achieved compliance with the requirements of the Act, these regulations and the pre-plan.

(c) The applicable liability period under Chapter 20, Article 6, Section 13(b)(20) of the Act has expired.

5A. REQUIREMENTS OF A NOTICE OF INTENT TO PROSPECT

5A.01 Notice of Intent - The notice of intent shall be filed in triplicate and shall consist of the following:

a. A map equivalent to a United States geological survey topographic quadrangle map (scale 1" = 2000) showing the following information.

1. The boundaries of the property to be prospected and the surface and mineral owners of the tract(s),
2. The quadrangle title with a north arrow and coordinates of the area to be prospected;
3. Clearly indicate the name(s) of the receiving stream(s),
4. If the tract(s) is to be prospected exceeds 500 acres, indicate the drainage areas;
5. Show by proper markings the approximate location of the cropline(s) and name of the seam(s); and
6. Show the number of acres to be disturbed and their approximate location.

b. The notice of intent to prospect must be submitted on forms supplied by the director and shall contain the following information.

1. Name, address and telephone number of person filing a notice of intent and of the representative who will be present at and responsible for conducting the prospecting activities.
2. Location of the operation - (county, magisterial district and nearest post office);

3. A list of the names of any person associated with the person filing the notice of intent which holds or has held a prospect Identification number assigned by the State of West Virginia and is currently under bond;
4. A list of all prospecting identification numbers which are currently held by the person filing this notice;
5. A list of the owner(s) of surface and minerals to be prospected;
6. The source of the applicant's legal right to enter and conduct operations;
7. A statement as to whether or not the person filing this notice or any person affiliated with him has ever had a prospect or surface mine bond forfeited in West Virginia;
8. A notarized signature of the individual with authority to file the notice;
9. A schedule indicating the period of prospecting including the anticipated dates of commencement and completion of operations; and
10. A reclamation plan which indicates the method of prospecting, a method of controlling runoff and sedimentation, a method of regrading and a plan which provides for a permanent diverse vegetative cover.
11. A plan describing how the operator will comply with section 5B.05(c).
12. The map required by section 3G.02(a) and the description required by section 3H.01(a), if more than 250 tons are to be removed.

5A.02 An approved bond in accordance with section 8, of the Act shall accompany the notice of intent to prospect.

5B. PERFORMANCE STANDARDS

5B.01 Applicability -This section governs the use of drilling or excavating equipment in an area not covered by a surface mining permit for the purpose of removing the overburden or to determine the location, quantity or quality of a natural coal deposit, or to make feasibility studies, or for any other purpose. Provided, however, that upon an affirmative demonstration that drilling operations are to be conducted solely for taxation and highway construction purposes such drilling shall be exempted from this section by the director.

5B.02 Prospecting Roads

a. All roads shall be utilized or constructed in a manner which does not contribute additional suspended solids to streamflow or runoff, prevents damage to fish or wildlife or their habitat, and prevents damage to public or private property. Where possible, existing roads should be utilized.

b. All roads must be reclaimed or rehabilitated to a condition equal to or better than their pre-prospecting condition. Where a road will permanently remain after prospecting activities, the construction, maintenance and stabilization shall be governed by Section 4A of these rules and regulations.

c. Vehicular travel on other than established graded and surfaced roads shall be limited by the person who conducts prospecting to that absolutely necessary to conduct the prospecting. Travel shall be confined to graded and surfaced roads during periods when excessive erosion, damage to vegetation or rutting of the land surface could result.

5B.03 Blasting - Blasting is prohibited on prospecting operations unless otherwise approved by the director.

5B.04 Drainage System - All disturbances created by prospecting operations shall be conducted in a manner which prohibits additional contributions of suspended solids to runoff or streamflow and meet all applicable state and federal water quality standards and effluent limitations. Any excavation which will disturb more than 1 acre on any one site, may be required to provide drainage control in accordance with Section 4B of these regulations.

5B.05 Method of Operation

a. All prospecting operations in steep slope conditions shall be conducted in a manner consistent with the steep slope requirements provided for in Section 13 of the Act.

b. The director may limit prospecting operations within 100' of a perennial or intermittent stream, provided however, that roads or access ways may be located within 100' of an intermittent or perennial stream. Roads shall not be constructed up a streambed or drainage channel or in such proximity to such channel so as to significantly alter the normal flow of water.

c. Each prospecting hole, borehole, well, or other exposed underground opening created during prospecting shall be cased, sealed, or otherwise managed to prevent acid or toxic drainage from entering ground or surface water, or substantial degradation of ground water quality and quantity.

d. All toxic or acid-forming materials encountered while prospecting shall be handled in accordance with the requirements of Section 6B.05 of these regulations.

e. All facilities and equipment shall be removed from the prospecting area when they are no longer needed.

f. Topsoil shall be removed, stored, and redistributed on disturbed areas as necessary to assure successful revegetation.

g. All areas disturbed during prospecting operations shall be regraded to approximate original contour within three months of initial disturbance unless reclamation has been waived (and inactive status has been granted not to exceed one year) pursuant to receipt of an appropriate surface mine application number (SMA). Provided, however, that reclamation cannot be delayed more than 1 year from receipt of a surface mine application number.

h. All disturbed areas must be revegetated in a manner consistent with Section 4F of these regulations.

5B.06 Removal of Minerals - Minerals may be removed during prospecting operations for testing purposes only, and shall be limited to a maximum of two hundred fifty (250) tons for each approval. Provided, a written request for permission which sets forth the reasons for the necessity to remove greater amounts than 250 tons shall be submitted to and approved by the director before exceeding the 250 ton limit.

a. Application for permission to remove greater than 250 tons of coal shall, in addition to the information already required by this section, contain the following:

1. The estimated amounts of coal to be removed and a description of the methods to be used to determine those amounts.
2. A demonstration that such coal removal is justified and necessary in order to determine the location, quantity or quality of a natural coal deposit or for making feasibility studies.

5B.07 Bond Release - The performance bond or other securities accompanying a prospecting operation shall be released upon satisfactory regrading and establishment of a permanent diverse species of vegetative cover. All applications for bond release shall be accompanied by a final map of a scale of 1" = 500' or on a lesser scale as approved by the director showing the total disturbed area of said prospecting operations.

5B.08 Requirement for a Permit - Any person who extracts coal in excess of 250 tons and does not obtain prior approval of the director shall obtain a surface mine permit for those operations pursuant to Section 9 and 10 of the Act.

5B.09 All operators conducting prospecting activities shall, while in the prospecting areas, have in their possession, a copy of the written approval or notice of intent for such activities issued by or submitted to the director.

5B.10 All information submitted to the Department of Natural Resources as a part of the notice of intent to prospect as required in the Act and this section of the rules and regulations shall be made available for public inspection and copying at the nearest reclamation division field office, Provided that information submitted to the director pursuant to this sub-section as confidential concerning trade secrets or priviledged commercial or financial information which relates to the competitive rights of the person or entity intended to prospect the described area shall not be available for public examination. Provided further, that the application for a notice of intent to prospect for more than 250 tons shall be posted at the nearest Reclamation Division field office for seven days prior to the director's decision to grant or deny ~~issuance of a permit~~ for removal of ~~coal incidental to development~~

5B.11 Approval or Disapproval of an intent to prospect and permit to remove coal in excess of 250 tons shall be advertised in a newspaper of general circulation in the general vicinity of the proposed permit. All appropriate local government officials shall be notified. At the time of advertisement the director shall notify the clerk of the county commission in which the area to be affected is located that the intent to prospect has been approved or disapproved.

6A. PERMIT REQUIREMENTS

6A.01 General - In addition to information required by the Act and these rules and regulations for a surface mining permit shall contain the following.

a. The return receipts of notification of all owners of record of surface and subsurface area contiguous to any part of the proposed permit area. Such notification shall contain all information required in the legal advertisement and shall be made a part of the permit application.

b. A true copy of the notarized affidavit of publication setting forth the dates the advertisement appeared. The advertisement shall be made a part of the affidavit and shall list the address of the local reclamation office where the application is available for public inspection

c. Accurate maps in accordance with the following:

1. The size of the maps shall be no larger than 24" x 36";
2. The map scale shall be such that the information is clear and legible with a preferred scale of 1" = 500 feet (1" =500'),
3. A separate drainage map shall be required unless all necessary information can be clearly and legibly reflected on the pre-plan map
4. Approximate boundaries and locations of surface mining operations in close proximity to the proposed permit area.
5. Show by appropriate markings the boundaries of the area of land to be disturbed and to be covered by bond or other guaranty the crop line of the seam or deposit of coal to be mined, and the total number of acres involved in the area of land to be disturbed,

6. Show the date on which the map was prepared, a north arrow, quadrangle name, location map, and strike and dip of the coal seam to be mined,
7. Show location of spoil storage, waste and refuse and topsoil preservation areas;
8. Show all impoundments for waste, water treatment all drainage and sediment control facilities; and each air pollution collection and control facility.
9. Where the natural slope of the land below the coal outcrop is less than 20° and downslope placement of overburden or spoil is proposed, the map hall indicate the location and percent slope of the land at each 200' interval along the cropline. Measurements shall be taken downslope and perpendicular to the cropline,
10. Show the drainage plan in accordance with 4B of these regulations, and
11. Show location of all rain gauge monitoring sites. If monitoring sites are not within range of the map, supplimental maps or other descriptions may be substituted.
12. Each facility to be used to protect and enhance fish and wildlife and related environmental values.

6A.02 Hydrologic Information -The application shall contain a statement describing the probable hydrologic consequences of the mining operations, both on and off the mine site with respect to the hydrologic balance provided that modeling techniques may be included as part of the application. This statement shall describe

a. Ground Water Hydrology

1. The depth below the surface and horizontal extent of the water table and/or aquifers if encountered;

2. Known or potential uses of the water in the aquifer and/or water table
3. The lithology and thickness of the aquifers
4. The quality of the water in the aquifer and/or water table if encountered; and
5. Other information as required by the director which describes recharge, storage and discharge characteristics of aquifers as necessary to make the determination of the probable cumulative impacts of all anticipated mining in the area upon the hydrology of the area and particularly upon water availability,
6. Ground Water Quality -Laboratory analysis of samples shall be taken at regular monthly intervals for a period not less than 6 consecutive months prior to application submission for pH, iron, suspended solids, dissolved solids, hot total acidity, total alkalinity, specific conductance and temperature. On-site field analysis of pH, iron, specific conductance and temperature shall also be recorded. Permanent monitoring sites shall be established utilizing bore holes established to make the determination required in 6A.03, or existing wells, springs, seeps and/or other such sources containing water from aquifers or the water tables which will be encountered or may reasonably be expected to be impacted by the mining operation, provided that information made available to the director showing the geological configuration of the area and the ground water system shall be the basis on which the determination shall be made as to whether or not the aquifers or water tables could be impacted.

b. Surface Water -The application shall contain data which accurately predicts premining surface water quality and quantity both on and off the mine site within the local limits of the drainage area which will be impacted by the mining. Such data shall be at a minimum but not limited to the following:

1. Water Quality -Laboratory analysis of samples shall be taken at regular monthly intervals for a period not less than 6 consecutive months prior to application submission for pH, iron, suspended solids, dissolved solids, hot total acidity, total alkalinity, specific conductance and temperature. On-site field analysis of pH, iron, specific conductance and temperature shall also be recorded. Permanent monitoring sites will be established for the collection of this data at locations upstream and downstream from the proposed permitted area on all intermittent or perennial streams receiving drainage from the proposed permit area and on all receiving streams above and below the confluence of tributaries receiving the drainage from the proposed permit area.

2. Water Quantity -Field flow data shall be taken at the same time and location as required in 6A.02 (b) (1) by use of weirs, flow meters or other similar apparatus.

c. The application shall contain a statement of the climatological factors representative of the proposed permit area. Permanent rain gauge monitoring sites will be established at a suitable location on the mine site or in the general vicinity of the proposed permit area so as to accurately reflect the average seasonal precipitation. Data collected at such monitoring sites will be contained in the permit application

and will reflect at a minimum but not limited to the measurement of precipitation during a 24-hour period at regular monthly intervals for a period of not less than 6 consecutive months prior to application submission. Where such information is available from alternate sources and if such information is deemed to be accurate, the director may accept the alternate information.

6A.03 The application shall contain a description of the geology of the permit area.

a. Test borings or core samples from the proposed permit area shall be collected and analyzed down to and including the stratum immediately below the lowest coal seam to be mined to provide the following data in the description:

1. Location of subsurface water, if encountered;
2. Logs of drill holes showing the lithologic characteristics and thickness of each stratum and each coal seam;
3. Physical properties of each stratum within the overburden including compaction and erodability;
4. Chemical analyses of each stratum within the overburden and the stratum immediately below the lowest coal seam to be mined to identify, at a minimum, those horizons which contain potential acid-forming, toxic-forming, or alkalinity producing materials. These analyses shall, unless otherwise provided by the director or by law or regulation, be determined by using standard procedures found in EPA Manual 600/2-78-054 (Field and Laboratory Methods Applicable to Overburden Minesoils); and

5. Analyses of the coal seam, including, but not limited to, an analyses of the sulphur, pyrite, and marcasite content and the clay content of the stratum immediately below the coal seam.

b. In the event that any part of the data required under this subsection is available to the operator from previous investigations on the proposed permit area or adjacent areas with similar characteristics and such other data is deemed acceptable to the director, in writing, it may be used in lieu of development of new data.

6A.04 a. No surface coal mining activities shall be conducted closer than 500 feet to any point of either an active or abandoned underground mine, except to the extent that:

1. The nature, timing and sequence of the operations are jointly approved by the director, the Mine Safety and Health Administration and the State Department of Mines, and
2. The activities result in improved resource recovery, abatement of water pollution, or elimination of hazards to the health and safety of the public.

b. Surface 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.

6B. PERFORMANCE STANDARDS

6B.01 Signs and Markers

a. Permanent Monument - A permanent mounument shall be posted at the entrances from public roads and highways and at other suitable locations. The monument shall consist of a sign constructed of wood, metal, or other suitable material 2' x 3' mounted on a two-inch pipe driven three feet into the ground with four feet exposed. Any suitable equivalent substitute may be approved. The sign shall clearly indicate the company name, permit number, business address and telephone number.

b. Perimeter Marker - A two-inch (2") pipe or suitable substitute shall be driven into the earth with a minimum of three feet (3') exposed to permanently mark the beginning and ending points of the area under permit. It shall be identified by painting the exposed portion of the pipe red. The assigned permit number shall be affixed to the permanent perimeter marker. Other markers will be used to delineate the boundaries of the proposed permit area.

c. Buffer Zone Markers - Appropriate markers will be established along a buffer zone. Markers shall consist of metal or wooden stakes or other suitable devices or methods.

d. Topsoil Markers - When topsoil or topsoil substitute material is segregated and stockpiled, the stockpiled material shall be marked. Markers shall remain in place until the materials are removed.

e. Blasting Signs - If blasting is necessary to conduct surface mining operations, signs reading "Blasting Area" shall be conspicuously displayed at all approaches to the blasting site, along haulageways and access roads to the mining operation and at all entrances to the permit area. The sign shall be two feet by three feet (2' x 3') reading "Blasting Area" and explaining the blasting warning and the all clear signals.

f. Slope Measurement - Slope measurement locations shall be clearly marked prior to pre-inspection at each 200' interval, where applicable.

6B.02 Casing and Sealing of Holes - All boreholes, shafts, wells, and auger holes shall be cased, sealed or otherwise managed to prevent pollution of surface or ground water and to prevent mixing of ground waters of significantly different quality in accordance with the approved pre-plan. All boreholes within the permit area which extend beneath the coal seam to be mined and into water bearing strata shall be permanently plugged unless the boreholes have been approved for use in Section 6A.02 (a) (6) for monitoring.

6B.03 Topsoil -

a. Removal - Prior to disturbance of an area topsoil shall be removed from the area to be disturbed in a separate layer and if not immediately redistributed, it shall be segregated and stockpiled in a separate stable location as specified in the pre-plan.

1. Where the removal of vegetative material, topsoil, or other materials may result in erosion, the director may limit the size of the area from which these materials are removed at any one time.

2. Topsoil or substitute materials not being immediately utilized shall be redistributed at a time when the physical and chemical properties of topsoil can be protected and erosion can be minimized; Provided that the director may approve or deem necessary that other erosion control measures be utilized. Provided further, that unless approved by the director, stockpiled topsoil and other materials shall not be moved until required for redistribution on a regraded area.

b. Materials to be removed - If the topsoil is less than 6 inches, a 6-inch layer that includes the A horizon and the unconsolidated material immediately below the A horizon and all unconsolidated material if the total available is less than 6 inches, shall be removed and the mixture segregated and redistributed as the surface soil layer, unless topsoil substitutes are approved by the director pursuant to 6B.03.e of this Section. When it can be demonstrated that the B horizons and portions of the C horizons or other underlying layers have qualities for comparable root development and are necessary or desirable to ensure soil productivity consistent with the approved post-mining land use, the director may require these layers to be segregated and replaced as topsoil.

c. Segregation Requirements - Topsoil not being immediately utilized shall be protected from wind and water erosion and kept free of contamination of acid or toxic materials. Protective measures include, but are not limited to, vegetative cover, snow fences, etc.

d. Redistribution - Topsoil and other materials shall be redistributed in a manner that:

1. Achieves an approximate uniform, stable thickness, consistent with the approved post mining land uses, contours and surface water drainage system;
2. Prevents excess compaction of topsoil; and
3. Protects the topsoil from wind and water erosion before and after it is seeded.
4. After final grading and before the replacement of topsoil and other materials segregated in accordance with this section, regraded land shall be scarified or otherwise treated as required by the director to eliminate slippage surfaces and to promote root penetration. If the person who conducts the surface mining activities shows, through appropriate tests, and the director approves, that no harm will be caused to the topsoil and vegetation, scarification may be conducted after topsoiling.

e. Top Soil Substitutes - If top soil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation. Any material used for topsoiling must be capable of supporting and maintaining the approved post mining land use. This determination shall be based on the results of appropriate chemical and physical analysis of overburden and topsoil. These analysis shall include:

1. Determinations of pH, net acidity or alkalinity, nitrogen, phosphorus, potassium, texture class, calcium, manganese and other analyses as may be required by the director. The director may also require, where he deems necessary, results of field-site tests or greenhouse tests be used to demonstrate the feasibility of using substitute materials;
2. Results of analyses, trials and tests shall be included in the pre-plan. Certification of trials and tests shall be made by a laboratory approved by the director stating that:
   (a) The proposed substitute material is equal to or more suitable for sustaining the vegetation than is the available topsoil;
   (b) The substitute material is the best available material to support the vegetation; and
   (c) The trials and tests were conducted using standard testing procedures, the results of which shall be included in the pre-plan.

f. Nutrients and Soil amendments in the amounts determined by soil tests shall be applied to the redistributed surface soil layer, so that it supports the approved postmining land use and meets the revegetation requirements of Section 4F. All soil tests shall be performed by a qualified laboratory using standard methods approved by the director. These tests shall include nutrient analysis and lime requirement tests. Results of these tests shall be submitted to the director with the final planting report as required by Section 4F.09.a.

6B 04 Water Quality Standards

a. Water Quality Control - All reasonable measures shall be taken to intercept all surface water by the use of diversions, culverts, and drainage ditches or other methods to prevent water from entering the pit area. All water accumulation into the pit shall be removed at least once in a 24-hour period unless otherwise approved by the director. The water leaving the permit area shall not violate the water quality standards established for the river, stream or drainway into which it is discharged. All surface drainage from the disturbed area must pass through a sediment pond or series of sediment ponds or other approved sediment control structures or treatment facilities.

b. Water Quality Standards -Discharge from the permit area shall not in any case violate Federal or State water quality standards or effluent limitations. The monitoring frequency shall be governed by the standards set forth in the NPDES Program under the Federal Water Pollution Control Act as amended, 33 U.S.C. 1251 et. seq. and the rules and regulations promulgated thereunder.

1. Before grade release, no discharge from the permit area shall have a pH of less than 6.0 or greater than 9.0 or an iron content exceeding 7 parts/million maximum allowable and 3.5 parts/million average daily values for 30 consecutive discharge days or an iron content exceeding 6 parts/million maximum allowable and 3.0 parts/million average daily values for 30 consecutive discharge days for new sources as defined by 40 CFR Section 434.11(i).
2. After grade release, discharges from the permit area shall meet applicable water quality standards.

c. Treatment Facilities - Adequate facilities shall be installed, operated, and maintained using the best technology currently available in accordance with the approved pre-plan to treat any water discharged from the permit area so that it complies with all federal and state laws and regulations and the limitations of this section. Non-mechanical treatment systems may be utilized if flow is infrequent or small and timely and consistent treatment is assured.

d. Breakthrough

1. Any surface breakthrough of water caused by the operator during the course of his operations shall be sampled immediately and analyzed for total iron, total suspended solids and pH and if requested by the director, any other parameter characteristics of the discharge. Such analysis shall be made by a competent water analyst or chemist. The original and at least one copy of such analysis shall be retained by the operator, two copies shall be submitted to the chief of the Division of Reclamation.

2. Should said analysis indicate the water quality to be less than applicable effluent limitations, seals shall be immediately constructed. These seals shall:

(a) Prevent any air from entering the underground mine by way of the breakthrough; or

(b) Prevent any air from entering the breakthrough while allowing the water to flow from the breakthrough; or

(c) Seal the breakthrough of acid water so that it cannot flow. Such seals shall be constructed of stone, brick, block earth or other impervious materials which are acid resistant.

3. Alternate methods of handling discharges from breakthroughs may be employed where it can be established that applicable effluent limitations can be met.

e. 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.

f. Surface water shall not be diverted or otherwise discharged into underground mine workings, unless the person who conducts the surface mining activities demonstrates to the director that this will-

1. Abate water pollution or otherwise eliminate public hazards resulting from surface mining activities; and

2. Be discharged as a controlled flow, meeting applicable effluent limitations for pH and total suspended solids, except that the pH and total suspended solid limitations may be exceeded, if approved by the director, and is limited to-

(a) Coal processing waste;

(b) Fly ash from a coal-fired facility,

(c) Inert materials used for stabilizing underground mines or,

(d) Underground mine development wastes;

3. In any event, the discharge into underground mines of surface waters will not cause, result in or contribute to a violation of applicable water quality standards or effluent limitations;

4. Minimizes disturbance to the hydrologic balance; and

5. Meets with the approval of the Mine Safety and Health Administration.

6B.05 Acid Producing and Toxic Materials

a. Drainage from acid-forming and toxic forming materials into ground and surface water shall be avoided by:

1. Identifying, burying, blending and/or treating where necessary, spoil or other materials that will be toxic to vegetation or that will adversely affect water quality within thirty (30) days after it is first exposed or a lesser period if required by the director. Such materials shall be handled in accordance with methods set forth in the approved pre-plan, and

2. Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course or ground water system so as to cause or pose a threat of water pollution.

b. Treatment of Toxic Material - All exposed coal seams remaining after mining and any acid-forming, toxic-forming, combustible materials, or any other waste materials that are exposed, shall be covered with a minimum of four feet (4') of nontoxic and noncombustible material; or test, treat and blend material to provide materials suitable to prevent water pollution. If necessary, this material shall be treated to neutralize toxicity in order to prevent water pollution and sustained combustion and/or to minimize adverse effects on plant growth and land uses. Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local conditions, the director shall specify thicker amounts of cover using non-toxic material.

6B.06. Monitoring Requirements

a. Surface Water Monitoring:

1. The operator shall record daily normal and abnormal variations in precipitation, by using rain gauges.

2. All water discharged from the permit area shall be sampled and analyzed daily by the operator for total iron, pH and flow and for any other parameter required by the director . Samples shall be collected and analyzed for suspended solids by-monthly and within 12 hours after a precipitation event of 1" or greater.

3. A written record of the sampling dates and analytical data shall be kept current and made available for inspection at the operation, and a monthly report of all measurements shall be provided to the director. Any violations of effluent standards shall be reported to the director within five (5) days of receipt of analytical analysis.

4. Where any discharge from the permit area requires treatment during the mining operation in order to meet the water quality standards set forth in Section 6B.04 of these regulations, surface water monitoring of such discharges shall continue following grading approval. If it is established on the basis of such monitoring that the hydrologic balance is being preserved without treatment, the treatment facilities may be removed. A one year history of meeting the water quality standards of 6B.04 shall be adequate to establish that the hydrologic balance is being preserved.

b. Ground Water Monitoring

1. Where it has been determined as set forth in the pre-plan that the surface mining operations will result in the removal or disturbance of strata that serve as significant aquifers then the operator shall establish monitoring sites that can adequately reflect changes in ground water quantity and quality resulting from such operation.
2. Samples shall be collected from monitoring sites and tested a minimum of once per month and shall include; ground water levels, pH, iron, total acidity, total alkalinity and total suspended solids or any other such parameter that the director deems necessary.
3. A written record of the testing dates and analytical data shall be kept current and made available for inspection at the operation, and a monthly report of all data shall be provided to the director.

6B.07 Method of Operation

a. Steep Slope Mining

1. Applicability - On surface mining operations where the natural slope exceeds twenty degrees (20°), the provisions of this section in addition to other applicable provisions of these regulations, shall apply. On lesser slopes that require measures to protect the area below the operation from landslides or other similar disturbances as determined by the director on the basis of soils, climate, method of operation, geology, and other regional characteristics, the provisions of this section, in addition to other applicable provisions of these regulations, shall also apply. These provisions do not apply where mining is done 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.

2. Downslope Placement - Spoil or debris, including that from clearing and grubbing, shall not be placed on the downslope except as provided for in Section 6B.08 of these regulations. Wind rowing timber at or immediately below the cropline for erosion control may be approved by the director where the permittee can demonstrate such placement will not reduce stability and will enhance erosion control or wildlife habitat. Nothing in this section shall prohibit the placement of materials in haulroad or access road fills on slopes steeper than twenty degrees (20°) so long as the fills are constructed in accordance with Section 4A.03 b of these regulations.

3. Highwall Elimination - The highwall shall be eliminated and disturbed area graded to the approximate original contour. Spoil material in excess of that required for the reconstruction of the approximate original contour shall be permanently stored in accordance with Section 6B.08 of these regulations. Land above the highwall shall not be disturbed unless the director finds 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.

   (d) Comply with applicable health and safety laws.

4. Stabilization - The material used to backfill and eliminate the highwall shall be sufficiently compacted or otherwise mechanically stabilized so as to insure stability of the backfill. The method and design specifications of compacting material shall be approved by the director. Woody materials shall not be buried in the backfilled area unless the director determines that the proposed method for placing woody material beneath the highwall will not deteriorate the stable condition of the backfilled area. The operation shall at a minimum retain all overburden and spoil on the solid portion of existing or new benches and backfill and grade to the most moderate slope possible which does not exceed the angle of repose or such lesser slope as is necessary to achieve a minimum static safety factor of 1.3.
5. Drainage Channels and Flumes - When mining through natural watercourses or when water is to be directed across or through the backfill, a drainage channel, flumes or french drains must be constructed across or through the backfill in order to insure stability and to prevent erosion. Such drainage channels, flumes or french drains shall be constructed of durable rock, asphalt, concrete or any other material approved by the director. Channels flumes and drains shall be constructed in accordance with criteria contained in the Technical Handbook for Surface Mining.

b. Auger Operations

1. Augering may be prohibited if the director determines that such augering poses a potential hazard to the environment, public welfare and safety or to protect against adverse water quality impacts or if subsidence resulting from auger mining may damage structures or buildings.

2. Augering in Close Proximity of Underground Mining - No auger hole shall be made closer than 500 feet in horizontal distance to any abandoned or active underground mine unless approved in accordance with Section 6A.04 of these regulations.

3. Variance from Sealing Auger Holes - An auger hole need not be sealed if the director finds that an impoundment of the water resulting from sealing would create a hazard to the environment or public welfare and safety. Provided that, any discharge from unsealed auger holes shall not violate water quality standards. Adequate drainage through the backfill from any unsealed auger holes shall be constructed as shown in the approved pre-plan.

c. Mountaintop Removal

1. Applicability - Where the mountaintop removal technique is applied, the provisions of this section in addition to other applicable provisions of these regulations, shall apply.

2. The Final Graded Slopes - The final graded top plateau slopes on the mined area shall be less than 5 horizontal to 1 vertical so as to create a level plateau or gently rolling configuration and the outslopes of the plateau shall not exceed 2 horizontal to 1 vertical except where engineering data demonstrates and the director finds that the minimum static safety factor be less than 1.5.

3. Drainage - The resulting level or gently rolling contour shall be graded to drain inward from the outslope except at specific points where it drains over the outslope in constructed channels. Such channels shall be protected from erosion and constructed using design criteria similar to that found in the Technical Handbook.

d. Inactive Status - Inactive operation status will be considered for a period not to exceed one (1) year from date of approval, provided that prior written approval is obtained from the director; Provided further that inactive status shall not be approved unless the operator demonstrates that reclamation is current and all water management practices will be maintained during the inactive period and all exposed coal is covered with non-toxic material. The director may also require progress maps prior to approval. Where it can be adequately demonstrated by the permittee that inactive status to exceed one (1) year is necessary, the director may extend inactive status beyond the one (1) year limitation.

e. Requirements for Special Land Use Purposes

1. Alternative Plans - Alternative plans for restoration of the disturbed area may be submitted to the director. If such restoration will be consistent with the purpose of the Act and if such plans are approved by the director and complied with within such time limits as may be determined by him as being reasonable for carrying out such plans, the backfilling and grading requirements of these regulations may be modified.

2. Water Impoundments - Prior to the construction of an impounding area for the storage of water after mining, approval must be obtained from the director for each impoundment. The Division of Water Resources will cooperate with the Division of Reclamation in reviewing all portions of any plan for water impoundments as they relate to water quality and will give its recommendations to the Division of Reclamation. The contents of this plan shall include, but are not limited, to the following:

(a) Location of the impounding area,

(b) Dimensions of the area as to capacity and depth (average, maximum and minimum),

(c) Plot plan of impoundment area;

(d) Source of water entering the impoundment;

(e) Quality of the water entering the impoundment,

(f) Quality of water leaving the impoundment and mechanism of discharge,

(g) Coal seam or seams mined or involved with impoundment,

(h) Chemical characteristics of the soils and underlying strata in the impoundment area as they relate to acid production;

(i) Safety aspects considered such as spillway overflow, emergency spillway, access to area;

(j) Consent of the landowner for such impoundment with submission on specified forms; and

(k) Projected stability of water level in the impoundment.

3. Waste Disposal - Where waste materials such as filter cake, municipal wastes, chemical sludge, etc., are deposted upon the permit area, plans for such deposition shall require prior approval of the director. Such plans for waste disposal shall be accompanied by the written approval of the Division of Water Resources and where appropriate, the State Department of Health.

6B.08 Disposal of Excess Spoil

a. General Requirements - Spoil not required to achieve the approximate original contour shall be transported to and placed in a controlled manner in designated disposal areas within the permit area in accordance with the provisions of the Act as approved in the pre-plan and in

accordance with the design criteria and specifications found in the Technical Handbook for Surface Mining. Coal processing wastes and/or toxic material shall not be disposed of in head-of-hollow or valley fills, unless such fills are specifically and exclusively designated for that purpose in accordance with Section 10 of these regulations.

b. Disposal of Excess Spoil on Existing Benches - Spoil material not required to return the area to the approximate original contour may be placed on a bench abandoned as of August 3, 1977 if the following conditions are met. and

1. All excess spoil must be hauled, placed and retained on the solid portion of the existing bench;
2. The spoil must be compacted or otherwise mechanically stabilized and the existing highwall eliminated to the extent possible with the available spoil.

c. Other design criteria may be approved if fills are constructed in accordance with 30 CFR 816 or 817, or if fills are justified as an experimental practice under section 33 of the Act.

d. Location of Sediment Control Structures - All sediment control structures for fill areas shall be as contiguous with the spoil disposal area as is economically and technologically feasible, but not in such proximity so as to affect mass stability.

e. Disturbance Within Fill Site - At no time shall the disturbance in the valley fill area be greater than the sediment storage requirement provided by the sediment structures until two or more lifts of the valley fill have been installed.

f. Where environmental benefits will occur, spoil not needed to restore the approximate original contour of the land and reclaim land within the permit

area may in a manner consistent with the Act and these regulations be deposited:

1. On another area under a permit issued pursuant to the Act, or
2. On abandoned mine lands under a contract for reclamation conducted pursuant to the provisions of the Act and all rules and regulations promulgated thereunder.

6B.09. Backfilling and Regrading

a. Operator Responsibility - In planning and executing surface mining operations, the operator shall, at all times, have proper regard for all backfilling and regrading requirements, imposed by the Act and these rules and regulations and all provisions of the approved pre-plan.

b. Keeping Operation Current - Grading, backfilling and water management practices as approved in the pre-plans shall be kept current as follows:

1. Where the operation includes only contour mining (no augering) the grading and backfilling shall follow the mineral removal by a period not to exceed sixty (60) days or 1,500 linear feet;
2. Where the operation includes contour mining and augering, the augering shall follow the mining by a period not to exceed sixty (60) days, and the grading and backfilling shall follow the augering by not more than thirty (30) days or 1,500 linear feet, but in no event shall more than 3,000 linear feet of pit be exposed at any time.
3. Where the operation includes only augering, the grading and backfilling shall follow the augering by a period not to exceed thirty (30) days or 1,000 linear feet.

4. Area Mining - Should the operation include only area mining, the backfilling and grading shall not be more than two spoil ridges behind the pit being worked. Maximum linear feet of open pit shall not exceed 3,000 feet at any time.

5. Mountaintop Removal - For Surface mine operations that remove entire coal seams running through the upper fraction of a mountain, hill or ridge by removing all the overburden, backfilling and regrading shall follow the same guidelines for area and contour mining as found in this section. The outer perimeter and drainage area shall be stabilized, regraded, seeded & mulched immediately upon construction. Where more than one component spread of equipment is being utilized on the same permit area, the backfilling and regrading shall be considered current when each area meets the requirements of paragraph 4 of this subsection.

6. Revegetation shall be kept current by establishing a temporary or permanent vegetative cover on regraded areas by the end of the first growing season and a permanent cover by the end of the second growing season. Standards and procedures for establishing a satisfactory vegetative cover and guidelines for species selection and application rates are found in Section 4F of these regulations.

7. The period of time or the distance required to be current may be reasonably extended where the permittee affirmatively demonstrates that unforeseen site conditions or weather changes make adherence to these guidelines impractical. A written waiver must be obtained from the director for such extension.

8. Removal of Regrading Equipment - Operable regrading equipment shall be kept on the permit area until satisfactory completion of grading unless otherwise approved.

9. Variance from Reclamation Requirements - Reclamation requirements may be postponed on a surface mining permit where surface mining operations and underground mining operations are proposed on the same area; provided that all requirements set forth in Section 13 of the Act are met; provided, however, that underground mining operations must commence no later than one year after completion of surface mining activities.

c. Bench Surface - Where land with gently sloping benches result, the surface of the regraded bench shall be graded so as to permit the use of farm implements and machinery.

d. Grading Outer Spoil - All outer spoil shall be graded so as to blend into the adjoining undisturbed lands.

e. Regrading or Stabilizing Rills and Gullies - Any rills or gullies deeper than nine (9) inches forming in areas that have been regraded and the topsoil replaced will be deemed unacceptable and any such rills or gullies shall be filled, graded, or otherwise stabilized and all disturbed areas seeded and mulched. Rills or gullies of lesser size shall also be stabilized if they will be disruptive to the approved post-mining land use or may result in additional erosion and sedimentation.

f. Reaffecting Previously Mined Areas

1. Where surface mining operations are reaffecting lands mined prior to August 3rd, 1977; lands that have not been restored to the standard of these regulations and sufficient spoil is not available to otherwise comply with these regulations, the permittee shall at a minimum retain all overburden and spoil on the solid portion of existing or new benches and backfill and grade to the most moderate slope possible which does not exceed 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 must be eliminated.
2. Operations proposing to remine existing benches created prior to July 1, 1977 and not proposing to substantially reaffect the existing highwall, shall at a minimum completely eliminate the newly created highwall and utilize the excess spoil material to eliminate as much of the pre-existing highwall as possible. This regulation applies only to those situations where mining is proposed in order to remove coal seams lying below the seam originally mined prior to July 1, 1977.
3. Auger operations proposing to auger areas permitted prior to July 1, 1977 and not substantially reaffecting the pre-existing highwall, shall at a minimum properly seal all auger holes and backfill to a minimum depth of (4) four feet over the coal seam with non-toxic material capable of supporting vegetation.
4. All operations which reaffect areas mined prior to July 1, 1977 where the highwall was eliminated shall at a minimum eliminate all newly created highwalls.

g. Regraded Drainage Control - Drainage control on regraded areas shall be provided as approved in the pre-plan to prevent excessive erosion or additional contribution of suspended solids to the receiving stream, ensure safety, and conserve soil moisture. Drainage control measures may include, but are not limited to, constructed drainways flumes and rip-rap channels, tracking in, small depressions and other devices that may be approved by the director.

7A. PERMIT REQUIREMENTS

7A.01 General - In addition to information required by the Act and these rules and regulations an application for a permit for the surface effects of underground mining will contain the following:

a. The return receipts of notification of all owners of record of surface and subsurface area contiguous to any part of the proposed permit area. Such notification shall contain all information required in the legal advertisement.

b. A true copy of the notarized affidavit of publication setting forth the dates the advertisement appeared. The advertisement shall be made a part of the affidavit and list the address of the local reclamation office where the application is available for public inspection.

c. Accurate maps in accordance with the following:

1. The size of the maps shall be no larger than 24" x 36",
2. The map scale shall be such that the information is clear and legible with a preferred scale of 1" = 200 feet (1" =200');
3. A separate drainage map shall be required unless all necessary information can be clearly and legibly reflected on the pre-plan map;
4. Approximate boundaries and locations of all surface mining operations in close proximity to the proposed permit area.
5. Show by appropriate markings the boundaries of the area of land to be disturbed, the crop line of the seam or deposit of coal to be mined, and the total number of acres involved in the area of land to be disturbed;

6. Show the date on which the map was prepared, a north arrow, quadrangle name, location map, and strike and dip of the coal seam to be mined;
7. Show location of spoil storage, waste and refuse disposal and topsoil preservation areas;
8. Show all impoundments for waste, water treatment and all drainage and sediment control facilities;
9. Where the natural slope of the land below the coal outcrop is less than 20° and downslope placement of overburden or spoil is proposed, the map shall indicate the location and percent slope of the land at each 200 foot interval along the cropline. Measurements shall be taken downslope and perpendicular to the cropline.
10. Show the drainage plan in accordance with 4B of these regulations;
11. Show location of all rain gauge water and subsidence monitoring sites. If monitoring sites are not within range of the map, supplimental maps or other descriptions may be substituted; and
12. Show location of facilities to be used to protect and enhance fish and wildlife related environmental values.

7A.02. Hydrologic Information -The application shall contain a statement describing the probable hydrologic consequences of the mining operations, both on and off the mine site with respect to the hydrologic balance, provided that modeling techniques may be included as part of the application. This statement shall describe:

a. Ground Water Hydrology

1. The depth below the surface and horizontal extent of the water table

and/or aquifers if encountered;

2. Known or potential uses of the water in the aquifer and/or water table;
3. The lithology and thickness of the aquifers,
4. The quality of the water in the aquifer and/or water table if encountered; and
5. Other information as required by the director which describes recharge, storage and discharge characteristics of aquifers as necessary to make the determination of the probable cumulative impacts of all anticipated mining in the area upon the hydrology of the area, and particularly upon water availability.
6. Ground Water Quality -Laboratory analysis of samples shall be taken at regular monthly intervals for a period not less than 6 consecutive months prior to application submission for pH, iron, suspended solids, dissolved solids, hot total acidity, total alkalinity specific conductance, and temperature. On-site field analysis of pH, iron, specific conductance, and temperature shall also be recorded. Permanent monitoring sites shall be established utilizing bore holes established to make the determination required in 7A.03, existing wells, springs, seeps and/or other such sources containing water from aquifers or the water tables which will be encountered or may reasonably be expected to be impacted by the mining operation; provided that information made available to the director showing the geological configuration of the area and the ground water system shall be the basis on which the determination shall be made as to whether or not the aquifers or water tables could be impacted.

b. Surface Water -The application shall contain data which accurately predicts premining surface water quality and quantity both on and off the mine site within the local limits of the drainage area which will be impacted by the mining. Such data shall be at a minimum but not limited to the following:

1. Water Quality -Laboratory analysis of samples shall be taken at regular monthly intervals for a period not less than 6 consecutive months prior to application submission for pH, iron, suspended solids, dissolved solids, hot total acidity, total alkalinity, specific conductance and temperature. On-site field analysis of pH, iron, specific conductance, and temperature shall also be recorded. Permanent monitoring sites will be established for the collection of this data at locations upstream and downstream from the proposed permitted area on all intermittent or perennial streams receiving drainage from the proposed permit area and on all receiving streams above and below the confluence of tributaries receiving the drainage from the proposed permit area.

2. Water Quantity -Field flow data shall be taken at the same time and location as required in 7A.02 (b)(1) by use of weirs, flow meters or other similar apparatus.

c. The application shall contain a statement of the climatological factors representative of the proposed permit area. Permanent rain gauge monitoring sites will be established at a suitable location on the mine site or in the general vicinity of the proposed permit area so as to accurately reflect the average seasonal precipitation. Data collected at such monitoring sites

will be contained in the permit application and will reflect at a minimum but not limited to the measurement of precipitation during a 24-hour period at regular monthly intervals for a period of not less than 6 consecutive months prior to application submission. Where such information is available from alternate sources and if such information is deemed to be accurate, the director may accept the alternate information.

7A.03 The application shall contain a description of the geology of the permit area or if authorized by the director only those areas where overburden will be removed down to the level of the coal seam.

a. Test borings or core samples from the proposed disturbed area shall be collected and analyzed down to and including the stratum immediately below the lowest coal seam to be mined to provide the following data in the description:

1. Location of subsurface water, if encountered;
2. Logs of drill holes showing the lithologic characteristics and thickness of each stratum and each coal seam;
3. Physical properties of each stratum within the overburden including compaction and erodability;
4. Chemical analyses of each stratum within the overburden and the stratum immediately below the lowest coal seam to be mined to identify, at a minimum, those horizons which contain potential acid-forming, toxic-forming, or alkalinity producing materials. These analyses shall, unless otherwise provided by the director or by law or regulation, be determined by using standard procedures found in EPA Manual 600/2-78-054 (Field and Laboratory Methods Applicable to Overburden Minesoils); and

5. Analyses of the coal seam, including, but not limited to, an analyses of the sulphur, pyrite, and marcasite content, the clay content of the stratum immediately below the coal seam and the pyrite content and potential alkalinity of the stratum immediately below the coal seam.

b. In the event that any part of the data required under this subsection is available to the operator from previous investigations on the proposed permit area or adjacent areas with similar characteristics and such other data is deemed acceptable to the director, in writing, it may be used in lieu of development of new data.

7A.04 The operator shall submit a plan demonstrating how mine entries will be sealed and how down-slope barriers will be designed to ensure stability under anticipated hydraulic loads if the mine is to be inundated or the operator shall submit a copy of an abandonment plan approved under Article 5A of Chapter 20 of the Code which contain the same information.

7B. PERFORMANCE STANDARDS

7B.01 Signs and Markers

a. Permanent Monument - A permanent monument shall be posted at the entrances from public roads and highways and at other suitable locations. The monument shall consist of a sign constructed of wood, metal, or other suitable material 2' x 3' mounted on a two-inch pipe driven three feet into the ground with four feet exposed. Any suitable equivalent substitute may be approved. The sign shall clearly indicate the company name, permit numbers, business address and telephone number.

b. Perimeter Marker - A two-inch (2") pipe or suitable substitute shall be driven into the earth with a minimum of three feet (3') exposed to permanently mark the beginning and ending points of the area under permit. It shall be identified by painting the exposed portion of the pipe red. The assigned permit number shall be affixed to the permanent perimeter marker. Other markers will be used to delineate the boundaries of the proposed permit area.

c. Buffer Zone Markers - Appropriate markers will be established along a buffer zone. Markers shall consist of metal or wooden stakes or other suitable devices or methods.

d. Topsoil Markers - When topsoil or topsoil substitute material is segregated and stockpiled, the stockpiled material shall be marked. Markers shall remain in place until the materials are removed.

e. Blasting Signs - If blasting is necessary to conduct surface mining operations, signs reading "Blasting Area" shall be conspicuously displayed at all approaches to the blasting site, along haulageways and access roads to the mining operation and at all entrances to the permit area. The sign shall be two feet by three feet (2' x 3') reading "Blasting Area" and explaining the blasting warning and the all clear signals.

f. Slope Measurements - Slope measurements shall be clearly marked prior to pre-inspection at each 200' interval along the cropline contour of the lowest seam to be mined.

7B.02 Casing and Sealing of Holes -All boreholes, shafts, and wells shall be cased, sealed or otherwise managed to prevent pollution of surface or ground water and to prevent mixing of ground waters of significantly different quality. All boreholes within the permit area which extend beneath the coal

to be mined and into water bearing strata shall be permanently plugged unless the boreholes have been approved for use in monitoring.

7B.03 Topsoil -

a. Removal-Prior to disturbance of an area topsoil shall be removed from the area to be disturbed in a separate layer and if not immediately redistributed, it shall be segregated and stockpiled in a separate stable location as specified in the pre-plan.

1. Where the removal of vegetative material, topsoil, or other materials may result in erosion, the director may limit the size of the area from which these materials are removed at any one time.

2. Topsoil or substitute materials not being immediately utilized shall be redistributed at a time when the physical and chemical properties of topsoil can be protected and erosion can be minimized; Provided that the director may approve or deem necessary that other erosion control measures be utilized. Provided further, that unless approved by the director, stockpiled topsoil and other materials shall not be moved until required for redistribution on a regraded area.

b. Materials to be removed-If the topsoil is less than 6 inches, a 6-inch layer that includes the A horizon and the unconsolidated material immediately below the A horizon and all unconsolidated material if the total available is less than 6 inches, shall be removed and the mixture segregated and redistributed as the surface soil layer, unless topsoil substitutes are approved by the director pursuant to 7B.03(e) of this Section. When it can be demonstrated that the B horizons and portions of the C horizons or other underlying layers have qualities for comparable root development and are necessary or desirable to ensure soil productivity consistent with the approved post-mining land

use, the director may require these layers to be segregated and replaced as topsoil.

c. Segregation Requirements - Topsoil not being immediately utilized shall be protected from wind and water erosion and kept free of contamination of acid or toxic materials. Protective measures include, but are not limited to, vegetative cover, snow fences, etc.

d. Redistribution - Topsoil and other materials shall be redistributed in a manner that:

1. Achieves an approximate uniform, stable thickness, consistent with the approved post mining land uses, contours and surface water drainage system;
2. Prevents excess compaction of topsoil; and
3. Protects the topsoil from wind and water erosion before and after it is seeded.
4. After final grading and before the replacement of topsoil and other materials segregated in accordance with this section, regraded land shall be scarified or otherwise treated as required by the director to eliminate slippage surfaces and to promote root penetration. If the person who conducts the surface mining activities shows, through appropriate tests, and the director approves, that no harm will be caused to the topsoil and vegetation, scarification may be conducted after topsoiling.

e. Top Soil Substitutes - If topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation. Any material used for topsoiling must be capable of supporting and maintaining the

approved post mining land use. This determination shall be based on the results of appropriate chemical and physical analysis of overburden and topsoil. These analysis shall include:

1. Determinations of pH, net acidity or alkalinity, nitrogen, phosphorus, potassium, texture class, calcium, manganese and other analyses as may be required by the director. The director may also require, where he deems necessary, results of field-site tests or greenhouse tests be used to demonstrate the feasibility of using substitute materials,

2. Results of analyses, trials and tests shall be included in the pre-plan. Certification of trials and tests shall be made by a laboratory approved by the director stating that:

   (a) The proposed substitute material is equal to or more suitable for sustaining the vegetation than is the available topsoil;

   (b) The substitute material is the best available material to support the vegetation; and

   (c) The trials and tests were conducted using standard testing procedures, the results of which shall be included in the pre-plan.

f. Nutrients and Soil amendments in the amounts determined by soil tests shall be applied to the redistributed surface soil layer, so that it supports the approved postmining land use and meets the revegetation requirements of Section 4F. All soil tests shall be performed by a qualified laboratory using standard methods approved by the director. These tests shall include nutrient analysis and lime requirement tests. Results of these tests shall be submitted to the director with the final planting report as required by Section 4F.09.a.

78.04 Water Quality Standards

a. Water Quality Control - All reasonable measures shall be taken to intercept all surface water by the use of diversions, culverts and drainage ditches or other methods to prevent water from entering the pit area. All water accumulation into the pit shall be removed at least once in a 24-hour period unless otherwise approved by the director. The water leaving the permit area shall not violate the water quality standards established for the river, stream or drainway into which it is discharged. All surface drainage from the disturbed area must pass through a sediment pond or series of sediment ponds or other approved sediment control structures or treatment facilities.

b. Water Quality Standards -Discharge from the permit area shall not in any case violate Federal or State water quality. The monitoring frequency shall be governed by the standards set forth in the NPDES Program under the Federal Water Pollution Control Act as amended, 33 U.S.C. 1251 et. seq. and the rules and regulations promulgated thereunder.

1. Before grade release, no discharge from the permit area shall have a pH of less than 6.0 or greater than 9.0 or an iron content exceeding 7 parts/million maximum allowable and 3.5 parts/million average daily values for 30 consecutive discharge days or an iron content exceeding 6 parts/million maximum allowable and 3.0 parts/million average daily values for 30 consecutive discharge days for new sources as defined by 40 CFR Section 434.11(i).
2. After grade release, discharges from the permit area shall meet applicable water quality standards.

c. Treatment Facilities - Adequate facilities shall be installed, operated, and maintained using the best technology currently available in accordance with the approved pre-plan to treat any water discharged from the permit area so that it complies with all federal and state laws and regulations and the limitations of this section. Non-mechanical treatment systems may be utilized if flow is infrequent or small and timely and consistent treatment is assured.

d. Breakthrough

1. Any surface or underground breakthrough of water caused by the operator during the course of his operations shall be sampled immediately and analyzed for total iron, total suspended solids and pH and if requested by the director, any other parameter characteristics of the discharge. Such analysis shall be made by a competent water analyst or chemist. The original and at least one copy of such analysis shall be retained by the operator, two copies shall be submitted to the chief of the division of reclamation.

2. Should said analysis indicate the water quality to be less than applicable effluent limitations, seals shall be immediately constructed. These seals shall:

(a) Prevent any air from entering the underground mine by way of the breakthrough; or

(b) Prevent any air from entering the breakthrough while allowing the water to flow from the breakthrough; or

(c) Seal the breakthrough of acid water so that it cannot flow. Such seals shall be constructed of stone, brick, block earth or other impervious materials which are acid resistant.

3. Alternate methods of handling discharges from breakthroughs may be employed where it can be established that applicable effluent limitations can be met.

e. 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.

f. Surface water shall not be diverted or otherwise discharged into underground mine workings, unless the person who conducts the mining activities demonstrates to the director that this will-

1. Abate water pollution or otherwise eliminate public hazards resulting from surface mining activities, and

2. Be discharged as a controlled flow, meeting applicable effluent limitations for pH and total suspended solids, except that the pH and total suspended solid limitations may be exceeded, if approved by the director, and is limited to-

(a) Coal processing waste;

(b) Fly ash from a coal-fired facility,

(c) Inert materials used for stabilizing underground mines; or

(d) Underground mine development wastes;

3. In any event, the discharge into underground mines of surface waters will not cause, result in or contribute to a violation of applicable water quality standards or effluent limitations,

4. Minimizes disturbance to the hydrologic balance; and

5. Meets with the approval of the Mine Safety and Health Administration.

7B.05 Discharge from Underground Operations No person shall locate openings for new drift mines working in acid producing or iron producing coal seams in such a manner that the mine will have a gravity discharge unless it is:

a. Demonstrated and the director so finds that health and safety factors clearly override environmental concerns, or

b. Demonstrated and the director so finds that any untreated discharge will not violate Federal and State effluent limitations and water quality standards.

7B.06 Acid Producing and Toxic Materials

a. Drainage from acid-forming and toxic forming materials into ground and surface water shall be avoided by:

1. Identifying, burying, blending and/or treating where necessary, spoil or other materials that will be toxic to vegetation or that will adversely affect water quality within thirty (30) days after it is first exposed or a lesser period if required by the director. Such materials shall be handled in accordance with methods set forth in the approved pre-plan; and

2. Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course or ground water system so as to cause or pose a threat of water pollution.

b. Treatment of Toxic Material - All exposed coal seams remaining after mining and any acid-forming, toxic-forming, combustible materials, or any other waste materials that are exposed, shall be covered with a minimum of four feet (4') of nontoxic and noncombustible material; or tested, treated and blended to provide materials suitable to prevent water pollution. If necessary, this material shall be treated to neutralize toxicity in order to prevent water pollution and sustained combustion and/or to minimize adverse effects on plant growth and land uses. Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local conditions, the director shall specify thicker amounts of cover using non-toxic material.

7B.07 Monitoring Requirements

a. Surface Water Monitoring

1. The operator shall record normal and abnormal variations in precipitation daily by using rain gauges.
2. All water discharged from the permit area shall be sampled analyzed and otherwise monitored in accordance with the Clean Water Act of 1977 and all applicable standards of the NPDES program, and a monthly report of all measurements shall be submitted to the director; provided that all violations of effluent standards shall be reported to the director within five (5) days of receipt of analytical analyses ;

3. Where any discharge from the permit area require treatment during the mining operation in order to meet the water quality standards set forth in Section 6B.04 of these regulations, surface water monitoring of such discharges shall continue following grading approval. If it is established on the basis of such monitoring that the hydrologic balance is being preserved without treatment, the treatment facilities may be removed. A one year history of meeting the water quality standards of 7B.04 shall be adequate to establish that the hydrologic balance is being preserved.

b. Ground Water Monitoring

1. When operations are conducted in such a manner that may affect the ground water system, ground water levels and ground water quality shall be periodically monitored in a manner that can adequately reflect changes in ground water quality and quantity resulting from such operations. The director may require development of additional monitoring sites if needed, to adequately monitor the ground water system or such other monitoring criteria as he may require.
2. Samples shall be collected from monitoring sites and tested a minimum of once per month and include; ground water levels, pH, iron, total acidity, total alkalinity and total suspended solids and any other such parameters that the director deems necessary.
3. A written record of the testing dates and analytical data shall be kept current and made availabe for inspection at the operation, and a monthly report of all data shall be provided to the director.

7B.08 Method of Operation

a. Steep Slope Mining

1. Applicability - On surface mining operations where the natural slope exceeds twenty degrees (20°), the provisions of this section in addition to other applicable provisions of these regulations, shall apply. On lesser slopes that require measures to protect the area below the mining operation from disturbance as determined by the director on the basis of consideration of soils, climate, method of operation, geology, and other regional characteristics, the provisions of this section, in addition to other applicable provisions of these regulations, shall also apply.

2. Downslope Placement - Spoil or debris, including that from clearing and grubbing, shall not be placed on the downslope except in specified fill areas designed for such placement; provided that nothing in this section shall prohibit the placement of materials in haulroad or acess road fills on slopes steeper than twenty degrees (20°) so long as the fills are constructed in accordance with Section 4A.03 b of these regulations.

3. Highwall Elimination - The highwall shall be eliminated and the disturbed area graded to the approximate original contour. Spoil material in excess of that required for the reconstruction of the approximate oreiginal contour shall be permanently stored in accordance with Section 7B.09 of these regulations. Land above the highwall shall not be disturbed unless the director finds 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) Comply with applicable health and safety laws.

4. Stabilization - The material used to backfill and eliminate the highwall shall be sufficiently compacted or otherwise mechanically stabilized so as to insure stability of the backfill. The method and design specifications of compacting material shall be approved by the director. Woody materials shall not be buried in the backfilled area unless the director determines that the proposed method for placing woody material beneath the highwall will not deteriorate the stable condition of the backfilled area. The operation shall at a minimum retain all overburden and spoil on the solid portion of existing or new benches and backfill and grade to the most moderate slope possible which does not exceed the angle of repose or such lesser slope as in necessary to achieve a minimum static safety factor of 1.3.

5. Drainage Channels and Flumes - When mining through natural watercourses or when water is to be directed across or through the backfill, a drainage channel, flumes or french drains must be constructed across or through the backfill in order to insure stability and to prevent erosion. Such drainage channels, flumes or french drains shall be constructed of durable rock, asphalt, concrete or any other material approved by the director. Channels, flumes and drains shall be constructed in accordance with criteria contained in the Drainage Handbook for Surface Mining.

b. Inactive Status - Inactive operation status will be considered for a period not to exceed one (1) year from date of approval; provided that prior written approval is obtained from the director. Provided further that inactive status shall not be approved unless the operator demonstrates that reclamation is current and all water management practices will be maintained during the inactive period and all exposed coal is covered with non-toxic material. The director may also require progress maps prior to approval. All entries temporarily abandoned must be protected from unauthorized entry. Where it can be adequately demonstrated by the permittee that inactive status to exceed one (1) year is necessary, the director may extend inactive status beyond the one (1) year limitation.

c. Requirements for Special Land Use Purposes

1. Alternative Plans - Alternative plans for restoration of the disturbed area may be submitted to the director at the end of the coal extraction phase of mining if the application demonstrates a return to the pre-mining land use capability. If such restoration will be consistent with the purposes of the Act and if such plans are approved by the director and complied with within such time limits as may be determined by him as being reasonable for carrying out such plans, the backfilling and grading requirements of these regulations may be modified,

2. Water Impoundments - Prior to the construction of an impounding area for the storage of water after mining, approval must be obtained from the director for such impoundment. The Division of Water Resources will cooperate with the Division of Reclamation in reviewing all portions of any plan for water impoundments as they relate to water quality and will give its recommendations therefore, to the Division of Reclamation. The contents of this plan will include, but are not limited to, the following:

   (a) Location of the impounding area;

   (b) Dimensions of the area as to capacity and depth (average, maximum and minimum);

   (c) Plot plan of impoundment area;

   (d) Source of water entering the impoundment;

   (e) Quality of the water entering the impoundment;

   (f) Quality of water leaving the impoundment and mechanism of discharge;

   (g) Coal seam or seams mined or involved with impoundment;

   (h) Chemical characteristics of the soils and underlying strata in the impoundment area as they relate to acid production;

   (i) Safety aspects considered such as spillway overflow, emergency spillway, access to area; and

   (j) Consent of the landowner for such impoundment with submission on specified forms; and

   (k) Projected stability of water level in the impoundment.

3. Waste Disposal - Where waste materials such as filter cake, municipal wastes, chemical sludge, etc., are deposited upon the permit area, plans for such deposition shall require prior approval of the director. Such plans for waste disposal shall be accompanied by the written approval of the Division of Water Resources and where appropriate, the State Department of Health.

7B.09 Disposal of Excess Spoil

a. General Requirements - Spoil not required to achieve the approximate original contour shall be transported to and placed in a controlled manner in designated disposal areas within the permit area in accordance with the provisions of the Act as approved in the pre-plan; and in accordance with the design criteria and specifications found in the Technical Handbook. Coal processing wastes and/or toxic material shall not be disposed of in head-of-hollow or valley fills, unless such fills are specifically and exclusively designated for that purpose in accordance with Section 10 of these regulations.

b. Disposal of Excess Spoil on Existing Benches - Spoil material not required to return the area to the approximate original contour may be placed on a pre-existing bench if the following conditions are met:

1. All excess spoil must be hauled, placed and retained on the solid portion of the a bench abandoned as of August 3, 1977; and
2. The spoil must be compacted or otherwise mechanically stabilized and the existing highwall eliminated to the extent possible with the available spoil.

c. Other design criteria may be approved if fills are constructed in accordance with 30 CFR 816 or 817, or if fills are justified as an experimental practice under section 33 of the Act.

d. Location of Sediment Control Structures - All sediment control structures for fill areas shall be as contiguous with the spoil disposal area as is economically and technologically feasible but not in such proximity so as to affect mass stability.

e. Disturbance Within Fill Site - At no time shall the disturbance in the valley fill area be greater than the sediment storage requirement provided by the sediment structures until two or more lifts of the valley fill have been installed.

7B.10 Site Development

a. Time Schedule for Site Excavation - The time schedule for site excavation shall be consistent with the approved pre-plan and shall provide for minimum disturbance at any one time consistent with environmentally sound procedures. Regrading and stabilization of all areas disturbed in the development of the mine site shall proceed as contemporaneously as practicable. In any event, all required drainage system components and haulroads shall be installed in accordance with the approved pre-plan prior to any disturbance for site development.

1. Temporary Revegetation - All topsoil and spoil storage areas which will be in place for more than six months but less than one year shall at a minimum be seeded and mulched so as to establish a satisfactory stand of temporary vegetative cover. This seeding and mulching must be done within thirty (30) days of completion of the storage area.
2. Permanent Revegetation - All topsoil, spoil storage, and other disturbed areas which will be in place for longer than one year shall be seeded and mulched so as to establish a satisfactory permanent vegetative cover. Trees shall be required only on those areas that:
   (a) Will not be redisturbed by future reclamation activities, or
   (b) Are necessary in order to meet the approved post-mining land use. Seeding and planting of these areas shall be conducted during the first normal seeding season after the completion of the disturbance.

b. Mine Site Organization and Aesthetics -Indiscriminate dumping or discarding or acid-producing or toxic-producing materials, litter, refuse, junked equipment, containers, etc. shall be prohibited. These materials shall be placed in areas specifically designated for their storage or disposal, as indicated in the pre-plan. Regrading and revegetation of the disturbed areas shall be planned and carried out where possible in a manner which results in the covering or screening of offensive and unsightly areas.

7B.11 Backfilling and Regrading

a. Operator Responsibility - In planning and executing underground mining operations, the operator shall, at all times, have proper regard for all backfilling and regrading requirements, imposed by the Act and all rules and regulations adopted pursuant thereto, and all provisions of the approved pre-plan.

b. Time Schedule for Regrading and Backfilling - Regrading and backfilling will proceed as contemporaneously as practicable with mining operations and as reflected on the approved mining and reclamation plan, Provided however, that final backfilling and regrading shall be completed within 60 days of completion of underground mining. Should particular site conditions or weather make adherence to these guidelines impractical, the period of time or the distance required to be current may be reasonably extended.

c. Revegetation shall be kept current by establishing a temporary or permanent vegetative cover on regraded areas by the end of the first growing season and a permanent vegetative cover by the end of the second growing season. Standards and procedures for establishing a satisfactory vegetative cover and guidelines for species selection and application rates are found in Section 4F of these regulations.

d. Variances from Highwall Elimination - All underground mining operations which were in existence and which created highwalls prior to August 3, 1977 shall not be required to eliminate the highwall if the operator can demonstrate that it is economically or technologically infeasible, by virtue of the fact that there is an insufficient amount of spoil material within the proximity of the mine site, the operator shall utilize all available material to eliminate

as much of the highwall as possible to achieve highwall elimination. At a minimum, the operator shall be required to seal all underground openings and to cover the exposed coal seam with a minimum of four feet of non-acid producing materials. Where highwalls are created or pre-existing highwalls are reaffected after August 3, 1980, they must be eliminated upon completion of mining and reclamation. In the event that reshaping of a pre-existing highwall is ordered by a State or Federal agency for safety reasons, such reshaping will not be deemed reaffecting a pre-existing highwall and the requirements to eliminate the highwall shall not be imposed.

e. Bench Surface - The surface of the regraded bench shall be graded so as to permit the use of farm implements and machinery.

f. Grading Outer Spoil - All outer spoil shall be graded so as to blend into the adjoining undistrubed lands.

g. Rills and Gullies - When rills and gullies deeper than nine inches form in areas that have been regraded and topsoiled, the rills and gullies shall be filled, graded or otherwise, mechanically stabilized and the area reseeded. Rills or gullies less than nine inches deep shall be regraded and reseeded if the rills and gullies interfere with the approved post-mining land use.

h. Reaffecting Previously Mined Areas - Where underground mining operations are reaffecting previously mined lands that have not been restored to the standard of these regulations and sufficient spoil is not available to otherwise comply with these regulations, the permittee shall at a minimum retain all overburden and spoil on the solid portion of existing or new benches and backfill and grade to the most moderate slope possible which does not exceed 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 must be eliminated.

i. Regraded Drainage Control - Drainage control on regraded areas shall be provided as approved in the pre-plan to prevent excessive erosion or additional contribution of suspended solids to the receiving stream, ensure safety, and conserve soil moisture. Drainage control measures include, but are not limited to, diversion ditches, flumes and rip-rap channels, tracking in, small depressions and other devices that may be approved by the director.

7C. Subsidence Control

7C.01 Public Notice 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, as a minimum:

a. Identification of specific areas in which mining will take place;

b. Dates of mining activities that could cause subsidence and affect specific structures; and

c. Measures to be taken to prevent or control adverse surface effects.

7C.02 Surface Owner Protection

a. Each person who conducts underground mining activities shall adopt all measures approved by the director to reduce the likelihood of subsidence, to prevent subsidence 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.

b. Each person who conducts underground mining which results in subsidence

that causes material damage or reduces the value or reasonably foreseeable use of the surface lands shall, with respect to each surface area affected by subsidence-

1. Restore, rehabilitate, or remove and replace each damaged structure, feature or value, promptly after the damage is suffered, to the condition it would be in if no subsidence had occurred and restore the land to a condition capable of supporting reasonably foreseeable uses it was capable of supporting before subsidence.
2. Purchase the damaged structure or feature for its fair market, pre-subsidence value and shall promptly after subsidence occurs, to the extent technologically and economically feasible, restore the land surface to a condition capable and appropriate of supporting the purchased structure, and other foreseeable uses it was capable of supporting before mining. Nothing in this paragraph shall be deemed to grant or authorize an exercise of the power of condemnation or the right of eminent domain by any person engaged in underground mining activities; or
3. Each person who conducts underground mining activities will compensate the owner of any surface structure in the full amount of the diminution in value resulting from subsidence, by purchase prior to mining of a noncancellable, premium prepaid insurance policy or other means approved by the director assuring before mining begins that payment will occur, indemnify every person with an interest in the surface for all damages suffered as a result of the subsidence; and, to the extent technologically and economically feasible, fully restore the land to a condition capable of maintaining reasonably foreseeable uses which it could support before subsidence.

7C.03 Buffer Zones

a. 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, unless the director, 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 to prevent additional subsidence from occurring.

b. Underground mining activities beneath any aquifer that serves as a significant 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 director may prohibit mining in the vicinity of the aquifer or may limit the percentage of coal extraction to protect the aquifer and water supply.

c. Underground mining activities shall not be conducted beneath or in close proximity to any public buildings, including but not limited to churches, schools, hospitals, courthouses and government offices, unless the director, 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.

d. The director 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.

7C 04 Subsidence control plan -The application shall include a survey which shall show whether structures or renewable resource lands exist within the proposed permit and adjacent area and whether subsidence, if it occurred, could cause material damage or diminution of reasonable foreseeable use of such structures or renewable resource lands. If the survey shows that no such structures or renewable resource lands exist, or no such material damage or diminution could be caused in the event of mine subsidence, and if the director agrees with such conclusion, no further information need be provided in the application under this Section. In the event the survey shows such structures or renewable resource lands exist, and that subsidence could cause material damage or diminution of value or foreseeable use of the land, or if the director determines that such damage or diminution could occur, the application shall include a subsidence control plan which shall contain the following information :

a. A detailed description of the mining method and other measures to be taken which may affect subsidence, including:

   1. The technique of coal removal, such as longwall mining, room and pillar with pillar removal or other methods; and

   2. The extent, if any, to which planned and controlled subsidence is intended.

b. A detailed description of the measures to be taken to prevent subsidence from causing material damage or lessening the value or reasonable foreseeable use of the surface, including:

   1. The anticipated effects of planned subsidence, if any;

   2. Measures, if any, to be taken in the mine to reduce the likelihood of subsidence, including such measures as; and

      a. Backstowing or backfilling of voids;

b. Leaving support pillars of coal; and

c. Areas in which no coal removal is planned, including a description of the overlying area to be protected by leaving coal in place.

3. Measures to be taken on the surface to prevent material damage or lessening of the value or reasonably foreseeable use of the surface including such measures as:

a. Reinforcement of sensitive structures or features;

b. Installation of footers designed to reduce damage caused by movement;

c. Change of location of pipelines, utility lines or other features;

d. Relocation of moveable improvements to sites outside the angle-of-draw.

c. Monitoring, if any, to determine the commencement and degree of subsidence so that other appropriate measures can 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:

1. Restoration or rehabilitation of structures and features, including approximate land-surface contours, to premining condition; and/or

2. Replacement of structures destroyed by subsidence; and/or

3. 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, and/or

4. Purchase of non-cancellable insurance policies payable to the surface owner in the full amount of the possible material damage or other comparable measures.

d. 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-

1. The results of pre-subsidence surveys of all structures and surface features which might be materially damaged by subsidence; and
2. Monitoring, if any, proposed to measure deformations near specified structures or features or otherwise as appropriate for the operation.

8A. PERMIT REQUIREMENTS

8A.01 General - In addition to information required by the Act and these rules and regulations an application for a permit for facilities required for, or used incidentally to, the operation of a mine, including, but not limited to, mine buildings, coal loading facilities at or near the mine site, coal storage facilities, preparation plants, tipples, etc., shall contain the following:

a. Return receipts of notification of all owners of record of surface and subsurface area contiguous to any part of the proposed permit area. Such notification shall contain information required in the legal advertisement.

b. Notarized affidavit of publication setting forth the dates the advertisement appeared and bearing original signatures. The advertisement shall list the address of the local reclamation office where the application is available for public inspection; and

c. Submit accurate maps in accordance with the following:

   1. The size of the maps shall be no larger than 24" x 36";
   2. The map scale shall be such that the information is clear and legible with a preferred scale of 1 inch = 200 feet .
   3. A separate drainage map shall be required unless all necessary information can be clearly and legibly reflected on the pre-plan map;

4. Approximate boundaries and locations of surface mining operations in close proximity;
5. Show by appropriate markings the boundaries of the area of land to be disturbed and the total number of acres involved in the area of land to be disturbed;
6. Show the date on which the map was prepared, a north arrow, quadrangle name, and location map;
7. Show the location of all spoil storage areas, topsoil preservation areas and all other areas utilized for the loading, storage, or processing of coal or coal waste and refuse. Where any such areas are to be prepared under separate permits, a statement to that effect must be made a part of the permit application with a reference to the location of these proposed permit areas in the mine plan map as required under the provisions of Section 11 (a) (1), of the Act.
8. Show all impoundments for waste, water treatment and all drainage and sediment control facilities;
9. Indicate location and percent slope at each 200' interval perpendicular to a surveyed baseline;
10. Show the drainage plan in accordance with 4B of these regulations;
11. Show the location of all rain gauge monitoring sites. If monitoring sites are not within range of the map, supplimental maps or other descriptions may be substituted.

8A.02. Hydrologic Information -The application shall contain a statement describing the probable hydrologic consequences of the mining operations, both on and off the mine site with respect to the hydrologic balance provided that modeling techniques may be included as part of the application. This statement shall describe:

a. Ground Water Hydrology

1. The depth below the surface and horizontal extent of the water table and/or aquifers if encountered;
2. Known or potential uses of the water in the aquifer and/or water table;
3. The lithology and thickness of the aquifers;
4. The quality of the water in the aquifer and/or water table if encountered; and
5. Other information as required by the director which describes recharge, storage and discharge characteristics of aquifers as necessary to make the determination of the probable cumulative impacts of all anticipated mining in the area upon the hydrology of the area, and particularly upon water availability.
6. Ground Water Quality -Laboratory analysis of samples shall be taken at regular monthly intervals for a period not less than 6 consecutive months prior to application submission for pH, iron, suspended solids, dissolved solids, hot total acidity, total alkalinity, specific conductance, and temperature. On-site field analysis of pH, iron, specific conductance and temperature shall also be recorded. Permanent monitoring sites shall be established utilizing bore holes established to make the determination required in 8A.03, existing wells, springs, seeps

and/or other such sources containing water from aquifers or the water tables which will be encountered or may reasonably be expected to be impacted by the mining operation; provided that information made available to the director showing the geological configuration of the area and the ground water system shall be the basis on which the determination shall be made as to whether or not the aquifers or water tables could be impacted.

b. Surface Water -The application shall contain data which accurately predicts premining surface water quality and quantity both on and off the mine site within the local limits of the drainage area which will be impacted by the mining. Such data shall be at a minimum but not limited to the following:

1. Water Quality -Laboratory analysis of samples shall be taken at regular monthly intervals for a period not less than 6 consecutive months prior to application submission for pH, iron, suspended solids, dissolved solids, hot total acidity, total alkalinity, specific conductance and temperature. On-site field analysis of pH, iron, specific conductance and temperature shall also be recorded. Permanent monitoring sites will be established for the collection of this data at locations upstream and downstream from the proposed permitted area on all intermittent or perennial streams receiving drainage from the proposed permit area and on all receiving streams above and below the confluence of tributaries receiving the drainage from the proposed permit area.

2. Water Quantity -Field flow data shall be taken at the same time and location as required in 8A.02 (b) (1) by use of weirs, flow meters or other similar apparatus.

c. The application shall contain a statement of the climatological factors representative of the proposed permit area. Permanent rain gauge monitoring sites will be established at a suitable location on the mine site or in the general vicinity of the proposed permit area so as to accurately reflect the average seasonal precipitation. Data collected at such monitoring sites will be contained in the permit application and will reflect at a minimum but not limited to the measurement of precipitation during a 24-hour period at regular monthly intervals for a period of not less than 6 consecutive months prior to application submission. Where such information is available from alternate sources and if such information is deemed to be accurate, the director may accept the alternate information.

8A.03 The application shall contain a description of the geology of the permit area.

a. Test borings or core samples from the proposed permit area shall be collected and analyzed down to and including the stratum immediately below the lowest stratum to be excavated or disturbed to provide the following data in the description:

1. Location of subsurface water, if encountered;
2. Logs of drill holes showing the lithologic characteristics and thickness of each stratum and coal seam, if any;
3. Physical properties of each stratum within the overburden including compaction and erodability;

4. Chemical analyses of each stratum within the overburden and the stratum immediately below the lowest stratum to be excavated or disturbed to identify, at a minimum, those horizons which contain potential acid-forming, toxic-forming, or alkalinity producing materials. These analyses shall, unless otherwise provided by the director or by law or regulation, be determined by using standard procedures found in EPA Manual 600/2-78-054 (Field and Laboratory Methods Applicable to Overburden Minesoils); and
5. Analyses of the coal seam, if any, including, but not limited to, an analyses of the sulphur, pyrite, and marcasite content and the clay content of the stratum immediately below the coal seam.

b. In the event that any part of the data required under this subsection is available to the operator from previous investigations on the proposed permit area or adjacent areas with similar characteristics and such other data is deemed acceptable to the director, in writing, it may be used in lieu of development of new data.

8A.04 Reclamation Plan

a. General - In addition to the requirements of Section 11 of the Act all facilities covered under this Section are subject to the following provisions;
   1. A timetable for the construction of new facilities including a schedule for:
      (a) Site Preparation,
      (b) Construction of drainage systems;
      (c) Relocation of streams, if necessary, and the construction of temporary and permanent stream channels;

(d) Construction of fills and disposal sites; and

(e) Construction of buildings and facilities.

8A.05 Permanent Facilities Exemptions -To qualify for an exemption from the Act and these regulations for permanent facilities not within the area being mined the applicant shall:

a. Indicate the exact location of the facility and the applicant's closest permit area.

b. Describe its present use. The use proposed for the facility while the applicant is actively mining in the county wherein the facility is located and the proposed use of the facility after the applicant finishes all mining.

c. Submit a verified statement stating that the permanent facility is not and will not be directly involved in the extraction, loading, storage or processing of coal.

8A.06 The director shall not grant an exemption until:

a. The applicant has submitted the information required by Section 8A.05.

b. The director has inspected the site, and

c. The director has determined that the permanent facility is not or will not be located within any area being mined which for purposes of this section means a permit area.

8B. PERFORMANCE STANDARDS

8B.01 Signs and Markers

a. Permanent Monument - A permanent mounument shall be posted at the entrance from public roads and highways and at other suitable locations. The monument shall consist of a sign constructed of wood, metal, or other suitable material 2' x 3' mounted on a two-inch pipe driven three feet into the ground with four feet exposed. Any suitable equivalent substitute may be approved. The sign shall clearly indicate the company name, permit numbers, business address and telephone number.

b. Perimeter Marker - A two-inch (2") pipe or suitable substitute shall be driven into the earth with a minimum of three feet (3') exposed to permanently mark the beginning and ending points of the area under permit. It shall be identified by painting the exposed portion of the pipe red. The assigned permit number shall be affixed to the permanent perimeter marker. Other markers will be used to delineate the boundaries of the proposed permit area.

c. Buffer Zone Markers - Appropriate markers will be established along a buffer zone. Markers shall consist of metal or wooden stakes or other suitable devices or methods.

d. Topsoil Markers - When topsoil of other vegetation supporting material is segregated and stockpiled, the stockpiled material shall be marked. Markers shall remain in place until the materials are removed.

e. Blasting Signs - If blasting is necessary to conduct surface mining operations, signs reading "Blasting Area" shall be displayed conspicuously at all approaches to the blasting site and along haulageways and access roads to the facility and all entrances to the permit area. The sign shall be two feet by three feet (2' x 3') reading

"Blasting Area" and explaining the blasting warning and the all clear signals.

f. Slope Measurement - Slope measurement locations shall be clearly marked prior to pre-inspection at each 200' interval along the base line established in the pre-plan.

8B.02 Casing and Sealing of Holes - All boreholes, shafts, wells, and auger holes shall be cased, sealed or otherwise managed to prevent pollution of surface or ground water and to prevent mixing of ground waters of significantly different quality in accordance with the approved pre-plan. All boreholes within the permit area surface coal mining which extend beneath the coal seam or stratum to excavated or disturbed and into water bearing strata shall be permanently plugged unless the boreholes have been approved for use in Section 6A.02 (a) (6) for monitoring.

8B.03 Topsoil -

a. Removal-Prior to disturbance of an area topsoil shall be removed from the area to be disturbed in a separate layer and if not immediately redistributed, it shall be segregated and stockpiled in a separate stable location as specified in the pre-plan.

1. Where the removal of vegetative material, topsoil, or other materials may result in erosion, the director may limit the size of the area from which these materials are removed at any one time.

2. Topsoil or substitute materials not being immediately utilized shall be redistributed at a time when the physical and chemical properties of topsoil can be protected and erosion can be minimized; Provided that the director may approve or deem necessary that other erosion control measures be utilized; Provided further,

that unless approved by the director, stockpiled topsoil and other materials shall not be moved until required for redistribution on a regraded area.

b. Materials to be removed-If the topsoil is less than 6 inches, a 6-inch layer that includes the A horizon and the unconsolidated material immediately below the A horizon and all unconsolidated material if the total available is less than 6 inches, shall be removed and the mixture segregated and redistributed as the surface soil layer, unless topsoil substitutes are approved by the director pursuant to 8B.03.e of this Section. When it can be demonstrated that the B horizons and portions of the C horizons or other underlying layers have qualities for comparable root development and are necessary or desirable to ensure soil productivity consistent with the approved post-mining land use, the director may require these layers to be segregated and replaced as topsoil.

c. Segregation Requirements - Topsoil not being immediately utilized shall be protected from wind and water erosion and kept free of contamination of acid or toxic materials. Protective measures include, but are not limited to, vegetative cover, snow fences, etc.

d. Redistribution - Topsoil and other materials shall as required by the director be redistributed in a manner that:

1. Achieves an approximate uniform, stable thickness, consistent with the approved post mining land uses, contours and surface water drainage system;
2. Prevents excess compaction of topsoil; and
3. Protects the topsoil from wind and water erosion before and after it is seeded.

4. After final grading and before the replacement of topsoil and other materials segregated in accordance with this section, regraded land shall be scarified or otherwise treated as required by the director to eliminate slippage surfaces and to promote root penetration. If the person who conducts the surface mining activities shows, through appropriate tests, and the director approves, that no harm will be caused to the topsoil and vegetation, scarification may be conducted after topsoiling.

e. Top Soil Substitutes - If top soil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation. Any material used for topsoiling must be capable of supporting and maintaining the approved post mining land use. This determination shall be based on the results of appropriate chemical and physical analysis of overburden and topsoil. These analysis shall include:

1. Determinations of pH, net acidity or alkalinity, nitrogen, phosphorus, potassium, texture class, calcium, manganese and other analyses as may be required by the director. The director may also require, where he deems necessary, results of field-site tests or greenhouse tests be used to demonstrate the feasibility of using substitute materials;

2. Results of analyses, trials and tests shall be included in the pre-plan. Certification of trials and tests shall be made by a laboratory approved by the director stating that:

(a) The proposed substitute material is equal to or more suitable for sustaining the vegetation than is the available topsoil;

(b) The substitute material is the best available material to support the vegetation; and

(c) The trials and tests were conducted using standard testing procedures, the results of which shall be included in the pre-plan.

f. Nutrients and Soil amendments in the amounts determined by soil tests shall be applied to the redistributed surface soil layer, so that it supports the approved postmining land use and meets the revegetation requirements of Section 4F. All soil tests shall be performed by a qualified laboratory using standard methods approved by the director. These tests shall include nutrient analysis and lime requirement tests. Results of these tests shall be submitted to the director with the final planting report as required by Section 4F.09.a.

8B.04 Water Quality Standards

a. Water Quality Control - All reasonable measures shall be taken to intercept all surface water by the use of diversions, culverts and drainage ditches or other methods to prevent water from entering the permit area. The water leaving the permit area shall not violate the water quality standards established for such river, stream or drainway into which it is discharged. All surface drainage from the disturbed area must pass through a sediment pond or series of sediment ponds or other approved sediment control structures or treatment control structures.

b. Water Quality Standards -Discharge from the permit area shall not in any case violate Federal or State water quality standards or effluent limitations. The monitoring frequency shall be governed by the standards set forth in the NPDES Program under the Federal Water Pollution Control Act as amended, 33 U.S.C. 1251 et. seq. and the rules and regulations promulgated thereunder.

1. Before grade release, no discharge from the permit area shall have a pH of less than 6.0 or greater than 9.0 or an iron content exceeding 7 parts/million maximum allowable and 3.5 parts/million average daily values for 30 consecutive discharge days or an iron content exceeding 6 parts/million maximum allowable and 3.0 parts/million average daily values for 30 consecutive discharge days for new sources as defined by 40 CFR Section 434.11(i).
2. After grade release, discharges from the permit area shall meet applicable water quality standards.

c. Treatment Facilities - Adequate facilities shall be installed, operated, and maintained using the best technology currently available in accordance to the approved pre-plan to treat any water discharged from the permit area so that it complies with all federal and state laws and regulations and the limitations of this section. Non-mechanical treatment systems may be utilized if flow is infrequent or small and timely and consistent treatment is assured.

d. 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.

e. Breakthrough

1. Any surface breakthrough of water caused by the operator during the course of his operations shall be sampled immediately and analyzed for total iron, total suspended solids and pH and if requested by the director, any other parameter characteristics of the discharge. Such analysis shall be made by a competent water analyst or chemist. The original and at least one copy of such analysis shall be retained by the operator, two copies shall be submitted to the chief of the division of reclamation.

2. Should said analysis indicate the water to be less than the applicable effluent limitations, seals shall be immediately constructed. These seals shall;

   (a) Prevent any air from entering the underground mine by way of the breakthrough; or

   (b) Prevent any air from entering the breakthrough while allowing the water to flow from the breakthrough; or

   (c) Seal the breakthrough of acid water so that it cannot flow. Such seals shall be constructed of stone, brick, block earth or impervious materials which are acid resistant.

3. Alternate methods of handling discharges from breakthroughs may be employed where it can be established that applicable effluent limitations can be met.

f. Surface water shall not be diverted or otherwise discharged into underground mine workings, unless the person who conducts the surface mining activities demonstrates to the director that this will-

1. Abate water pollution or otherwise eliminate public hazards resulting from surface mining activities; and

2. Be discharged as a controlled flow, meeting applicable effluent limitations for pH and total suspended solids, except that the pH and total suspended solid limitations may be exceeded, if approved by the director, and is limited to-
   (a) Coal processing waste;
   (b) Fly ash from a coal-fired facility;
   (c) Inert materials used for stabilizing underground mines or;
   (d) Underground mine development wastes;
3. In any event, the discharge into underground mines of surface waters will not cause, result in or contribute to a violation of applicable water quality standards or effluent limitations;
4. Minimizes disturbance to the hydrologic balance; and
5. Meets with the approval of the Mine Safety and Health Administration.

8B.05 Acid Producing and Toxic Materials

a. Drainage from acid-forming and toxic forming materials into ground and surface water shall be avoided by:
   1. Identifying, burying, blending and/or treating where necessary, spoil or other materials that will be toxic to vegetation or that will adversely affect water quality within thirty (30) days after it is first exposed or a lesser period if required by the director. Such materials shall be handled in accordance with methods set forth in the approved pre-plan; and
   2. Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course or ground water system so as to cause or pose a threat of water pollution.

b. Treatment of Toxic Material - Any acid-forming, toxic-forming, combustible materials, or any other waste materials that are exposed, shall be covered with a minimum of four feet (4') of nontoxic and noncombustible material; or test, treat and blend material to provide materials suitable to prevent water pollution. If necessary, this material shall be treated to neutralize toxicity in order to prevent water pollutions and sustained combustion and/or to minimize adverse effects on plant growth and land uses. Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local conditions, the director shall specify thicker amounts of cover using non-toxic material.

8B.06 Monitoring Requirements

a. Surface Water Monitoring:

1. The operator shall record daily normal and abnormal variations in precipitation, by using rain gauges.
2. All water discharged from the permit area shall be sampled and analyzed daily by the operator for total iron, pH and flow and for any other parameter required by the director . Samples shall be collected and analyzed for suspended solids by-monthly and within 12 hours after a precipitation event of 1" or greater.
3. A written record of the sampling dates and analytical data shall be kept current and made available for inspection at the operation; and a monthly report of all measurements shall be provided to the director. Any violations of effluent standards shall be reported to the director within five (5) days of receipt of analytical analyses.

4. Where any discharge from the permit area requires treatment during the mining operation in order to meet the water quality standards set forth in Section 8B.04 of these regulations, surface water monitoring of such discharges shall continue following grading approval. If it is established on the basis of such monitoring that the hydrologic balance is being preserved without treatment, the treatment facilities may be removed. A one year history of meeting the water quality standards of 8B.04 shall be adequate to establish that the hydrologic balance is being preserved.

b. Ground Water Monitoring

1. Where it has been determined as set forth in the pre-plan that the surface mining operations will result in the removal or disturbance of strata that serve as significant aquifers then the operator shall establish monitoring sites that can adequately reflect changes in ground water quantity and quality resulting from such operation.
2. Samples shall be collected from monitoring sites and tested a minimum of once per month and shall include; ground water levels, pH, iron, total acidity, total alkalinity and total suspended solids or any other such parameter that the director deems necessary.
3. A written record of the testing dates and analytical data shall be kept current and made available for inspection at the operation, and a monthly report of all data shall be provided to the director.

8B.07 Method of Operation

a. Steep Slope Mining

1. Applicability - On surface mining operations where the natural slope exceeds twenty degrees (20°), the provisions of this section in addition to other applicable provisions of these regulations, shall apply. On lesser slopes that require measures to protect the area below the operation from landslides or other similar disturbances as determined by the director on the basis of soils, climate, method of operation, geology, and other regional characteristics, the provisions of this section, in addition to other applicable provisions of these regulations, shall also apply.

2. Downslope Placement - Spoil or debris, including that from clearing and grubbing, shall not be placed on the downslope except as provided for in Section 8B.08 of these regulations. Windrowing timber at an immediately below the cropline for erosion control may be approved by the director where the permittee can demonstrate such placement will not reduce stability and will enhance erosion control or wildlife habitat. Nothing in this section shall prohibit the placement of materials in haulroad or access road embankments on slopes steeper than twenty degrees (20°) so long as the embankments are constructed in accordance with Section 4A.03b of these regulations.

3. Highwall Elimination - The highwall shall be eliminated and the disturbed area graded to the approximate original contour. Spoil material in excess of that required for the reconstruction of the approximate original contour shall be permanently stored in accordance with Section 8B.08 of these regulations. Land above the highwall shall not be disturbed unless the director finds that the disturbance is necessary to:
   (a) Blend the solid highwall and the backfilled material;
   (b) Control surface runoff; or
   (c) Provide access to the area above the highwall.
   (d) Comply with applicable health and safety laws.
4. Stabilization - The material used to backfill and eliminate the highwall shall be sufficiently compacted or otherwise mechanically stabilized so as to insure stability of the backfill. the method and design of specifications of compacting material shall be approved by the director. Woody materials shall not be buried in the backfilled area unless the director determines that the proposed method for placing woody material beneath the highwall will not deteriorate the stable condition of the backfilled area. The operation shall at a minimum retain all overburden and spoil on the solid portion of existing or new benches and backfill and grade to the most moderate slope possible which does not exceed the angle of repose or such lesser slope as in necessary to achieve a minimum static safety factor of 1.3.

5. Drainage Channels and Flumes - When construction activities progress through natural watercourses, or when water is to be directed across or through the operation or backfill, a drainage channel, flume, or french drain must be constructed across or through the operation or backfill in order to insure stability and to prevent erosion. Such drainage channels, flumes or french drains shall be constructed of durable rock, asphalt, concrete or any other material approved by the director. Channels, flumes and drains shall be constructed in accordance with criteria contained in the Technical Handbook for Surface Mining.

b. Inactive Status - Inactive operation status will be considered for a period not to exceed one (1) year from date of approval, provided that prior written approval is obtained from the director; Provided further that inactive status shall not be approved unless the operator demonstrates that reclamation is current and all water management practices will be maintained during the inactive period and all exposed coal is covered with non-toxic material. The director may also require progress maps prior to approval. Where it can be adequately demonstrated by the permittee that inactive status to exceed one (1) year is necessary, the director may extend inactive status beyond the one (1) year limitation.

c. Requirements for Special Land Use Purposes

1. Alternative Plans - Alternative plans for restoration of the disturbed area may be submitted to the director. If such restoration will be consistent with the purpose of the Act and if such plans are approved by the director and complied with within such time limits as may be determined by him as being reasonable for carrying out such plans, the

backfilling and grading requirements heretofore contained, may be modified.

2. Water Impoundments - Prior to the construction of an impounding area for the storage of water after mining, approval must be obtained from the director for such impoundment. The division of water resources will cooperate with the division of reclamation in reviewing all portions of any plan for water impoundments as they relate to water quality and will give its recommendations to the division of reclamation. The contents of this plan shall include, but not be limited, to the following:

(a) Location of the impounding area;

(b) Dimensions of the area as to capacity and depth (average, maximum and minimum);

(c) Plot plan of impoundment area,

(d) Source of water entering the impoundment;

(e) Quality of the water entering the impoundment,

(f) Quality of water leaving the impoundment and mechanism of discharge;

(g) Coal seam or seams mined or involved with impoundment;

(h) Chemical characteristics of the soils and underlying strata in the impoundment area as they relate to acid production;

(i) Safety aspects considered such as spillway overflow, emergency spillway, access to area; and

(j) Consent of the landowner for such impoundment with submission on specified forms.

(k) Projected stability of water level in impoundment.

3. Waste Disposal - Where waste materials from a coal preparation or conversion facility or from other activities conducted outside the permit area such as municipal wastes, garbage, etc., are used for fill material in the permit area, plans for such use shall be approved by the director. Such plans for sanitary landfills and/or solid waste disposal shall be accompanied by the written approval of the division of water resources and where appropriate, the state department of health.

8B.08 Site Development

a. Time Schedule for Site Excavation -Time schedule for site excavation and/or construction activities shall be consistent with the approved pre-plan but shall provide for minimum disturbance at any one time consistent with good environmental procedures. Provided, however, all applicable drainage system components as approved in the pre-plan shall be installed prior to any disturbance for site development.

1. Temporary Revegetation -All topsoil and spoil storage areas which will be in place for less than one year shall be seeded and mulched with a mixture of annual grasses and grains in order to reduce erosion. This seeding and mulching must be done within thirty (30) days of completion of the storage area.

2. Permanent Revegetation -All topsoil, spoil storage, and other disturbed areas which will be in place for longer than one year shall be seeded and mulched with a combination of annual and perennial grasses and legumes. Trees shall be required only on those areas that:

(a) will not be redisturbed by future reclamation activities;

(b) are necessary in order to meet the approved post-mining land use. Seeding and planting of these areas shall be conducted during the first normal seeding season after the completion of the disturbance.

b. Disposal of Excess Spoil on Existing Benches - Spoil material not required to return the area to the approximate original contour may be placed on a pre-existing bench if the following conditions are met:

1. All excess spoil must be hauled, placed and retained on the solid portion of the a bench abandoned as of August 3, 1977; and
2. The spoil must be compacted or otherwise mechanically stabilized and the existing highwall eliminated to the extent possible with the available spoil.

8B.09 Backfilling and Regrading

a. Operating Responsibility - In planning and executing operations, the operator shall have, at all times, proper regard for all backfilling and regrading requirements, imposed by the Act and all rules and regulations adopted pursuant thereto, and all provisions of the approved pre-plan.

b. Time Schedule for Regrading and Backfilling - Regrading, backfilling and revegetation will proceed as contemporaneously as practicable with operations and as reflected on the approved construction and reclamation plan, Provided however, that final backfilling and regrading shall be completed within 60 days of removal of the facility unless an alternate post-mining land use has been approved in which case back-filling and regrading shall be accomplished as specified in the approved pre-plan. Should particular site conditions or weather make adherence to these

guidelines impractical, the period of time required to be current may be reasonably extended. A written waiver must be obtained from the director for such extension.

c. Revegetation shall be kept current by establishing a temporary or permanent cover on regraded areas by the end of the first growing season and a permanent cover by the end of the second growing season. Standards and procedures for establishing a satisfying vegetative cover and guidelines for species selection and application rates are found in Section 4F of these regulations.

d. Bench surface - The surface of the regraded bench shall be graded so as to permit the use of farm implements and machinery.

e. Grading Outer Spoil - All outer spoil shall be graded so as to blend into the adjoining undistrubed lands.

f. Rills and Gullies - Any rills or gullies deeper than nine (9) inches forming in areas that have been regraded and the topsoil replaced will be deemed unacceptable and any such rills or gullies shall be filled, graded, or otherwise stabilized and all disturbed areas seeded and mulched. Rills or gullies of lesser size shall also be stabilized if they will be disruptive to the approved post-mining land use or may result in additional erosion and sedimentation.

g. Reaffecting Previously Mined Areas

1. Where facilities incidental to mining are reaffecting lands mined prior to August 3rd, 1977, lands that have not been restored to the standard of these regulations and sufficient spoil is not available to otherwise comply with these regulations, the permittee shall at a minimum retain all overburden and spoil on the solid portion of existing or new benches and backfill and grade to the most moderate

slope possible which does not exceed 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 must be eliminated.

2. Operations proposing to remine existing benches created prior to July 1, 1977 and not proposing to substantially reaffect the existing highwall, shall at a minimum completely eliminate the newly created highwall and utilize the excess spoil material to eliminate as much of the pre-existing highwall as possible. This regulation applies only to those situations where mining is proposed in order to remove coal seams lying below the seam originally mined prior to July 1, 1977.

h. Regraded Drainage Control - Drainage control on regraded areas shall be provided as approved in the pre-plan to prevent excessive erosion or additional contribution of suspended solids to the receiving stream, ensure safety, and conserve soil mositure. Drainage control measures include, but are not limited to, diversion ditches, flumes and rip-rap channels, tracking in, small depressions and other devices that may be approved by the director.

8B.10 Disposal of Excess Spoil

a. General Requirements - Spoil not required to achieve the approximate original contour shall be transported to and placed in a controlled manner in designated disposal areas within the permit area in accordance with the provisions of the Act as approved in the pre-plan and in accordance with the design criteria and specifications found in the Technical Handbook for Surface Mining. Coal processing wastes and/ or toxic material shall not be disposed of in head-of-hollow or valley fills, unless such fills are specifically and exclusively designated for that purpose in accordance with Section 10 of these regulations.

b. Disposal of Excess Spoil on Existing Benches - Spoil material not required to return the area to the approximate original contour may be placed on a bench abandoned as of August 3, 1977 if the following conditions are met:

1. All excess spoil must be hauled, placed and retained on the solid portion of the existing bench; and
2. The spoil must be compacted or otherwise mechanically stabilized and the existing highwall eliminated to the extent possible with the available spoil.

c. Other design criteria may be approved if fills are constructed in accordance with 30 CFR 816 or 817, or if fills are justified as an experimental practice under section 33 of the Act.

d. Location of Sediment Control Structures - All sediment control structures for fill areas shall be as contiguous with the spoil disposal area as is economically and technologically feasible, but not in such proximity so as to affect mass stability.

e. Disturbance Within Fill Site - At no time shall the disturbance in the valley fill area be greater than the sediment storage requirement provided by the sediment structures until two or more lifts of the valley fill have been installed.

9A. PERMIT REQUIREMENTS

9A.01 In addition to the requirements of Section 31 of the Act and these rules and regulations an application for an incidental permit shall contain a map in accordance with the following:

a. Size of map shall be no more than 24" x 36";

b. Map scale shall be 1" = 200';

c. A separate drainage map shall be required unless all necessary information can be clearly and legibly reflected on the pre-plan map.

d. Show by appropriate markings the boundaries of the area of land to be disturbed for the development and shall differentiate all lands to be disturbed in conjunction with coal removal to include the area of coal to be removed, any necessary spoil area, all drainage structures and haulageways;

e. The cropline of the seam of coal;

f. The total number of acres of coal to be removed;

g. Show location of all rain gauges;

h. Show the date on which map was prepared, a north arrow, quadrangle name, location map and strike and dip of coal seam;

i. Show the drainage plan in accordance with 4B of these regulations; and

j. Where the natural slope of the land below the coal outcrop is less than 20° and downslope placement of overburden or spoil is proposed the map shall indicate the location and percent slope of the land at each 200' interval along the cropline. Measurements shall be taken downslope and perpendicular to the cropline.

9A.02 Application

a. Application for an incidental permit shall be submitted on forms prescribed by the director and shall contain the following:

1. The names and addresses of:

(a) The permit applicant;

(b) The owner of record of the property, surface and mineral, to be mined;

(c) The holders of record of any leasehold interest in the property;

(d) Any purchaser of record of the property under a real estate contract;

(e) The operator, if he is a person different from the applicant, and

(f) If any of these are business entities other than a single proprietor, the names and addresses of the principals, officers and resident agent;

2. The names and addresses of the owners of record of all surface and subsurface areas contiguous to any part of the proposed permit area; Provided, That all residents living on property contiguous to the proposed permit area shall be notified by the applicant, by registered or certified mail, of such application;

3. A statement of any current surface mining permits held by the applicant in this state and the permit number and each pending application;

4. If the applicant is a partnership, corporation, association or other business entity, the following where applicable: The names and addresses of every officer, partner, resident agent, director or person performing a function similar to a director, together with the names and addresses of any person owning of record ten percent or more of any class of voting stock of the applicant; and a list of all names under which the applicant, officer, director, partner or

principal shareholder previously operated a surface mining operation in the United States within the five-year period preceding the date of submission of the application;

5. A statement of whether the applicant, or any officer, partner, director, principal shareholder of the applicant, any subsidiary, affiliate or persons controlled by or under common control with the applicant, has ever been an officer, partner, director or principal shareholder in a company which has ever held a federal or state mining permit which in the five-year period prior to the date of submission of the application has been permanently suspended or revoked or has had a mining bond or similar security deposited in lieu of bond forfeited and, if so, a brief explanation of the facts involved;
6. A description of the type and method of surface mining operation that exists or is proposed, the engineering techniques used or proposed, and the equipment used or proposed to be used;
7. The anticipated starting and termination dates of each phase of the surface mining operation and the number of acres of land to be affected;
8. A description of the legal documents upon which the applicant bases his legal right to enter and conduct surface mining operations on the proposed permit area and whether that right is the subject of pending court litigation: PROVIDED, That nothing in this article may be construed as vesting in the director the jurisdiction of adjudicate property-rights disputes.
9. A reasonable estimate of the number of acres of coal what would be mined as a result of the proposed development.

9A.03 A copy of the notification to all owners of surface contiguous to any part of the proposed mining operation. Such notice shall be accompanied by return receipts.

9A.04 A statement of the necessity for the coal removal as it relates to the development.

9A.05 Permits or approvals as necessary from the appropriate land use, planning, or zoning agencies.

9A.06 The availability of all necessary utilities or services required for the development.

9A.07 A site development plan in accordance with the following:

a. A time schedule for site development to include all structures, roads, buildings, etc.;

b. A clear plot of the development area versus coal mining area;

c. All areas to be regraded and revegetated which will not be redisturbed during development; and

d. Evidence of financial commitment necessary for the development and the feasibility of the planned development;

9A.08 Blasting plan, where required, in accordance with Section 4C.01 of these regulations with the exception of the following:

a. All blasting conducted on an incidental permit will conform to the scaled distance formula $W = D/60)^2$.

b. Where blasting is to be conducted, all residents or owners of a manmade structure within 1000' of the proposed blasting area shall be notified by certified mail in advance of any blasting.

9A.09 Vegetation plan shall be in accordance with 4F of these regulations.

9A.10 Final Surface Configuration - The application shall contain cross sections which accurately depict the final surface configuration that will be achieved as proposed in the reclamation plan .

9B. PERFORMANCE STANDARDS

9B.01 Signs and Markers

a. Permanent Monument - A permanent mounument shall be posted at the entrance from public roads and highways and at other suitable locations. The monument shall consist of a sign constructed of wood, metal, or other suitable material 2' x 3' mounted on a two-inch pipe driven three feet into the ground with four feet exposed. Any suitable equivalent substitute may be approved. The sign shall clearly indicate the company name, permit numbers, business address and telephone number.

b. Perimeter Marker - A two-inch (2") pipe or suitable substitute shall be driven into the earth with a minimum of three feet (3') exposed to permanently mark the beginning and ending points of the area under permit. It shall be identified by painting the exposed portion of the pipe red. The assigned permit number shall be permanently affixed to the permanent perimeter marker. Other markers will be used to delineate the boundaries of the proposed permit area.

c. Buffer Zone Markers - Appropriate markers will be established along a buffer zone. Markers shall consist of metal or wooden stakes or other suitable devices or methods.

d. Topsoil Markers - When topsoil or other vegetation supporting material is segregated and stockpiled, the stockpiled material shall be marked. Markers shall remain in place until the materials are removed.

e. Blasting Signs - If blasting is necessary to conduct surface mining operations, signs reading "Blasting Area" shall be displayed conspicuously at all approaches to the blasting site and along haulageways and access roads to the mining operation. The sign shall be two feet by three feet (2' x 3') reading "Blasting Area" and explaining the blasting warning and the all clear signals.

f. Slope Measurement - Slope measurement locations shall be clearly marked prior to pre-inspection at each 200' interval along the base line established in the pre-plan.

9B.02 Top Soil - unless otherwise specified in the pre-plan and for the purposes of this section where topsoil is to be segregated and redistributed such activities shall be in compliance with Section 6B.03.

9B.03 Water Quality

a. Water Quality Control - All reasonable measures shall be taken to intercept all surface water by the use of diversions, culverts and drainage ditches or other methods to prevent water from entering the disturbed area. The water leaving the permit area will not violate the water quality standards established for river, stream or drainway into which it is discharged . All surface drainage from the disturbed area must pass through a sediment pond or series of sediment ponds or other approved sediment or treatment control structures.

b. Water Quality Standards -Discharge from the permit area shall not in any case violate Federal or State water quality standards or effluent limitations. The monitoring frequency shall be governed by the standards set forth in the NPDES Program under the Federal Water Pollution Control Act as amended, 33 U.S.C. 1251 et. seq. and the rules and regulations promulgated thereunder.

1. Before grade release, no discharge from the permit area shall have a pH of less than 6.0 or greater than 9.0 or an iron content exceeding 7 parts/million maximum allowable and 3.5 parts/million average daily values for 30 consecutive discharge days or an iron content exceeding 6 parts/million maximum allowable and 3.0 parts/million average daily values for 30 consecutive discharge days for new sources as defined by 40 CFR Section 434.11(i).
2. After grade release, discharges from the permit area shall meet applicable water quality standards.

c. Treatment Facilities - Adequate facilities shall be installed, operated, and maintained according to the approved pre-plan to treat any water discharged from the disturbed area so that it complies with all federal and state laws and regulations and the limitations of this section. Non-mechanical treatment systems may be utilized if flow is infrequent or small and timely and consistent treatment is assured.

d. Breakthrough

1. Any surface breakthrough of water caused by the operator during the course of his operations shall be sampled immediately and analyzed for total iron, total suspended solids and ph and if requested by the director, any other parameter characteristics of the discharge. Such analysis shall be made by a competent water analyst or chemist. The original and at least one copy of such analysis shall be retained by the operator, two copies shall be submitted to the chief of the division of reclamation.
2. Should said analysis indicate the water to be less than the applicable effluent limitations, seals shall be immediately constructed. These seals shall either:

(a) Prevent any air from entering the underground mine by way of the breakthrough; or

(b) Prevent any air from entering the breakthrough while allowing the water to flow from the breakthrough; or

(c) Seal the breakthrough of acid water so that it cannot flow. Such seals shall be constructed of stone, brick, block earth or impervious materials which are acid resistant.

3. Alternate methods of handling discharges from breakthroughs may be employed where it can be established that applicable effluent limitations can be met.

98.04 Acid Producing and Toxic Materials

a. Drainage from acid-forming and toxic forming materials into ground and surface water shall be avoided by:

1. Identifying, burying, blending and/or treating where necessary, spoil or other materials that will be toxic to vegetation or that will adversely affect water quality within thirty (30) days after it is first exposed or a lesser period if required by the director. Such materials shall be handled in accordance with methods set forth in the approved pre-plan.

2. Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course or ground water system so as to cause or pose a threat of water pollution.

b. Treatment of Toxic Material - Any acid-forming, toxic-forming, combustible materials, or any other waste materials that are exposed, shall be covered with a minimum of four feet (4') of nontoxic and noncombustible material; or test, treat and blend material to provide materials suitable to prevent water pollution. If necessary, this material shall be treated to neutralize toxicity in order to prevent water pollutions and sustained combustion and/or to minimize adverse effects on plant growth and land uses. Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local conditions, the director shall specify thicker amounts of cover using non-toxic material.

98.05 Monitoring Requirements

a. Surface Water Monitoring:

1. The Operator shall provide daily monitoring by rain gauges to measure normal and abnormal variations in precipitation.
2. All water discharged from the permit area is to be monitored daily by the operator for total iron, pH and water flow and any other parameters if required by the director. Total suspended solids shall be tested bi-monthly and within 12 hours after a precipitation event of 1" or greater.
3. A written record of the testing dates and analytical data shall be kept current and made available for inspection at the operation; and shall provide to the director a monthly report of all measurements.

4. In the event violations of water quality standards occur, the director shall be notified immediately after receipt of analytical results by the operator; and

5. After disturbed areas have been regraded and seeded in accordance with these regulations, the operator shall monitor surface water flow and quality. Data from this monitoring shall be used to demonstrate that the quality and quantity of runoff without treatment will be consistent with the requirement of this section to minimize disturbance to the prevailing hydrologic balance and with the requirements of these regulations to attain the approved postmining land use. This data shall provide a basis for approval by the director for removal of water quality or flow control systems and for determining when the requirements of this section are met. A one (1) year history of meeting effluent limitations shall be adequate for demonstrating that the water has stabilized to an acceptable level. The nature of data, frequency of collection and reporting requirements will be the same as that during the mining operation. Provided however, that certain effluent limitations may be waived upon grading.

98.06 Method of Operation

a. Steep Slope Mining

1. Applicability - On all operations conducted pursuant to this section and where the natural slope of the coal removal area exceeds 20°, spoil or debris, including that from clearing and grubbing, shall not be placed on the downslope except as provided for in Section 6B.08 of these regulations.

2. Downslope Placement - Spoil or debris, including that from clearing and grubbing, shall not be placed on the downslope except as provided for in Section 6B.08 of these regulations. Nothing in this section shall prohibit the placement of materials in haulroad or access road embankments on slopes steeper than twenty degrees (20°) so long as the embankments are constructed in accordance with Section 4A.03 of these regulations.
3. Highwall Elimination - The highwall shall be eliminated and the permitted area regraded to the specifications provided in the approved site development plan.
4. Stabilization - The material used to backfill and eliminate the highwall shall be sufficiently compacted or otherwise mechanically stabilized so as to insure stability of the backfill. Woody materials may be buried in the backfilled area only when the burial does not cause instability.
5. Drainage Channels and Flumes - When construction activities progress through natural watercourses, or when water is to be directed across or through the operation or backfill, a drainage channel, flume, or french drain must be constructed across or through the operation or backfill in order to insure stability and to prevent erosion. Such drainage channels, flumes or french drains shall be constructed of durable rock, asphalt, concrete or any other material approved by the director. Channels, flumes and drains shall be constructed in accordance with criteria contained in the Technical Handbook for Surface Mining.

6. Disposal of Excess Spoil on Existing Benches -Spoil material not required to return the area to the approximate original contour may be placed on a pre-existing bench if the following conditions are met:

   (a) All excess spoil must be hauled, placed and retained on the solid portion of the existing bench;

   (b) The spoil must be compacted or otherwise mechanically stabilized and the existing highwall eliminated to the extent possible with the available spoil.

b. Inactive Status - Inactive operation status will be considered for a period not to exceed one (1) year from date of approval, provided that prior written approval is obtained from the director; Provided further that inactive status shall not be approved unless the operator demonstrates that reclamation is current and all water management practices will be maintained during the inactive period and all exposed coal is covered with non-toxic material. The director may also require progress maps prior to approval. Where it can be adequately demonstrated by the permittee that inactive status to exceed one (1) year is necessary, the director may extend inactive status beyond the one (1) year limitation.

9B.07 Site Development

a. Time Schedule for Site Excavation -Time schedule for site excavation and/or construction activities shall be consistent with the approved pre-plan but shall provide for minimum disturbance at any one time consistent with good environmental procedures, provided however, all applicable drainage system components as approved in the pre-plan shall be installed prior to any disturbance for site development.

1. Temporary Revegetation -All topsoil and spoil storage areas which will be in place for less than one year shall be seeded and mulched with a mixture of annual grasses and grains in order to reduce erosion. This seeding and mulching must be done within thirty (30) days of completion of the storage area.
2. Permanent Revegetation -All topsoil, spoil storage, and other disturbed areas which will be in place for longer than one year shall be seeded and mulched with a combination of annual and perennial grasses and legumes. Trees shall be required only on those areas that:
   (a) Will not be redisturbed by future reclamation activities; and
   (b) Are necessary in order to meet the approved post-mining land use. Seeding and planting of these areas shall be conducted during the first normal seeding season after the completion of the disturbance.

9B.08 Backfilling and Regrading

a. Operating Responsibility - In planning and executing operations, the operator shall have, at all times, proper regard for all backfilling and regrading requirements, imposed by the Act and all rules and regulations adopted pursuant thereto, and all provisions of the approved pre-plan.
b. Time Schedule for Regrading and Backfilling - Regrading, backfilling and revegetation will proceed as contemporaneously as practicable with operations and as reflected on the approved construction and reclamation plan. Provided, however, that final backfilling and regrading shall be completed within 60 days of completion of the project. Should particular site conditions or weather make adherence to these guidelines impractical, the period of time required to be current may be reasonably extended.

c. Revegetation shall be kept current by establishing a temporary or permanent cover on regraded areas by the end of the first growing season and a permanent cover by the end of the second growing season. Revegetation shall be in accordance with Section 4F of these regulations.

d. Grading Outer Spoil - All outer spoil shall be graded so as to blend into the adjoining undistrubed lands.

e. Rills and Gullies - When rills and gullies deeper than nine inches form in areas that have been regraded and topsoiled, the rills and gullies shall be filled, graded or otherwise, mechanically stabilized and the area reseeded. Rills or gullies less than nine inches deep shall be regraded and reseeded if the rills and gullies interfere with the approved post-mining land use.

f. Reaffecting Previously Mined Areas - Where operations are reaffecting previously mined lands that have not been restored to the standard of these regulations and sufficient spoil is not available to otherwise comply with these regulations, the permittee shall at a minimum. Retain all overburden and spoil on the solid portion of existing or new benches and backfill and grade to the most moderate slope possible which does not exceed 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 must be eliminated provided if the pre-existing highwall has not been reaffected then elimination of the pre-existing highwall will not be required.

g. Regraded Drainage Control - Drainage control on regraded areas shall be provided as approved in the pre-plan to prevent excessive erosion or additional contribution of suspended solids to the receiving stream,

ensure safety, and conserve soil moisture. Drainage control measures include, but are not limited to, diversion ditches, flumes and rip-rap channels, tracking in, small depressions and other devices that may be approved by the director.

h. Storage of Overburden to be Used for Regrading:

1. All material to be used in final regrading must be placed within the permit area as specified in the approved pre-plan in a manner which will ensure mass stabilization and adhere to all applicable regulations governing excess spoil disposal.
2. Erosion and Sediment Control shall be maintained in accordance with the approved pre-plan.
3. Revegetation shall meet the requirements pursuant to Section 4F of these rules and regulations.

9B.09 Where Landowners are engaged in construction which involves coal removal which does not require the disturbance of more than one acre of privately owned land, the following provisions shall be met:

a. Prior to the removal of coal, a landowner shall notify the local reclamation inspector and submit to him the following.

1. A plot drawn to scale of the land to be disturbed including the limits of construction, all associated landscaping and all roads or haulroads. Under no circumstances may the total disturbance exceed one acre.
2. Copies of all deeds to the land and deeds or leases showing the right to extract the coal.
3. All building and sewage permits, if required by state or local laws.
4. A sworn and notorized statement from the landowner that he intends to complete construction.

b. Clearly visible perimeter markers shall show the boundaries of the area indicated on the plot plan.

c. Construction must begin within 6 months of mineral removal.

d. No landowner may mine coal on this or any additional tract of land unless construction has been completed on the initial tract of land pursuant to this section.

e. If the landowner engages the services of another party for the removal of the coal, the other party must first obtain an incidental permit, provided the party engaged is also under contract to complete the construction, such a permit shall not be required.

9C. FEDERAL OR STATE HIGHWAY OR OTHER CONSTRUCTION EXEMPTION

9C.01 To qualify as a federal or state highway or other construction project the construction must be funded 50 percent or more by the federal or state government and once the exemption is granted the person doing the construction must have on-site available for inspection.

a. Descriptions of the project to include, but not be limited to, the exact location of the limits of all of the area to be affected by the construction, and,

b. Authorization from the agency or agencies providing the funding and, if different, the agency or agencies responsible for the construction, giving permission to proceed and the amount of funding provided as a percent of the total project cost.

9C.02 The extraction of coal shall be limited to areas within the highway right-of-way or within the boundaries of the area directly affected by other construction activities.

9D. PUBLIC INSPECTION

9D.01 All information submitted to the department of natural resources as a part of the application for an incidental permit as required in the Act and this section of the rules and regulations shall be made available for public inspection and copying at the nearest reclamation division field office, Provided that information submitted to the director pursuant to this sub-section as confidential concerning trade secrets or priviledged commercial or financial information which relates to the competitive rights of the person or entity intended to prospect the described area shall not be available for public examination. Provided further, that the application for an incidental permit shall be posted at the nearest reclamation division field office for seven days prior to the director's decision to grant or deny issuance of a permit for removal of coal incidental to development.

Section 11. SMALL OPERATOR ASSISTANCE PROGRAM 11.

11A. GENERAL

11A.01 This section comprises the Small Operator Assistance Program and governs the procedures for providing assistance to qualified small operators for:

a. The determination of the probable hydrologic consequences of mining and reclamation.

b. The statement of physical and chemical analyses of test borings or core samples.

11A.02 Data collected under this program shall be made available to all interested persons, except information related to the chemical and physical properties of coal, provided information regarding the mineral or elemental content of the coal which is potentially toxic in the environment shall be made available.

11B. OBJECTIVE

11B.01 Provide financial and other necessary assistance to qualified small operators.

11B.02 Assure that sufficient information has been collected to make a reasonable assessment of the probable cumulative impacts of all anticipated mining upon the hydrology of the area and particularly upon water availability.

11C. PROGRAM SERVICES -Where a qualified small operator requests assistance, the Division of Reclamation shall:

11C.01 Select and pay a qualified laboratory to determine the probable hydrologic consequences of mining and reclamation operations both on and off proposed permit area. The determination of the probable hydrologic consequences of

mining and reclamation and the statement of the result of test borings or core samples shall be completed in accordance with sections 6A.03 and 7A.02 of the Rules and Regulations.

11D. ELIGIBILITY REQUIREMENTS OF OPERATORS

11D.01 An operator is eligible for assistance if he or she establishes that the probable total actual and attributed production of this operator for each year of the surface mining permits will not exceed 100,000 tons of coal. Production from the following operations shall be attributed to the permittee.

a. All coal produced by operations beneficially owned entirely by the applicant or controlled, by reason of ownership, direction of the management.

b. The pro rata share, based upon percentage of beneficial ownership, of coal produced by operations in which the applicant owns more than a five percent (5%) interest.

c. All coal produced by person who own more than five (5) percent of the applicant or who directly or indirectly control the applicant by reason of stock ownership, direction of the management or in any other manner whatsoever.

d. The pro rata share of coal produced by operations owned or controlled by the person who owns or controls the applicant.

11E. REQUEST FOR ASSISTANCE

11E.01 Each applicant requesting assistance shall complete an application on forms prescribed by the director, the application must include, but not be limited to the following items:

a. A statement of intent to file a permit application;

b. The names and address of the applicant and the operator, if different from this 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 to the applicant under Section 11D. The schedule shall include the following:

1. Name of company,
2. What state this permit was issued in and the permit number,
3. Mining Enforcement and Safety Administration Identification Number;
4. Actual production of coal from the preceeding year and that portion of the production attributed to the applicant;
5. Estimated future yearly production.

d. The method of surface coal mining operations proposed;

e. The anticipated starting and termination dates of mining operations;

f. The number of acres of land to be affected.

g. The geological title and thickness of coal seam to be mined.

h. Attach a U. S. Geological Survey topographic map in accordance with Section 3C of these rules and regulations with the additional requirements as stated in Section 10, subsection a, 12A,12B,12C,13E,13F,13G,13J,13K,13L,13M of the Act.

i. Copies of documents showing that the applicant has a legal right to enter and conduct operations on lands to be covered by this permit.

11E.02 The applicant shall be notified if the application requesting assistance has been approved or denied, and if denied, the reasons shall be attached.

11E.03 If application requesting assistance has been approved, then the division shall select the services of one or more qualified laboratories to perform this work. A copy of the contract or other appropriate work order and the final report shall be provided to the applicant.

11F. QUALIFIED LABORATORIES

11F.01 General

a. A qualified laboratory means a designated public agency, private consulting firm or analytical laboratory.

b. The Division of Reclamation and the Office of Surface Mining shall designate qualified laboratories.

11F.02 Basic Qualifications - To qualify for designation, this laboratory must demonstrate that it:

a. Is staffed with experienced, professional personnel in the field 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 periods 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 and methods contained in:

1. Standard Methods for the Examination of Water and Waste Water,

14th Edition, 1975;

2. Methods for Chemical Analysis of Water and Wastes, 1977.

3. EPA Manual 600/2-78-054 Field and Laboratory Methods Applicable to Overburden Minesoils.

g. Has the capability of making hydrologic field measurements and analytical laboratory determinations by acceptable hydrologic engineering or analytical methods.

11F.03 The qualified laboratory shall be capable of performing either the determination or statements. Subcontractors may be used to provide the services required provided their use is defined in the application for designation and approval is granted by the Division of Reclamation or Office of Surface Mining as a qualified laboratory.

11G. LIABILITY OF OPERATORS

11G.01 The applicant shall reimburse the Division of Reclamation for the cost of the laboratory services performed if the applicant:

a. Submits false information on his or her application or other submitted information;

b. Fails to submit a surface mining permit application within one (1) year from the date of receipt of the approved laboratory report;

c. Fails to mine after obtaining a surface mining permit.

d. If the applicant's actual and attributed annual production of coal exceeds one hundred thousand (100,000) tons during any year of mining under the surface mining permit for which the assistance is provided.

11G.02 The division can waive the reimbursement obligation if it finds that the applicant at all times acted in good faith.

12A. NOTICE OF CITIZENS' SUITS

12A.01 A person who intends to initiate a civil action on his own behalf under section 28 of the Act shall give notice of intent to do so in accordance with this Section.

a. Notice shall be given by certified mail to the director in all cases. A copy of the notice shall also be sent by first class mail to the Office of Surface Mining Regional director.

b. In suits against any person or the State of West Virginia or any other governmental instrumentality, agency or agent thereof, notice shall be given by certified mail to the alleged violator, if the complaint alleges a violation of the Act or any regulation, order, or permit issued under the Act.

c. Service of notice under this Section is complete upon mailing to the last known address of the person being notified.

d. A person giving notice regarding an alleged violation shall state to the extent known -

1. Sufficient information to identify the provision of the Act, regulation, or permit allegedly violated;
2. The act or omission alleged to constitute a violation;
3. The name, address, and telephone numbers of the person or person responsible for the alleged violation;
4. The date, time, and location of the alleged violation(s);
5. The name, address, and telephone number of the person giving notice;
6. The name, address, and telephone number of legal counsel, if any.

e. A person giving notice of an alleged failure by the director, reclamation commission, reclamation board of review, or appropriate department employee, to perform a mandatory act or duty under the Act, shall state, to the extent known.

1. The provision of the Act containing the mandatory act or duty allegedly not performed;
2. Sufficient information to identify the ommission alleged to constitute the failure to perform a mandatory act or duty under the Act;
3. The name, address, and telephone number of the person giving notice; and
4. The name, address, and telephone number of legal counsel, if any, of the person giving notice.

12B. CITIZEN'S REQUEST FOR STATE INSPECTIONS

12B.01 Any person may request a State inspection by furnishing to the director a signed, written statement (or an oral report followed by a signed, written statement) giving the director reason to believe that a violation exists and setting forth a phone number and address where the person can be contacted.

12B.02 The identity of any person supplying information to the director relating to a possible violation or imminent danger or harm shall remain confidential with the director, if requested by that person, unless that person elects to accompany the inspector on the inspection.

12B.03 If an inspection is conducted as a result of information provided to the director by a person as described in Section 12B.01 of these regulations, the person shall be notified as far in advance as practicable when the inspection is to occur and shall be allowed to accompany the State inspector during the inspection. Such person has a right of entry to, upon and through the coal exploration or surface coal mining and reclamation operation about which he or she supplied information, but only if he or she is in the presence of and is under the control, direction and supervision of a State inspector while on the mine property. Such right of entry does not include a right to enter buildings without consent of the person in control of the buildings or without a search warrent.

12B.04 Within 10 days of the inspection or, if there is no inspection within 15 days of receipt of the person's written statement, the director shall send the following:

a. If an inspection was made, a description of the enforcement action taken, which may consist of copies of the State inspection report and all notices of violation and cessation orders;

b. If no State inspection was conducted, an explanation of the reason why; and

c. An explanation of the person's right to informal review of the action or inaction of the director.

d. Copies of all materials in paragraphs (a) and (b) of this section within the time limits specified in those paragraphs to the person alleged to be in violation, except that the name of the person shall be removed unless disclosure of the person's identity is permitted under Section 12B.02 of these regulations.

12B.05 Review of Adequacy and Completeness of Inspections -Any person who is or may be adversely affected by a surface coal mining operation may notify the director in writing of any alleged failure to make adequate and complete inspections as required by law and regulation. The notification shall include sufficient information to create a reasonable belief that the law and regulations as regards inspections are not being complied with and to demonstrate how the person is or may be adversely affected. The director shall within fifteen days of receipt of the notice determine whether or not the statutes or regulations concerning inspections are being complied with and if not shall order an inspection to remedy the non-compliance. The director shall furnish the complainant with a written decision of the reasons for his determination and actions, if any, he has taken.

12B.06 Review of Decision Not to Inspect or Enforce.

a. Any person who is or may be adversely affected by a surface coal mining operator may ask the director to informally review an authorized representative's decision not to inspect or take appropriate enforcement action with respect to any violation alleged by that person in a request for inspection under section 15 of the Act The request for review shall be in writing and shall include a statement of how the person is or may be adversely affected and why the decision merits review. The director shall conduct the review within thirty days of his receipt of the request and inform the person of the results.

b. Informal review under this section shall not affect any right to formal review or to a citizen's suit.

12B.07 a. Copies of all records, reports, inspection materials, or information obtained under the West Virginia Surface Mining Act, except information in paragraph (b) of this section shall be made available to the public at regional, district or field offices in the area of mining so that they are conveniently available to residents in the area of mining.

b. Information as to coal seams, test borings, core samplings, or soil samples pertaining to the analysis of the chemical and physical properties of the coal, except information regarding mineral or element content which is potentially toxic to the environment, shall be kept confidential and shall not be made a matter of public record.

13A. PROCEDURES: PETITIONS

13A.01 Right to petition

a. Any person having an interest which is or may be adversely affected, or the director, has the right to petition the Reclamation Commission to have an area designated as unsuitable for surface coal mining operations, or to have an existing designation terminated.

b. Designation - The only information that a petitioner need provide is:

1. The location and size of the area covered by the petition,
2. Allegations of facts and supporting evidence which would tend to establish that the area is unsuitable for all or certain types of surface coal mining operations;
3. A description of how mining of the area has affected or may adversely affect people, land, air, water or other resources;
4. The petitioner's name, address and telephone number; and
5. Identification of the petitioner's interest which is or may be adversely affected.

c. Termination of the Designation - The only information that a petitioner need provide to terminate a designation is:

1. The location and size of the area covered by the petition,
2. Allegations of facts, 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 statements or allegations indicate that the designation should be terminated based on:

(a) The nature or abundance of the protected resource or condition or other basis of the designation if the designation was based on criteria found in Section 13.07(b); or

(b) Reclamation now being technologically and economically feasible, if the designation was based on the criteria found in Section 13.07(a), or

(c) The resources or condition 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, if the designation was based on the criteria found in Section 13.07(b);

3. The petitioner's name, address and telephone number; and

4. Identification of the petitioner's interest which is or may be adversely affected by the continuation of the designation.

13A.02 Procedures: Initial processing, recordkeeping, and notification requirements

a. 1. Within 30 days of receipt of a petition, the Reclamation Commission shall notify the petitioner by certified mail whether or not the petition is complete under Section 13.01 (b) or (c).

2. The Reclamation Commission shall determine whether any identified coal resources exist in the area covered by the petition, without requiring any showing from the petitioner. If the regulatory authority finds there are not any identified coal resources in that area, it shall return the petition to the petitioner with a statement of the findings.

3. The Reclamation Commission may reject petitions for designations or terminations of designations which are frivolous. Once the requirements of Section 13.01b are met, no party shall bear any burden of proof, but each accepted petition shall be considered and acted upon by the Reclamation Commission pursuant to the procedures of this Part.

4. When considering a petition for an area which was previously and unsuccessfully proposed for designation, the Reclamation Commission shall determine if the new petition presents new allegations of facts. If the petition does not contain new allegations of facts, the Reclamation Commission shall not consider the petition and shall return the petition to the petitioner, with a statement of its findings and a reference to the record of the previous designation proceedings where the facts were considered.
5. If the Reclamation Commission determines that the petition is incomplete or frivolous, it shall return the petition to the petitioner, with a written statement of the reasons for the determination and the categories of information needed to make the petition complete.
6. The Reclamation Commission 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. Any petitions received after the close of the public comment period on a permit application relating to the same mine plan area shall not prevent the Reclamation Commission from issuing a decision on that permit application. The Reclamation Commission may return any petition received thereafter to the petitioner with a statement why the petition cannot be considered. For the purposes of this Section, close of the public comment period shall mean at the close of any informal conference or if no conference is requested, at the close of the period for filing written comments and objections.

b. 1. Within three weeks after the determination that a petition is complete, the Reclamation Commission shall circulate copies of the petition to, and request submissions of relevant information from, other interested governmental agencies, the petitioner, intervenors, persons with an ownership interest of record in the property, and other persons known to the Reclamation Commission to have an interest in the property.

2. Within three weeks after the determination that a petition is complete, the Reclamation Commission shall 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, in the newspaper of largest circulation in the state, and in any official State register of public notices.

c. Until three days before the Reclamation Commission holds a hearing under Section 13.03, any person may intervene in the proceeding by filing allegations of facts, supporting evidence, a short statement identifying the petition to which the allegations pertain, and the intervenor's name, address and telephone number.

d. Beginning immediately after a complete petition is filed, the Reclamation Commission shall compile and maintain a record consisting of all documents relating to the petition filed with or prepared by the regulatory authority. The Reclamation Commission shall make the record available for public inspection, free of charge, and copying, at reasonable cost, during all normal business hours at a central location of the county or multi-county area in which the land petitioned is located, and at the main office of the regulatory authority.

13A.03 Procedures: Hearing Requirements

a. Within 10 months after receipt of a complete petition, the Reclamation Commission shall hold a public hearing in the locality of the area covered by the petition. If all petitioners and intervenors agree, the hearing need not be held. The hearing shall be legislative and fact-finding in nature, without cross-examination of witnesses. The Reclamation Commission shall make a verbatim transcript of the hearing.

b. 1. The Reclamation Commission shall give notice of the date, time, and location of the hearing to:

(a) Local, State, and Federal agencies which may have an interest in the decision on the petition;

(b) The petitioner and the intervenors; and

(c) Any person with an ownership or other interest known to the regulatory authority in the area covered by the petition.

2. Notice of the hearing shall be sent by certified mail and postmarked not less than 30 days before the scheduled date of the hearing.

c. The Reclamation Commission shall notify the general public of the date, time, and location of the hearing by placing a newspaper advertisement once a week for 2 consecutive weeks in the locale of the area covered by the petition and once during the week prior to the scheduled date of the public hearing. The consecutive weekly advertisement must begin between 4 and 5 weeks before the scheduled date of the public hearing.

d. The Reclamation Commission may consolidate in a single hearing the hearings required for each of several petitions which relate to areas in the same locale.

e. Prior to designating any land areas as unsuitable for surface coal mining operations, the Reclamation Commission shall prepare a detailed statement, using existng and available information on the potential coal resources of the area, the demand for coal resources, and the impact of such designation on the environment, the economy, and the supply of coal.

f. In the event that all petitioners and intervenors stipulate agreement prior to the hearing, the petition may be withdrawn from consideration.

13A.04 Procedures: Decision

a. In reaching its decision, the Reclamation Commission shall use --

1. The information contained in the data base and inventory system. 2. Information provided by other governmental agencies;
3. The detailed statement prepared under Section 13.03e, and
4. Any other relevant information submitted during the comment period.

b. A final written decision shall be issued by the Reclamation Commission including a statement of reasons, within 60 days of completion of the public hearing, or, if no public hearing is held, then within 12 months after receipt of the complete petition. The Reclamation Commission shall simultaneously send the decision by certified mail to the petitioner, every other party to the proceeding, and to the Regional director of the Office of Surface Mining for the region in which the State is located.

c. The decision of the Reclamation Commission with respect to a petition, or the failure of the commission to act within the time limits set forth in this Section, shall be subject to judicial review by a court of competent jurisdiction in accordance with State law.

13A.05 Data Base and Inventory System Requirements

a. The Reclamation Commission shall develop a data base and inventory system which will permit evaluation of whether reclamation is feasible in areas covered by petitions.

b. The Reclamation Commission shall include in the system information relevant to the criteria in 30 CFR 762.11, including but not limited to, information received from the United States Fish and Wildlife Service, the State Historic Preservation Officer, and the agency administering Section 127 of the Clean Air Act, as amended (42 U.S.C. Section 7470 et seq.).

c. The Reclamation Commission shall add to the data base and inventory system information --

1. On potential coal resources of the state, demand for those resources, the environment, the economy and the supply of coal, sufficient to enable the Reclamation Commission to prepare the statements required by Section 13.03e; and

2. That becomes available from petitions, publications, experiments, permit applications, mining and reclamation operations, and other sources.

13A.06 Public Information

The Reclamation Commission shall:

a. Make the information and data base system developed available to the public for inspection free of charge and for copying at reasonable cost.

b. Provide information to the public on the petition procedures necessary to have an area designated as unsuitable for all or certain

types of surface coal mining operations or to have designations terminated and describe how the inventory and data base system can be used.

13A.07 Criteria for designating lands as unsuitable.

a. Upon petition an area shall be designated as unsuitable for all or certain types of surface mining operations, if the Reclamation Commission determines that reclamation is not technologically or economically feasible under the Act and these rules and regulations.

b. Upon petition an area may be (but is not required to be) designated as unsuitable for all or certain types of surface mining operations, if the operations will -

1. Be incompatible with existing State or local land use plans or programs;

2. 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;

3. Affect renewable resource lands in which the operations could result in a substantial loss or reduction of long-range productivity of water supply or of food or fiber products, or

4. Affect natural hazard lands in which the operations will substantially endanger life and property, such lands to include areas subject to frequent flooding and areas of unstable geology.

13A.08 Director's Responsibility for Implementation

a. The director shall not issue permits which are inconsistent with designations made pursuant to Section 22 of the Act.

b. The director shall maintain a map of areas designated as unsuitable for all or certain types of surface coal mining operations.

c. The Director shall make available to any person any information within his control regarding designations, including mineral or elemental content which is potentially toxic in the environment but excepting proprietary information on the chemical and physical properties of the coal.

14A.01 Pattern of Violations -Suspension or Revocation of a Permit

a. 1. Except as provided in paragraph (b) of this Section, the director shall issue an order to a permittee requiring him to show cause why his permit and right to mine under the Act should not be suspended or revoked, if the director determines that a pattern of violations of any requirements of this Chapter, the regulations or any permit condition required by the Act exists or has existed, and that the violations were caused by the permittee willfully or through unwarranted failure to comply with those requirements or conditions. A willful violation is a violation resulting from an intentional act or omission. Unwarranted failure to comply means the failure of the permittee to prevent the occurrance of any violation of the permit or any requirement of the Act, due to indifference, lack of diligence, or lack of reasonable care. Violations by any person conducting surface coal mining operations on behalf of the permittee shall be attributed to the permittee, unless the permittee establishes that they were acts of deliberate sabotage.

2. The director may determine that a pattern of violations exists or has existed, based on two or more inspections of the permit area within any 12-month period, after considering the circumstances, including:

(i) The number of violations, cited on more than one occasion, of the same or related requirements of this Article, the permit, or the regulations;

(ii) The number of violations, cited on more than one occasion, of different requirements of this Article, the regulations, or the permit; and

(iii) The extent to which the violations were isolated departures from lawful conduct.

3. The director shall after hearing determine that a pattern of violations exists, if he finds that there were any violations of the same or related requirements of this Article, the regulations or the permit during three or more inspections of the permit area within any 12-month period.

4. In determining the number of violations within any 12-month period, the director shall consider violations issued as a result of a State or Federal inspection carried out.

b. The director may decline to issue a show cause order, or may vacate an outstanding show cause order, if he finds that, taking into account exceptional factors present in the particular case, it would be demonstrably unjust to issue or to fail to vacate the show cause order. The basis for this finding shall be fully explained and documented in the records of case.

c. At the same time as the issuance of the order, the director shall:

1. File a copy of the order to show cause with the Reclamation Board of Review.

2. If practicable, publish notice of the 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 operations; and

3. Post the notice at the reclamation office closest to the area of the surface coal mining and reclamation operations.

d. If the permittee files an answer to the show cause order and requests a hearing, a public hearing shall be provided. The Reclamation Board of Review shall give thirty days written notice of the date, time and place of the hearing to the director, the permittee, and any intervenor. Upon receipt of the notice, the director shall publish it, if practicable, in a newspaper of general circulation in the area of the surface coal mining and reclamation operations, and shall post it at the regional, district or field office closest to those operations.

e. Within sixty days of the hearing, the Reclamation Board of Review shall issue a written determination as to whether a pattern of violations exists and, if appropriate, an order. If the Reclamation Board of Review revokes or suspends the permit and the permittees right to mine under the Act, the permittee shall immediately cease surface coal mining operations on the permit area and shall:

1. If the permit and the right to mine under the Act are revoked, complete reclamation within the time specified in the order; or
2. If the permit and right to mine under the Act are suspended, complete all affermative obligations to abate all conditions, practices or violations, as specified in the order.

14A.02 Determination of the Amount of Civil Penalty to Request

a. Each reclamation inspector who writes a notice of violation or other order which might subject an operator to a civil penalty shall within fifteen days of issuing the notice or order confer with his reclamation supervisor or other duly authorized person who shall determine the amount of penalty to be sought using the factors listed in the Act.

b. Upon a determination of the amount of the civil penalty to be assessed, or that no civil penalty shall be assessed, and within thirty days of the notice or order being issued, the reclamation inspector shall simultaneously send to the operator and appropriate Magistrate a certified or registered letter stating the nature of the violation and the amount of the penalty sought. The letter shall advise the operator that the amount must be paid or otherwise settled within thirty (30) days from the date the notice is received by the operator. The letter shall also advise the operator that any appeal of the proposed assessment must be filed with the Magistrate named in the letter within thirty (30) days after receipt, and the full amount of the penalty must be forwarded to the director for placement in an escrow account pending the outcome of the appeal. If the operator does not reply, or no satisfactory arrangement is completed within the thirty (30) day period, or the appropriate amount is not paid into escrow, the Magistrate shall, upon request by the director, enter an order declaring the penalty final and payable. If the operator files an appeal with the Magistrate the reclamation inspector shall notify the County Prosecuting Attorney and request his or her assistance in preparing the case.

c. West Virginia Code 20-6-17(a) provides that the assessment of "civil penalties continue until corrective steps have been initiated by the operator to the satisfaction of the surface mining reclamation inspector..." The underlined phrase shall mean that assessment of the civil penalty shall continue until the violation is corrected.

d. Within ten days of receiving a notice or order the operator may submit to the reclamation inspector in writing information about the violation which the inspector and supervisor shall consider in determining the facts surrounding the violation and the amount of the penalty. Within fifteen days of receipt of the letter stating the amount of penalty sought an operator may request and complete a meeting to discuss the notice or order insofar as civil penalties are concerned. Any settlement or agreement shall be reduced to writing and signed by the reclamation supervisor.

14A.03 Cessation Orders

a. West Virginia Code 20-6-16 (a) provides that a reclamation inspector "shall have the authority to issue a cessation order where the operation creates an imminent danger to the health or safety of the public or is causing or can reasonable by expected to cause significant, imminent environmental harm to land, air, or water resources..." Any reclamation inspector or supervisor who finds such a condition shall exercise his or her authority and forthwith issue a cessation order.

b. Any cessation order issued under the provisions of West Virginia Code 20-6-17(a) shall remain in effect until the violation has been abated or until modified, vacated or terminated by the director or the

Reclamation Board of Review or by a Court.

c. In any cessation order issued the reclamation inspector shall determine the steps necessary to abate the violation in the most expeditious manner possible and shall include the necessary measures in the order.

d. West Virginia Code 20-6-16 (c) uses the term vacate. This term shall mean end, stop, terminate. It does not mean as if the violation never existed.

14A.04 Notice of Violations - Each surface mining reclamation inspector shall note all violations of the operator and shall issue a notice of violation for each violation so noted.

14A.05 Inability to Comply

a. No order to show cause, cessation order or notice of violation issued may be vacated because of inability to comply.

b. Unless caused by lack of diligence, inability to comply may be considered only in mitigation of the amount of civil penalty and of the duration of the suspension of a permit.

14A.06 Attorneys' Fees and Costs Awards in Administrative Proceedings

Any party may on request be awarded by the appropriate court a sum equal to costs and expenses including attorneys' fees and expert witness fees as determined to have been reasonably incurred. Such request must be filed within forty-five days of date of entry of judgement. The request shall include an affidavit setting forth costs and expenses and an itemized statement of attorneys' fees. The request shall be served upon all parties who shall have thirty days to answer the request.

Cost and expenses including attorneys' fees may be awarded to:

(a) any participating party against the violator upon a finding that there is a violation of the Act, the regulations or the permit has occurred, and there is a determination that the party made a significant contribution to the full and fair determination of the issues;

(b) to any participating party other than the violator or his representative from the Department of Natural Resources upon a determination that the party made a significant contribution to a full and fair determination of the issues.

(c) to a violator from the Department of Natural Resources when the violator demonstrates that the Department of Natural Resources issues cessation order,a show cause order,or notice of violation in bad faith and for the purpose of harrassing or embarrassing the violator, provided that no award shall be made under this subsection if Department of Natural Resources prevails upon the issue of a violation;

(d) to a violator from any participating party other than the Department of Natural Resources where such participating parties initiated or participated in in the magistrate proceeding in bad faith and for the purpose of harrassing or embarrasssing the violator;

(e) to the Department of Natural Resources from any participating party where the Department of Natural Resources demonstrates that any such party participated in such proceeding in bad faith and for the purpose of harrassing or embarrassing the Department of Natural Resources.

An award may also include attorneys' fees and expert witness fees expended in obtaining an award of costs, expenses and attorneys' fees. Decisions on such awards may be appealed as other cases under this Act.

15A. OPEN MEETINGS

15A.01 a. All meetings of the Reclamation Commission and Reclamation Board of Review, pursuant to the provisions of the Act shall be open to the public.

b. The time, and place of all regularly scheduled meetings and the time, place and purpose of all special meetings shall be made available to the public and the news media by publishing a notice containing at least the above information in a newspaper of general circulation in the county where the site or environmental concern exists, or if the matter under consideration is of general interest to the people of the State in a newspaper of general circulation in the State.

c. In the event of any emergency requiring immediate official action such efforts to notify the public shall be taken as circumstances allow.

Section 16. - APPEALS TO THE RECLAMATION BOARD OF REVIEW 16.

16A. APPEALS TO THE RECLAMATION BOARD OF REVIEW

16A.01 The board may visit the site of the activity or proposed activity which is the subject of the hearing and take such additional evidence as it deems necessary provided that all parties and intervenors be given notice of the visit and are given an opportunity to accompany the Board.

16A.02 On all appeals to the Board, the Board shall issue a final decision thirty (30) days after the hearing or within thirty (30) days after the testimony presented at the hearing has been transcribed and checked for accuracy.

16A.03 RESERVED

16A.04 RESERVED

WEST VIRGINIA SURFACE MINING RECLAMATION REGULATIONS

DEPARTMENT OF NATURAL RESOURCES

CHAPTER 20-6

SERIES VII
SUBSERIES A
(1982)

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WEST VIRGINIA SURFACE MINING RECLAMATION REGULATIONS

Department of Natural Resources

Chapter 20-6
Series VII
(1982)

Sub Series A

Subject: Rules and regulations pertaining to areas disturbed by prospecting, surface mining operations, and surface effects of underground mining operations, particularly with regards to requirements for permit requirements, performance bonds, haulageways or access roads, blasting, protection of the hydrologic system, drainage system, method of operation, backfilling and regrading, postmining use of land, prime farmlands, revegetation, modifications, and state and federal compliance and validity of regulations.

Sub Series B

Subject: Rules and regulations pertaining to definitions, general permit requirements, transportation facilities, drainage systems, blasting, post mining land use, fish and wildlife considerations, revegetation, prime farmlands, bonding, prospecting, additional permit requirements and performance standards for surface mining operations, additional permit requirements and performance standards for surface effects of underground mining operations, subsidence control, additional permit requirements and performance standards for facilities incidental to coal mining, additional permit requirements and performance standards for coal removal incidental to development, exemptions, additional permit requirements and performance standards for coal mine waste piles, reprocessing, impoundments, small operators assistance program, notice of citizens' suits, citizens' inspections, designation of areas unsuitable for coal mining, inspections, enforcement, open meetings and Reclamation Board of Review appeals.

SECTION 1. GENERAL

1.01 A. Scope - These subseries A regulations establish general and specific rules for permits, for haulageways or access roads, for blasting, for protection of the hydrologic system, for drainage systems, for methods of operation, for postmining use of lands, for prime farmlands, for revegetation of lands disturbed by prospecting and surface mining operations, for bonds, for modifications,

for state and federal compliance and for validity of regulations.

1.01 B. Scope - These subseries B regulations establish general and specific rules for general permit requirements, transportation facilities, drainage systems, blasting, post mining land use, fish and wildlife considerations, revegetation, prime farmlands, bonding, prospecting, additional permit requirements and performance standards for surface mining operations, additional permit requirements and performance standards for surface effects of underground mining operations, subsidence control, additional permit requirements and performance standards for facilities incidental to coal mining, additional permit requirements and performance standards for coal removal incidental to development, exemptions, additional permit requirements and performance standards for coal mine waste piles, reprocessing, impoundments, small operators assistance program, notice of citizens' suits, citizens' inspections, designation of areas unsuitable for coal mining, inspections, enforcement, open meetings and Reclamation Board of Review appeals.

1.02 A. Applicability - The interim rules and regulations contained in Subseries A:

(a) Apply on March 12, 1982 to all permits, underground approvals, existing mine permits issued or modified by the Director between August 14, 1978 and February 13, 1982. These operations must continue to comply with these regulations until the Director has made his decision whether to grant or deny a modification to an interim or permanent program permit which requires compliance with Subseries B.

(b) Apply on March 12, 1982 to all surface mining operations as defined by Section 3 (t) of the Act which do not have a permit, underground approval or existing mine (EM) permit from the Director. This group consists primarily of underground mines opened or reopened before July 1, 1976 and most facilities

incidental to coal mining. The interim regulations apply to these operations until a permit has been approved or denied by the Director in conformity with the Act or until September 22, 1982, whichever is earlier.

(c) Apply on March 12, 1982 to all surface mining operations who receive conditionally approved permits under the Act issued after February 13, 1982. Those interim regulations apply until the date which shall be specified in the permit requiring compliance with the permanent regulations in Subseries B.

1.02 B. Applicability - The permanent rules and regulations contained in Subseries B:

(a) Apply, once the Director has made his decision to grant or deny a modification which requires compliance with Subseries B to operations presently under permit or approval issued or modified between August 14, 1978 and February 13, 1982.

(b) Apply on September 22, 1982, to operations which do not have any permit or approval issued or modified persuant to Chapter 20, Article 6.

(c) Apply to all operations which received conditionally approved permits after February 13, 1982 from the Director on the date specified in the permit.

1.03 A. The interim regulations (Subseries A) apply generally until September 22, 1982 to daily activities at the mine site. Once a permit is modified or a permit is obtained which requires compliance with the permanent regulations (Subseries B), then those regulations govern the daily activities at the mine site.

1.03 B. Phased Submittal - Chapter 20, Article 6, Section 9, of the West Virginia Code provides that:

> "Within two months after the secretary of the interior approves a permanent state program for West Virginia, all surface mining operations shall file an application for a permit or modification of a valid existing permit or underground opening approval relating to those lands to be mined eight months after that approval.

> "No later than eight months after the secretary's approval of a permanent state program for West Virginia, no person may engage in or carry out, on lands within this state, any surface-mining operations unless such person has first obtained a permit from the Director."

The two-month period referred to above expires on March 22, 1982. The eight-month period expires on September 22, 1982. Because of the extensive workloads imposed upon the industry in preparation of and the Reclamation Division in the review of permit applications, phased submittals shall be accepted.

No later than March 22, and upon the initial filing with the local DNR office, the Department of Natural Resources shall begin and maintain a file on that permit application. When the file is complete and all relevent information has been reviewed, the applicant shall forward the complete application to the Charleston office for final action on the application.

If the initial submittal is incomplete, the applicant shall submit a statement and schedule of dates for the remaining submittals.

1.04. Authority - These regulations are issued under the authority of Article 6, Chapter 20, Code of West Virginia, as amended.

1.05. Effective Date - These regulations were promulgated on the day of ,1982.

1.06. Filing Date - These regulations were filed in the Office of the Secretary of State on the 12th day of March, 1982.

SECTION 2

DEFINITIONS

SECTION 2. DEFINITIONS: UNLESS THE CONTEXT IN WHICH USED CLEARLY REQUIRES A DIFFERENT MEANING, AS USED IN THESE REGULATIONS OR AS REFERRED TO IN ARTICLE 6, CHAPTER 20, CODE OF WEST VIRGINIA, AS AMENDED:

2.01. Acidity shall mean the capacity of water to donate protons. The symbol pH referring to the degrees of acidity or alkalinity. On this scale, pH of 1 is the strongest acid, pH of 14 is the strongest alkali, pH of 7 is neutral.

2.02. Acid mine drainage shall mean water with a pH of less than 6.0 discharged from active or abandoned mines and from areas affected by surface mining operations.

2.03. Acid-forming materials shall mean earth materials that contain sulfide mineral or other materials which may create acid drainage.

2.04. Acid-producing overburden shall mean material that may cause spoil which upon chemical analysis, show a pH of 4.0 or less. Seams commonly associated with such material may include, but not be limited to Waynesburg, Washington, Freeport, Sewickley, Redstone, Pittsburgh, Kittanning, Elk Lick, Peerless, No. 2 Gas, Upper Eagle, No. 5 Block and Stockton Lewiston.

2.05. Active surface mining operation shall mean an operation where land is being disturbed or mineral is being removed and where grade release has not been approved.

2.06. Approximate original contour shall mean that surface configuration achieved by backfilling and grading of the mined area 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 compliments the drainage pattern of the surrounding terrain.

2.07. Aquifer shall mean a zone stratum or group of strata that can store and transmit water in sufficient quantities for a specific use.

2.08. Auger mining shall mean mining of coal from an exposed vertical coal face by means of a power-driven boring machine which employs an auger to cut and remove the coal.

2.09. Backfill shall mean to place material back into an excavation and return the area to a predetermined slope.

2.10. Bench shall mean the result of surface mining operations where there is created a leveled surface of an excavated area measured horizontally at any point in the overburden, spoil or mineral between the base of the highwall and outer point of original fill bench; or a working base extending from the base of a highwall on which excavating equipment can set and operate.

2.11. Buffer zone shall mean an undisturbed border along or around an intermittent or perennial stream.

2.12. Coal refuse means any waste coal, rock shale, slurry, culm, gob, boney, slate, clay, and related materials associated with or near a coal seam, which are either brought above ground or otherwise removed from a mine in the process of mining coal, or which are separated from coal during the cleaning or preparation operations.

2.13. Completion of mining shall mean an operation where no mineral has been removed or overburden removed for a period of two consecutive months, unless the operator, within thirty (30) days of receipt of the director's notification declaring completion, submits sufficient evidence that the operation is in fact not completed.

2.14. Controlled placement shall mean the method of surface mining by which the site is prepared, and the overburden is removed, manipulated, and replaced by mechanical means in such a manner as to achieve and maintain stabilization in accordance with the approved pre-plan.

2.15. Cut shall mean an excavation made by excavating equipment to remove overburden in a single progressive line.

2.16. Cut-fill shall mean overburden or other material removed from an elevated portion of a road or bench and deposited in a depression in order to maintain a desired grade.

2.17. Design storm shall mean predicted rainfall of given intensity, frequency, and duration based on National Weather Service.

2.18. Director and/or his authorized agent shall mean the director of the Department of Natural Resources, deputy directors, the Chief of the Division of Reclamation, the Assistant Chiefs of the Division of Reclamation and all duly authorized surface mining reclamation supervisors, or inspectors and inspectors-in-training.

2.19. Disturbed areas shall mean those lands that have been affected by surface mining operations.

2.20. Diversion ditch shall mean a designed channel constructed for the purpose of collecting and transmitting surface runoff.

2.21. Downslope shall mean the land surface between the projected outcrop of the lowest coal seam being mined and the valley floor.

2.22. Drill bench shall mean the construction of a bench created for the purpose of setting up and operating drilling equipment and all roads and other disturbed areas incidental to such construction.

2.23. Ephemeral stream shall mean a stream which flows less than one month per year in direct response to precipitation.

2.24. Face-up shall mean the result of an excavation where a vertical or near vertical highwall is created that exposes the overburden and/or the mineral face.

2.25. Groundwater shall mean subsurface water at or below the water table occupying the saturation zone from which wells or springs are fed.

2.26. Haulageway or access road shall mean any road constructed, improved, maintained or used by the operator with exception of state owned roads.

2.27. Hydrologic balance shall mean the relationship between the quality and quantity of inflow stroage and outflow in a hydrologic unit such as a drainage basin, aquifer, soilzone, lake, or reservoir. It encompasses the quantity and quality relationships between preciptiation, runoff, evaporation, and the change in ground and surface water storage.

2.28. Intermittent stream shall mean a stream or portion of a stream that flows continuously for at least one month of the calendar year as a result of ground water discharge or surface runoff.

2.29. Inspection shall mean a visual review of prospecting, surface, or other mining operations to insure compliance with any applicable law or rules and regulations under jurisdiction of the director.

2.30. Leachate shall mean a liquid that has percolated through soil, rock, or waste and has extracted dissolved or suspended materials.

2.31. Lightly buffered stream shall mean any stream or its tributaries that contains less than 15 ppm methyl orange alkalinity (to pH 4.5) and a conductivity of less than 50 micro MHO.

2.32. Mine shall mean the shaft, slopes, drifts or inclines connected with excavations penetrating coal seams or strata and the surface structures or equipment connected therewith which contributes directly or indirectly to the mining, preparation or handling of coal.

2.33. Mineral face shall mean the exposed vertical cross-section of the natural coal seam or mineral deposit.

2.34. Mountaintop removal shall mean surface mining operations that remove entire coal seams 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 and where equal, higher and/or better land use is proposed.

2.35. Natural drainway shall mean any water course or channel which may carry water to the tributaries and rivers of the watershed.

2.36. Operation shall mean the permit area indicated on the approved map submitted by the operator, or an area where land is being disturbed or mineral is being removed.

2.37. Outer spoil or outer slope shall mean the disturbed area extending from the outer point of the bench to the extreme lower limit of the disturbed land.

2.38. Overburden or spoil shall mean the earth, rock and other materials lying in the natural state above a mineral deposit before or after excavation.

2.39. Peak runoff shall mean the maximum flow at a specified location resulting from a design storm.

2.40. Perennial stream shall mean a stream or portion of a stream that flows continuously.

2.41. Pit shall mean that part of the surface mining operation from which the mineral is being actively removed or where the mineral has been removed and not backfilled.

2.42. Pre-Inspection shall mean a preliminary survey and a field review by the director or his authorized agent of a pre-plan and the proposed area to be disturbed.

2.43. Pre-plan shall mean the total application submitted to the director including the application form, mining and reclamation plan, drainage plan, blasting plan, planting plan, maps, drawings, data, cross-sections, bonds and other information as may be required.

2.44. Prospecting shall mean the use of excavating equipment in an area not covered by a surface mining permit for the purpose of removing the overburden to determine the location, quantity or quality of a natural coal deposit, or to make feasibility studies, or for any other purpose.

2.45. Recharge capacity shall mean the ability of the soils and underlying materials to allow precipitation to infiltrate and reach the zone of saturation.

2.46. Reclamation shall mean the process of converting disturbed land to a stable form for productive use.

2.47. Reference area shall mean land units of varying size for the purpose of measuring ground cover, productivity and species diversity.

2.48. Sand shall mean individual rock or mineral fragments having a diameter less than 2.00 mm but greater than .02 mm.

2.49. Sediment shall mean solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

2.50. Sediment control structure shall mean a barrier, dam, ditch, excavation or other structure placed in a suitable location to form a silt or sediment basin.

2.51. Sizeable quantity of water shall mean an accumulation of storm or any other water in excess of 5,000 cubic feet not provided for in the pre-plan.

2.52. Stoniness shall mean a characteristic of earth, overburden or spoil reflecting its relative proportion of sizeable aggregate content as apposed to its sand, silt, clay or rock fragment content.

2.53. Storm water shall mean any water flowing over or through the surface of the ground caused by precipitation; generally, surface runoff.

2.54. Structure shall mean but not be limited to gas lines, water lines, towers, airports and dams. This shall not include operational facilities of the surface mining operation.

2.55. Subsidence shall mean a sinking of a portion of the earth's surface resulting from underground removal of a mineral seam subsequent to failure of support structures.

2.56. Surface effect of underground mining operations shall mean surface mining operations where lands are disturbed including but not limited to roads, drainage systems, mine entry excavation, above-ground-work areas, such as tipples, coal processing facilities and other operating facilities; also waste work and spoil disposal areas and mine waste impoundments or embankments which are incident to mine openings or reopenings.

2.57. Surface mining operations shall mean surface disturbances and all activities necessary and incident to the removal of mineral and the reclamation of such operations.

2.58. Surface water shall mean water on the surface of the earth.

2.59. Toxic-forming materials shall mean 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, air or water that are detrimental to the environment.

2.60. Toxic mine drainage shall mean water that is discharged from active, abandoned and other areas affected by surface mining operations and which contains a substance which 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.

2.61. Valley or head of hollow fills shall mean a controlled earth and rock fill across or through the head of a valley or hollow to form a stable, permanent storage space for excess surface mine overburden.

SECTION 3.

PROSPECTING

SECTION 3. PROSPECTING

3.01. Performance Bond Coverage - The amount of performance bond or its equivalent as provided in Section 7, Article 6, Chapter 20 of the Code of West Virginia, as amended, shall be five hundred dollars ($500) per acre or any fraction thereof. Performance bond or its equivalent shall not be transferable as a credit to surface mining.

3.02. Notification of Approval or Disapproval - After review of the prospecting permit application and the reclamation plan for the area to be disturbed by prospecting, the director shall inform the applicant if they are approved or disapproved. If the application and plan are not acceptable, he shall set forth the reasons why they are not acceptable, and he may propose modifications, delete areas, or reject the permit on the basis of the reclamation plan or for other justifiable reasons set forth in the Code of West Virginia, as amended, and/or rules and regulations.

3.03. Reclamation Tax - No special reclamation tax, as outlined in Section 17 of Article 6, Chapter 20, Code of West Virginia, as amended, is required for a prospecting permit. However, if said permit is to be converted to a surface mining permit, the acreage disturbed by prospecting shall be included as a part of the total area to be assessed the special reclamation tax, as set forth in Section 17, Article 6, Chapter 20 of the Code of West Virginia, as amended.

3.04. Validity of Permit - A prospecting permit shall be valid for one year from its date of issue.

3.05. Governing Regulations - Prospecting and reclamation procedures may be governed by the following regulations of the Reclamation Commission.

a. Section 5 - Haulageways or access roads;

b. Section 6 - Blasting;

c. Section 7 - Protection of the Hydrologic Balance;

d. Section 8 - Drainage Systems;

e. Section 9 - Method of Operation; and

f. Section 12 - Revegetation.

3.06. Removal of Minerals - Minerals may be removed during prospecting operations for testing purposes only, and shall be limited to a maximum of two hundred fifty (250) tons for each permit area. Request for permission to remove greater amounts than two hundred fifty (250) tons of minerals shall be submitted to the director and may be approved at his discretion.

3.07. Bond Release - The performance bond or other securities accompanying a prospecting permit shall be released in the same manner as surface mining permit bonds.

SECTION 4.

PERMIT REQUIREMENTS

SECTION 4. PERMIT REQUIREMENTS

4.01. Class III Legal Advertisement Requirements - Prior to the publication of the Class III Legal Advertisement for a surface mining permit, excluding underground opening approval, the following requirements shall be met:

a. Upon filing of a surface mining permit application, proposal maps, reclamation plan and filing fee, a surface mining application (SMA) file number may be assigned. Surface mining application (SMA) file number assignments shall be valid for a period of time not to exceed 120 days from date of assignment.

b. A clear and accurate location map shall be made a part of the legal advertisement. The map of a scale and detail found in the West Virginia General County Highway Map or the equivalent will be acceptable. Any significant landmarks, roads or streams shall be indicated on the location map. Longitude and latitude coordinates on the map shall cross at a perimeter marker.

4.02. Operator Reassignment - Should the applicant or operator designate, contract or otherwise assign the surface mining operation to others, prior written notification of the assignment and additional information as provided in Section 8, Article 6, Chapter 20 of the Code of West Virginia, as amended, shall be submitted and approved.

4.03. Approval of Person to Prepare a Reclamation and Mining Plan - Any person preparing a reclamation and mining plan and drainage system for the area of land to be disturbed as required by the provisions of Article 6, Chapter 20, Section 9 and 9A, Code of West Virginia, as amended, or by the regulations, shall first submit to the director a written resume of his past experience and training. A written test shall also be administered. On the

basis of the resume and written test, he shall be adjudged qualified or not as the case may be, and so notified by the director in writing. Should experience warrant, an approved person may be adjudged disqualified and so notified by the director in writing.

4.04. Scale for Reclamation Pre-plan Map - The scale required for all maps prepared for submission with an application for a surface mining permit or underground opening reclamation plan approval shall be as follows:

a. Scale on a U. S. geological survey topographic 7.5-minute quadrangle shall be enlarged to 500 feet or less to the inch; and

b. Scale on aerial photograph shall be 660 feet or less to the inch.

4.05. Scale for Drainage, Progress and Final Maps - The scale on the drainage, progress and final maps shall be of the same scale as the approved pre-plan map.

4.06. Scale Approval - Written permission from the director shall be required prior to the submission of maps drawn to any scale other than set forth by regulations.

4.07. Map Size - All maps and plans shall be submitted on standard print paper, 24 inches by 36 inches or less. If supplementary maps or plans are attached, match lines shall be used.

4.08. Color Code - A color code shall be used in preparing all maps to indicate critical features of the permit area as follows:

a. Red shall indicate mineral to be removed;

b. Yellow shall indicate the total disturbed land;

c. Blue shall indicate water and drainage;

d. Brown shall indicate special uses;

e. Green shall indicate regrading; and

f. Purple for adjacent mining permits.

4.09. Permanent Monument - A permanent monument shall be posted at all points of access from public roads and highways and at other suitable locations. The monument shall consist of a sign constructed of wood, metal, or other suitable material 2' x 3' mounted on a two-inch pipe driven three feet into the ground with four feet exposed. The sign shall clearly indicate the company name, permit numbers, business address and telephone number. Any suitable equivalent substitute may be approved.

4.10. Perimeter Marker - A two-inch (2") pipe shall be driven into the earth with a minimum of three feet (3') exposed to permanently mark the beginning and ending points of the area under permit. It shall be identified by painting the exposed portion of the pipe red. Any suitable substitute may be approved. The assigned permit number shall be permanently affixed to the perimeter marker.

4.11. Buffer Zone Markers - Appropriate markers will be established along a buffer zone. Markers shall consist of metal or wooden stakes or other suitable devices or methods.

4.12. Topsoil Markers - When topsoil or other vegetation supporting material is segregated and stockpiled, the stockpiled material shall be marked. Markers shall remain in place until the materials are removed.

4.13. Slope Measurements - The operator shall show on the map filed with the application for a permit the percent of slope of the original surface within each 200 foot interval along the contour of the operation. The first measurement is to be taken at the starting point of the operation. The flagged field measurements shall be made from the estimated cropline or proposed coal seams extending 100 lineal feet above and below or beyond the coal outcrop on the area to be disturbed. Where the original slope has been previously altered, slope measurements shall be taken above or below the dis-

turbance; whichever is more representative of the original slopes.

SECTION 5.

HAULAGEWAYS OR ACCESS ROADS

SECTION 5. HAULAGEWAYS OR ACCESS ROADS

5.01. Location - The centerline location of the proposed haulageways or access roads shall be identified on the site by visible markings at one hundred (100) foot intervals, at the time the reclamation and mining plan is pre-inspected and prior to commencement of construction. Pre-existing haulageways or access roads shall be exempted from this requirement.

5.02. Haulageway or Access Road Construction - All construction of haulageways or access roads shall conform to "controlled placement" as defined in 2.14. and described in Section 9B.02, Method of Operation. The grading of a haulageway or access road shall be such that:

a. No sustained grade shall exceed 10%;

b. The maximum pitch grade shall not exceed 15% for 300 feet;

c. There shall not be more than 300 feet of maximum pitch grade for each 1,000 feet of road constructed; and

d. The surface shall pitch toward the ditchline at the minimum rate of 1/2 inch per foot of surface width or crowned at the minimum rate of 1/2 inch per foot of surface width as measured from the centerline of the haulageway or access road.

5.03. Curves - The grade on switchback curves shall be reduced to less than the approach grade and should not be greater than ten percent (10%).

5.04. Cut Slopes - Cut slopes should not be more than 1:1 in soils or 1/4:1 in rock.

5.05. Ditches - A ditch shall be provided on both sides of a through-cut and on the inside shoulder of a cut-fill section, with ditch relief culverts being spaced according to grade. Water shall be intercepted before reaching a switchback or fill and led off. All ditchlines shall be designed to pass a peak discharge capacity of a one-year, 24-hour precipitation event.

5.06. Culverts - Ditch relief culverts shall be installed wherever necessary to insure proper drainage of surface water beneath or through the haulageway or access road, according to the following provisions:

a.

Road Grade in Percent	Spacing of Culverts in Feet
0 - 5	300 - 800
6 - 10	200 - 300
11 - 15	100 - 200

b. The culvert shall cross the haulageway or access road at a 30 degree angle downgrade with a minimum grade of 3% from inlet to outlet, except in intermittent or perennial streams where the pipe shall be straight and coincident with the normal flow;

c. The inlet end shall be protected by a headwall of suitable material and the slope at the outlet end shall be protected with an apron of suitable material;

d. The culvert shall be covered by compacted fill to a depth of one foot or half the culvert diameter, whichever is greater; and

e. Design of culverts may be submitted where the aforementioned design criteria is not practical or necessary.

5.07. Culvert Openings - Culvert openings installed on haulageways or access roads shall not be less than one hundred (100) square inches in area, but, in any event, all culvert openings shall be adequate to carry storm runoff of a peak discharge capacity of a one-year, 24-hour precipitation event from the contributing watershed, and shall receive necessary maintenance to function properly at all times.

5.08. Stream Crossings - Culverts, bridges or other drainage structures shall be used to cross intermittent or perennial streams. Consideration shall be given to such factors as weather conditions, season of the year,

time period for construction, etc. with regard to using measures to minimize adverse effects to the water quality and stream channel. In no event shall the sediment load of the stream be significantly increased or the water quality be significantly decreased during the construction period. Water control structures shall be designed with a minimum discharge capacity capable of passing the runoff for a 10-year, 24-hour precipitation event from the contributing watershed.

5.09. Removal of Drainage Structures - No bridges, culverts, stream crossings, etc., necessary to provide access to the operation, may be removed until reclamation is completed and approved by the director. The same precautions as to water quality are to be taken during removal of drainage structures as those taken during construction and use.

5.10. Seeding of Slopes - All disturbed area including fill and cut slopes, shall be seeded and mulched immediately after the construction of a haulageway or access road and maintained thereafter in accordance with Section 12 of these regulations.

5.11. Haulageway or Access Road Surfacing - Haulageways or access roads shall not be surfaced with any acid-producing or toxic material or with any material which will produce a concentration of suspended solids in surface drainage.

5.12. Tolerance - All grades referred to in this section shall be subject to a tolerance of two percent (2%) grade. All linear measurements referred to in this section shall be subject to a tolerance of ten percent (10%) of measurement. All angles referred to in this section shall be measured from the horizontal and shall be subject to a tolerance of five percent (5%).

5.13. Dust Control - All reasonable means shall be employed to control dust from the surface of haulageways or access roads.

5.14. Abandonment of Haulageways or Access Roads - Haulageways or access roads shall be abandoned in accordance with Section 9 of these regulations in addition to the following requirements:

a. Upon abandonment of haulageways or access roads, every effort shall be made to prevent erosion by the use of culverts, water bars or other devices. Water bars of the ditch, earth berm or log type shall be installed according to the following table of spacings in terms of percent of haulageway or access road grade, prior to the abandonment.

Percent of Haulageway	Spacing of Water Bars in Feet
2	250
5	135
10	80
15	60
20	45
Above 20	25

b. Upon abandonment of haulageways or access roads, they shall be seeded and mulched in accordance with Section 12 of these regulations.

5.15. Sediment Control - A sediment storage volume must be provided equal to 0.125 Ac/ft. for each acre of disturbed area or a lesser value as approved by the director.

5.16. Existing Haulageways or Access Roads - Where existing roads are to be used for access or haulage and it can be demonstrated that reconstruction to meet the above requirements would result in greater environmental harm and the drainage and sediment control requirements of this section can otherwise be met, the above requirements may be waived.

5.17. Infrequently Used Access Road Exemption - Access roads constructed for and used only to provide infrequent service to surface facilities such as ventilators, monitoring devices and sedimentation ponds shall be exempt from the requirements of sub-sections 5.02, 5.03, 5.04, 5.05, 5.06, 5.07, 5.08, 5.12, 5.13 and 5.15, provided adequate stabilization to control erosion is achieved through use of alternate measures. This exemption shall not apply should environmental harm in the form of additional contributions of suspended solids or erosion occur and in such instances the director may order that any or all of the requirements of Section 5 be met.

SECTION 6.

BLASTING

SECTION 6. BLASTING

6.01. Blasting Signs - If blasting is necessary to conduct surface mining operations, signs reading "Blasting Area" shall be displayed conspicuously at all approaches to the blasting site and along haulageways and access roads to the mining operation. The sign shall be two feet by three feet (2' x 3') reading "Blasting Area" and explaining the blasting warning and the all clear signals shall be posted at all entrances to the permit area.

6.02. Certified Blasting Personnel - All blasting operations shall be conducted by certified, trained and competent persons who possess the knowledge of hazards involved and have full knowledge of all local, state, and federal laws and regulations pertaining to explosives and use thereof. Certification by the Fire Marshall of the State of West Virginia shall be accepted as being valid.

6.03. Pre-blasting Survey - Requirements for a pre-blasting survey shall be governed by the following:

a. On a request to the director by a resident or owner of a man-made dwelling or structure that is located within one-half mile of the permit area, the operator shall conduct a pre-blasting survey of the dwelling or structure and submit a report of the survey to the director.

b. Personnel approved by the director shall conduct the survey to determine the condition of the dwelling or structure, and to document any pre-blasting damage and to document other physical factors that could reasonably be affected by the blasting. Assessments of structures such as pipes, cables, transmission lines, wells and other water systems shall be limited to surface conditions

and other readily available data. Special attention shall be given to the pre-blasting condition of wells and other water systems used for human, animal, or agricultural purposes and to the quantity and quality of the water.

c. A written report of the survey shall be prepared and signed by the person or persons who conducted the survey. The report shall include recommendations of any special conditions or proposed adjustments to the blasting procedures 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 to the director.

6.04. Public Notice of Blasting Operations - At least 10 days, but not more than 20 days before beginning blasting operations, the operator shall publish on a form supplied by the director, a schedule in a newspaper of general circulation in the county of the proposed site. Copies of the schedule shall be distributed by mail to local governments and public utilities and to each resident within one-half mile of the blasting sites described in the advertisement. The operator shall republish and redistribute the schedule by mail at least every three (3) months. Schedules shall not be so general as to cover all working hours but shall identify as accurately as possible the location of the blasting sites and the time periods when blasting will occur. The schedule shall contain at a minimum:

a. Identification of the specific areas in which blasting will take place. The specific blasting areas described shall not be larger than 300 acres with a generally contiguous border;

b. Dates and times when explosives are to be detonated shall be expressed in not more than 4-hour increments;

c. Methods to be used to control access to the blasting area;

d. Types of audible warnings and all clear signals to be used before and after blasting; and

e. A description of possible emergency situations (defined in Section 6.05.).

6.05. Blasting Procedures - All blasting shall be conducted only during the daytime hours, defined as sunrise until sunset. (Based on public requests or other consideration, including the proximity to residential areas, the director may specify more restrictive time periods.) No blasting shall be conducted on Sunday.

Blasting may not be conducted at times different from those announced in the blasting schedule except in emergency situations where rain, lightning other atmospheric conditions, or operator or public safety requires unscheduled detonations.

6.06. Audible Blast Warning - Three (3) minutes prior to blasting, a warning signal audible to within a range of 1/2 mile from blast site will be given. This pre-blast warning shall consist of three (3) short blasts of five (5) seconds duration with five (5) seconds between each blast. One (1) long audible warning signal of twenty (20) seconds duration shall be the "all clear" signal.

6.07. Approaches to Area - All approaches to the blast area shall be guarded against unauthorized entry ten (10) minutes prior to and immediately after blasting.

6.08. Charged Holes - All charged holes awaiting firing for any reason shall be guarded and posted against unauthorized entry.

6.09. Air Blast Level Standard - A maximum air blast level of 128 decibel linear peak shall not be exceeded at any residence, building or

occupied structure within 1/2 mile of the blasting site other than operational facilities of the mine.

6.10. Blasting Prohibited - Except where lesser distances are approved by the director, blasting shall not be conducted within:

a. 1,000 feet of any building used as a dwelling, school, church, hospital or nursing facility;

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;

c. 500 feet of an underground mine not totally abandoned except with the concurrence of the Mining Safety and Health Administration; and

d. The director may prohibit blasting on specific areas where it is deemed necessary for the protection of public or private property and general safety of the area.

6.11. Particle Velocity - A particle velocity of one (1) inch per second in any one of the three mutually perpendicular directions shall not be exceeded at the nearest residence, building, or structure, other than operational facilities of the mine. The mutually perpendicular directions are identified as transverse, vertical and longitudinal.

6.12. Maximum Weight of Explosive - The maximum weight of explosive to be detonated within any 8 millisecond period shall be determined by the formula $W = (D/60)^2$ where W represents the maximum weight of explosives, in pounds, that can be detonated in any 8 millisecond period, and D represents the distance, in feet, from the nearest point of blast to nearest residence, building or structure, other than operational facilities of the mine.

6.13. Seismograph Measurements - Where a seismograph is used to monitor the velocity of ground motion and the peak particle velocity limit of one (1) inch per second is not exceeded, the equation in Section 6.12. need not be used. However, if the equation is not being used, a seismograph record at the nearest structure to the blast site shall be obtained for every blast. The director may require a seismograph recording of any or all blasts.

6.14. Blast Record - A blasting log record book shall be kept current daily and is to be made available at the operation for inspection by the director and the public. These blasting log records are to include seismograph reports, shall be retained for three (3) years and should include as a minimum the following data:

a. Name of permittee, operator, or other person conducting the blast;

b. Location, date and time of blast;

c. Name, signature and certification number of blaster-in-charge;

d. Direction and distance, in feet, to nearest dwelling, school, church or commercial or institutional building neither owned nor leased by the operator;

e. Weather conditions;

f. Type of material blasted;

g. Number of holes, burden, and spacing;

h. Diameter and depth of holes;

i. Types of explosives used;

j. Total weight of explosives used;

k. Maximum weight of explosives detonated within any 8 millisecond period;

m. Method of firing and type of circuit;

n. Type and length of stemming;

o. If mats or other protections were used;

p. Type of delay detonator used and delay periods used;

q. Seismograph records, where required, including but not limited to;

1. Seismograph reading, including exact location of seismograph and its distance from the blast;

2. Name of person taking the seismograph reading;

3. Name of person and firm analyzing the seismograph record, and;

r. Shot location.

The format for the arrangement and the recording of items in the blasting log record book is to be on forms prescribed by the director.

6.15. Assessment - Any assessment as set forth in Section 11a, Article 6, Chapter 20 of the Code of West Virginia, as amended, shall be paid within ten (10) days after receipt of said assessment notice.

SECTION 7.

PROTECTION OF THE HYDROLOGIC SYSTEM

SECTION 7. PROTECTION OF THE HYDROLOGIC SYSTEM

7.01. Applicability - The operator shall plan and conduct surface mining operations to minimize disturbance to the prevailing hydrologic balance in order to prevent long-term adverse changes in the hydrologic balance, both on and off site, that could result from surface mining operations. Changes in water quality and quantity, in the depth to ground water, and in the location of surface water drainage channels shall be minimized such that the postmining land use of the disturbed land is not adversely affected and applicable federal and state statutes and regulations are not violated. The operator shall conduct operations so as to minimize water pollution and shall, where necessary, use treatment methods to control water pollution. The operator shall emphasize surface mining and reclamation practices that will prevent or minimize water pollution and changes in flows in preference to the use of water treatment facilities. Practices to control and minimize pollution include, but are not limited to, stabilizing disturbed areas through grading, diverting runoff, achieving quick growing stands of temporary vegetation, lining drainage channels with rock or vegetation, mulching, sealing acid-forming and toxic-forming materials, and selectively placing waste materials in backfill areas. If pollution can be controlled only by treatment, the permittee shall operate and maintain the necessary water treatment facilities for as long as treatment is required.

7A. Permit Requirements

7A.01. Site Analysis - Each application for a permit shall include cross-sections of the land to be affected with respect to the hydrologic balance including the actual area to be mined. These cross-sections may

be derived from core boring or other approved sources. These cross-sections are to be prepared and certified by a registered professional engineer or other approved person showing pertinent elevation and location of test borings or core samplings and depicting the following information:

a. The nature and depth of the various strata of overburden;

b. The location of subsurface water, if encountered, and its quality;

c. The nature and thickness of any coal or rider seam;

d. The nature of the stratum immediately beneath the coal seam to be mined;

e. Mine openings to the surface;

f. The location of aquifers;

g. The estimated elevation of the water table;

h. Where surface mining operations are to be conducted on critical streams, pre-mining overburden sampling and analysis shall be required. Sampling points shall be located on the drainage plan map. Where overburden analysis reflects toxic strata, a plan for handling and final placement for said strata shall be submitted. On critical streams where it can be documented or past mining experience has shown that surface mining will not result in significant acid production, pre-mining overburden analysis may not be required. Overburden and minesoil analysis shall be in accordance with standard procedures outlined in Environmental Protection Agency manual # 600/2-78-054 (Field and Laboratory Methods Applicable to Overburdens Minesoils) or other approved methods; and

i. Such other information as the director may require.

7A.02. Surface Water Monitoring - The operator shall submit as part of the complete mining and reclamation pre-plan a surface water monitoring

program which meets the following requirements:

a. Provides adequate data to describe the likely daily and seasonal variation in discharges from the disturbed area in terms of water flow, pH, total iron, total suspended solids and, if requested by the director, any other parameters characteristic of the discharge;

b. Provides daily monitoring by rain gauges to measure normal and abnormal variations in precipitation;

c. All water discharged from the permit area is to be monitored daily by the operator for total iron, pH and water flow and if required by the director, any other parameter. A written record of the testing dates and analytical data shall be kept current and made available for inspection at the operation;

d. Provides a monthly report of all measurements to the director;

e. In the event violations of permit conditions occur, the director shall be notified immediately after receipt of analytical results by the operator; and

f. After disturbed areas have been regraded and seeded in accordance with these regulations, the operator shall monitor surface water flow and quality. Data from this monitoring shall be used to demonstrate that the quality and quantity of runoff without treatment will be consistent with the requirement of this section to minimize disturbance to the prevailing hydrologic balance and with the requirements of these regulations to attain the approved postmining land use. This data shall provide a basis for approval by the director for removal of water quality or flow control systems and for determining when the requirements of this section are met. A

one (1) year history of meeting effluent limitations shall be adequate for demonstrating that the water has stabilized to an acceptable level. The nature of data, frequency of collection and reporting requirements will be the same as that during the mining operation.

7A.03. Ground Water Monitoring - The operator shall submit as part of the complete mining and reclamation pre-plan a procedure for monitoring ground-water levels, infiltration rates, subsurface flow and storage characteristics, and the quality of ground water to determine the effect of surface mining operations on the recharge capacity of reclaimed lands and on the quantity and quality of water in ground water systems at the mine area and in associated off-site areas. When operations are conducted in such a manner that may affect the ground water system, ground water levels and ground water quality shall be periodically monitored using wells that can adequately reflect changes in ground water quantity and quality resulting from such operations. The director may require drilling and development of additional wells if needed to adequately monitor the ground water system.

7A.04. Water Sampling - Water tests for total iron, total hot acidity, total mineral acidity, total alkalinity, total aluminum, total manganese, total sulfate, dissolved solids, pH and suspended solids shall be taken before surface mining operations begin and the results of these tests will be shown in the pre-plan. The location for these preliminary tests will be:

a. On natural drainways above proposed surface mining operations;

b. On natural drainways below proposed surface mining operation at or near the affected drainage area boundary; and

c. On natural drainways upstream from the mouth of natural drainways

affected by surface mining.

7B. Water Quality

7B.01. Acid and Toxic Materials - Drainage from acid-forming and toxic-forming materials into ground and surface water shall be avoided by:

a. Identifying, burying, blending, and treating where necessary, spoil or other materials that will be toxic to vegetation or that will adversely affect water quality. Such materials shall be disposed of in accordance with the provisions of Section 9.03;

b. Preventing or removing water from contact with acid-forming or toxic-forming materials;

c. Burying or otherwise treating toxic-forming materials from coal preparation plants no later than 90 days after the cessation of the filling of the disposal area. Burial or treatment shall be in accordance with Section 9.03.;

d. Casing, sealing or otherwise managing boreholes, shafts, wells, and auger holes to prevent pollution of surface or ground water and to prevent mixing of ground waters of significantly different quality. All boreholes that are within the permit area but are outside the surface coal mining area or which extend beneath the coal to be mined and into water bearing strata shall be plugged permanently unless the boreholes have been approved for use in monitoring; and

e. Taking such other actions as required by the director.

7B.02. Water Quality Control - All reasonable measures shall be taken to intercept all surface water by the use of diversions, culverts and drainage ditches or other methods to prevent water from entering the pit area. All water accumulation into the pit shall be removed at least once in a 24-hour

period unless otherwise approved by the director.

The water leaving the permit area will not lower the water quality of the river, stream or drainway into which it is discharged below the water quality standards established for such river, stream or drainway.

7B.03. Water Quality Standards - Discharges from areas disturbed by surface mining operations must meet all applicable federal and state laws and regulations. The monitoring frequency and minimum effluent limitations shall be governed by the standards set forth in the NPDES Program under the Federal Water Pollution Control Act as amended, 33 U.S.C. 466 et. seq. and the rules and regulations promulgated thereunder. In no event shall the discharge from the permit area have a pH of less than 6.0 or greater than 9.0 and the iron shall not exceed 7 parts/million.

7B.04. Treatment Facilities for Drainage from Surface Mine Operations - The Chief of the Division of Reclamation or his duly authorized agent shall conduct such investigation as it is deemed necessary and proper in order to determine whether or not any such permit should be granted or denied. In making such investigation and determination as to any such application, the Chief of the Division of Reclamation shall consult with the Chief of the Division of Water Resources. The Chief of the Division of Water Resources shall cooperate with and assist him in carrying out the duties imposed on him by the provisions of Article 5A, Section 5 (3) and Article 6, Chapter 20 of the Code of West Virginia, as amended, and the rules and regulations of the Reclamation Commission and the Water Resources Board. Such cooperation shall include, but not be limited to a written recommendation for the approval or disapproval of the permit and the reason or reasons for such recommendation.

7B.05. Treatment of Acid Water Surface Breakthrough - Treatment of

acid water surface breakthrough shall be as follows:

a. Any surface breakthrough of water caused by the operator during the course of his operations shall be sampled immediately and analyzed for total iron, total suspended solids and pH and if requested by the director, any other parameter characteristics of the discharge. Such analysis shall be made by a competent water analyst or chemist. The original and at least one copy of such analysis shall be retained by the operator, two copies shall be submitted to the Chief of the Division of Reclamation;

b. Should said analysis indicate the water to be acid with a pH of less than 6.0 and/or contains more than 7mg/l of iron, seals shall be immediately constructed. These seals shall either:

1. prevent any air from entering the underground mine by way of the breakthrough; or

2. prevent any air from entering the breakthrough while allowing the water to flow from the breakthrough; or

3. seal the breakthrough of acid water so that it cannot flow. Such seals shall be constructed of stone, brick, block earth or similar impervious materials which are acid resistant. Any cement or concrete employed in the construction of these seals shall also be of an acid resistant, impervious type; and

c. Alternate methods of sealing and/or treating acid water may be employed as they are developed and approved.

7C. Water Rights and Replacement

7C.01. Applicability - The operator shall replace the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where the owner of interest has estab-

lished that such supply has been affected by contamination, diminution or interruption resulting from the surface mining operation. The replacement of the water supply will not be required if the owner of interest waives the replacement thereof.

7D. Daily Monitoring Exception

7D.01. Applicability - The requirements of Section 7, sub-sections 7A.02 b and 7A.02 c shall not apply where an operator demonstrates by sufficient data that there is a reasonable expectation that a violation of federal or state water discharge permits will not occur. If such a violation occurs, then the director may require daily monitoring until it has been demonstrated to his satisfaction that the violation or pollution problem has been abated.

SECTION 8.

DRAINAGE SYSTEM

SECTION 8. DRAINAGE SYSTEM

8.01. Drainage Plan - There shall be submitted as part of the complete application and pre-plan for surface mining operations, a drainage plan which will show the proposed method of drainage on and away from the area of land to be disturbed. Said plan shall indicate the directional flow of water, constructed drainways, natural waterways used for drainage, streams or tributaries receiving or to receive this discharge, location and design of sediment control structures, location of all water test sites, treatment facilities and other data as may be required.

8.02. Sediment Control - Sediment control structures shall be constructed in appropriate locations in order to control sedimentation. All such structures shall meet the following requirements:

a. All structures shall have the capacity to store 0.125 acre/ft. of sediment for each acre of disturbed area in the structures watershed; provided, however, that consideration may be given for reduced storage volume where the pre-plan reflects controlled placement, concurrent reclamation practices, use of on-site sediment control measures and access and availability of all structures for maintenance;

b. This disturbed area will include all land affected by previous surface mining operations that are not presently stabilized and all land that will be disturbed throughout the life of the permit; and

c. The structures shall be cleaned out when the sediment accumulation reaches 80% of the sediment storage volume required. Sediment removal shall be done in a manner that minimizes adverse effects on surface water due to its chemical and physical characteristics, on infiltration, on vegetation, and on surface and ground water

quality and in a manner consistent with the provisions of Section 9 (Abandonment Procedures for Sediment Control Structures) of the "Drainage Handbook for Surface Mining" published by the West Virginia Department of Natural Resources and hereby incorporated by reference.

8.03. Natural Drainways - Natural drainways in the area of land disturbed by surface mining and prospecting operations shall be kept free of overburden except where overburden placement has been approved. Overburden placement and haulageways across natural drainways shall be constructed so as not to affect the flow of the stream, or materially increase the sediment load and concentrations of toxic materials in the stream.

8.04. Intermittent or Perennial Stream - No land within 100 feet of an intermittent or perennial stream shall be disturbed by surface mining operations unless specifically authorized by the director. The area not to be disturbed shall be designated a buffer zone and marked accordingly.

8A. Constructed Drainways and Diversions

8A.01. Diversions Above Highwalls - All surface water which drains toward the pit shall be effectively intercepted on the uphill side of the highwall by diversion ditches and conveyed by approved channels or other approved means of discharge to natural drainways outside the disturbed area. The director may, in the exercise of his sound discretion, when not in conflict with Article 6, Chapter 20, Code of West Virginia, as amended, waive this regulation.

8A.02. Diversions on Benches - Diversions will be constructed on the excavated solid bench in order to carry off storm, surface or seepage water. The breaking point for diversions on the bench will fall at or near

the midpoint between natural or constructed drainways. In no case shall water be discharged over a spoil slope without adequate safeguards to prevent erosion. Removal of water from the bench shall be accomplished by use of adequate pipe, a rock riprap flume, asphalt or concrete chutes, by grading a channel to nonerosive rock, or by other approved methods.

8A.03. Diversions Below Spoil Slopes - All surface water draining off the spoil slopes, unless otherwise controlled, will be intercepted by suitable and adequate diversion ditches which will carry the water to an approved sediment control structure before discharge into a natural drainway. These diversions will be located within twenty-five (25) feet of the anticipated toe of the spoil slope. If, at any time, spoil material interferes with the flow of water in these diversions, that material shall be removed immediately. The director may, in the exercise of his sound discretion, when not in conflict with Article 6, Chapter 20, Code of West Virginia, as amended, waive this regulations.

8A.04. Temporary Diversions - Temporary diversion structures are those used during mining and reclamation. When no longer needed, these structures shall be removed and the area reclaimed. Temporary diversion structures shall be constructed to safely pass the peak runoff from a 1-year, 24-hour precipitation event, or larger event as specified by the director.

8A.05. Permanent Diversions - Permanent diversion structures are those approved diversion structures to be retained after mining and reclamation. Permanent diversion structures shall be constructed to safely pass the peak runoff from a 100-year, 24-hour precipitation event.

8A.06. Stream Channel Diversions - Flow from perennial and intermittent streams within the permit area may be diverted only when the diversions are approved by the director. When streamflow is to be diverted, the new stream channel shall be designed and constructed to meet the following requirements:

a. The average stream gradient shall be maintained and the channel designed, constructed, and maintained to remain stable and to minimize additional contributions of suspended solids to streamflow;

b. Channel bank, and flood plain configurations shall be adequate to safely pass the peak runoff of a 1-year, 24-hour precipitation event for temporary diversions and 100-year, 24-hour precipitation event for permanent diversions, or larger events if specified by the director; and

c. When the stream affected supports a fishery habitat, measures to maintain or enhance the water quality and habitat shall be reflected in the approved stream channel diversion design.

8B. Seeding

8B.01. Seeding of Drainage System - All area disturbed in the installation of the drainage system shall be seeded and mulched immediately after construction in accordance with Section 12 of these regulations.

8C. Handbook

8C.01. Drainage Handbook for Surface Mining - The guidelines for plans, design criteria and construction specifications for drainage systems are to be found in the "Drainage Handbook for Surface Mining" published by the West Virginia Department of Natural Resources. This handbook is hereby incorporated by reference in its entirety; provided, however, that other plans, design criteria and construction specifications if approved by the director, may be used in place of those specified in the handbook.

8D. Drainage Certification

8D.01. Certification Responsibility - Certification that the drainage system was constructed and installed in accordance with the approved pre-plan shall be submitted by an approved Registered Professional Engineer or other approved person.

8D.02. Filing Certification - Prior to the beginning of surface mining operations in the affected watershed, the certification of the drainage system shall be filed on forms prescribed by the director.

8E. Abandonment Procedures

8E.01. Abandonment Procedures - The pre-plan shall reflect a procedure for abandoning sediment control structures prior to final bond release. These abandonment procedures may be waived if the structures are to be immediately utilized under another permit or the landowner agrees in writing that he will assume future responsibility for said structures.

SECTION 9.

METHOD OF OPERATION

SECTION 9. METHOD OF OPERATION

9.01. Operator Responsibility - In planning and executing surface mining operations, the operator shall have, at all time, proper regard for all backfilling and regrading requirements, imposed by Article 6, Chapter 20, Code of West Virginia, as amended, and all rules and regulations adopted pursuant thereto, and all provisions of the approved pre-plan.

9.02. Topsoiling or Other Material Suitable for the Post Mining Land Use - These materials shall be removed in a separate layer and distributed over the backfilled area, or if not utilized immediately, segregated and stockpiled in a separate location as specified in the pre-plan. Topsoil not immediately utilized shall be protected from wind and water erosion. Any material used for topsoiling must be capable of supporting and maintaining the approved post mining land use.

9.03. Treatment of Toxic Material - All exposed coal seams remaining after mining and any acid-forming, toxic-forming, combustible materials, or any other waste materials that are exposed, shall be covered with a minimum of four (4) feet of nontoxic and noncombustible material; or test, treat and blend material to provide materials suitable to prevent water pollution. If necessary, this material shall be treated to neutralize toxicity in order to prevent water pollution and sustained combustion and/or to minimize adverse effects on plant growth and land uses. Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local

conditions, the director shall specify thicker amounts of cover using non-toxic material. 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.

9.04. Small Depressions - The requirement of this section to achieve approximate original contour does not prohibit construction of small depressions if they are approved by the director to minimize erosion, conserve soil moisture or promote revegetation. These depressions shall be compatible with the approved post-mining land use.

9.05. Bench Surface - The surface of the regraded bench shall be graded so as to permit the use of farm implements and machinery.

9.06. (Reserved)

9.07. Final Graded Slopes - Final graded slopes shall mean slopes backfilled and graded to eliminate the highwall which does not exceed the angle of repose or such lesser slope as is necessary to assure stability.

9.08. Grading Outer Spoil - All outer spoil shall be graded so as to blend into the adjoining undisturbed lands.

9.09. Regrading or Stabilizing Rills and Gullies - Any rills or gullies deeper than nine (9) inches forming in areas that have been regraded and the topsoil replaced but where vegetation has not yet been established will be deemed unacceptable and any such rills or gullies shall be filled, graded, or otherwise stabilized and revegetated. Rills or gullies of lesser size shall also be stabilized if they will be disruptive

to the approved postmining land use or may result in additional erosion and sedimentation.

9.10. Inactive Status - Inactive operation status will be considered for a period not to exceed one (1) year from date of approval providing that prior written approval is obtained from the director.

9.11. Keeping Operation Current - Grading, backfilling and water management practices as approved in the plans shall be kept current as follows:

a. Should the operation include only stripping (no augering or highwall mining), the grading and backfilling shall follow the mineral removal by a period not to exceed sixty (60) days or 3,000 linear feet.

b. Should the operation include stripping and augering, the augering shall follow the stripping by a period not to exceed sixty (60) days, and the grading and backfilling shall follow the augering by not more than thrity (30) days or 1,000 linear feet.

c. Should the operation include stripping and highwall mining, the highwall mining shall follow the stripping within sixty (60) days, or a reasonable time as prescribed by the director. Grading and backfilling shall follow the highwall mining by not more than thirty (30) days or 1,000 linear feet.

d. Should the operation include only augering or highwall mining, the grading and backfilling shall follow the augering or highwall mining by a period not to exceed thrity (30) days or 1,000 linear feet.

e. Should the particular site conditions or weather make adherence to these guidelines impractical the period of time or the distance required to be current may be reasonably extended.

9A. Requirements for Special Land Use Purposes

9A.01. Alternative Plans - Alternative plans for restoration of the disturbed area may be submitted to the director. If such restoration will be consistent with the purpose of Article 6, Chapter 20, Code of West Virginia, as amended, and if such plans are approved by the director and complied with within such time limits as may be determined by him as being reasonable for carrying out such plans, the backfilling and grading requirements heretofore contained, may be modified.

9A.02. Water Impoundments - Prior to the construction of an impounding area for the storage of water after mining, approval must be obtained from the director for such impoundment. The Division of Water Resources will cooperate with the Division of Reclamation in reviewing all portions of any plan for water impoundments as they relate to water quality and will give its recommendations therefore, to the Division of Reclamation. This plan will include but not be limited to the following:

a. Location of the impounding area;

b. Dimensions of the area as to capacity and depth (average, maximum and minimum);

c. Plot plan of impoundment area;

d. Source of water entering the impoundment;

e. Quality of the water entering the impoundment;

f. Quality of water leaving the impoundment and mechanism of discharge;

g. Coal seam or seams mined or involved with impoundment;

h. Chemical characteristics of the soils and underlying strata in the impoundment area as they relate to acid production;

i. Safety aspects considered such as spillway overflow, emergency spillway, access to area; and

j. Consent of the landowner for such impoundment with submission on specified forms.

9A.03. Sanitary Landfills - Where waste materials from a coal preparation or conversion facility or from other activities conducted outside the permit area such as municipal wastes, garbage, etc., are used for fill material, plans for such use shall be approved by the director. Such plans for sanitary landfills and/or solid waste disposal areas shall be accompanied by the written approval of the Division of Water Resources and where appropriate, the State Department of Health.

9B. Steep Slope Mining

9B.01. Applicability - On surface mining operations where the natural slope exceeds twenty degrees (20°), the provisions of this section in addition to other applicable provisions of these regulations, shall apply. On lesser slopes that require measures to protect the area from disturbance as determined by the director based on consideration of soils, climate, method

of operation, geology, and other regional characteristics, the provisions of this section, in addition to other applicable provisions of these regulations, shall also apply. These provisions do not apply where mining is done on a flat or gently rolling terrain with an occasional steep slope through which the mining procedds and leaves a plain or predominatly flat area.

9B.02. Downslope Placement - Spoil of debris including that from clearing and grubbing, shall not be placed on the downslope except as provided for in Section 9D. or 9E. of these regulations.

9B.03. Highwall Elimination - The highwall shall be eliminated and the disturbed area graded. Land above the highwall shall not be disturbed unless the director finds that the disturbance will facilitate compliance with the requirements of this section.

9B.04. Stabilization - The material used to backfill and eliminate the highwall shall be sufficiently compacted or otherwise mechanically stabilized so as to insure stability of the backfill. Woody materials may be buried in the backfilled area only when the burial does not cause or add to instability.

9C. Mountaintop Removal

9C.01. Applicability - Where the mountaintop removal technique is applied, the provisions of this section in addition to other applicable provisions of these regulations, shall apply.

9C.02. Outcrop Barrier - An outcrop barrier of sufficient width consisting of the toe of the lowest coal seam and its associated overburden shall be retained where necessary to prevent slides and erosion. Where no outcrop exists due to previsous mining, this requirement will be waived.

9C.03. The Final Graded Slopes - The final graded top plateau slopes

on the mined area shall be less than 5 horizontal to 1 vertical so as to create a level plateau or gently rolling configuration and the outslopes of the plateau shall not exceed 2 horizontal to 1 vertical except where approved by the director, but in no case shall the minimum static safety factor be less than 1.5.

9C.04. Drainage - The resulting level or gently rolling contour shall be graded to drain inward from the outslope except at specific points where it drains over the outslope in protected channels.

9C.05. Post Mining Land Use - Where the mountain top removal method is applied, the lands must be returned to industrial, commercial, agricultural, or public use and the requirements of Section 10.04. must be met.

9D. Disposal of Spoil or Toxic Forming Materials by Methods Other Than Valley or Head-Of-Hollow Fills

9D.01. Applicability - Spoil or toxic forming materials not required to achieve the approximate original contour shall be transported to and placed in a controlled manner in disposal areas other than the mine workings or excavation only if all the provisions of this section are met.

9D.02. Location of Disposal Sites - The disposal areas shall be within the permit area and they must be approved by the director as suitable for construction of fills. The disposal area shall be located on the most moderate slopes and naturally stable areas available. Where possible, fill materials suitable for disposal shall be placed upon or above a natural terrace, bench, or berm, if such placement provides additional stability and prevents mass movement.

9D.03. Certification - Certification of the fill shall be as follows:

a. The fill shall be designed using recognized professional standards and certified by an approved registered professional

engineer or other approved professional specialist;

b. The fill shall be inspected for stability by an approved registered professional engineer or other approved professional specialist after completion of the first 50-foot lift, to assure removal of all organic material and topsoil, placement of underdrainage systems, and proper construction in accordance with the approved pre-plan. The approved registered professional engineer or other approved professional specialist, shall also provide a certified report upon completion of the fill that the fill has been constructed as designed in the approved pre-plan; and

c. Where fills are placed on slopes less than twenty degrees (20°) a certification shall not be required.

9D.04. Stabilization - Where the slope in the disposal area exceeds 2.8 horizontal to 1 vertical (36 percent) or where necessary to achieve a static safety factor of 1.5, measures such keyway cuts, rock toe buttresses or other techniques shall be used. All organic material shall be removed from the disposal area and the topsoil must be removed and segregated before the overburden is placed in the disposal area. Suitable organic material may be used as mulch or may be included in the topsoil. The spoil or toxic forming materials shall be transported and placed in a controlled manner, concurrently compacted as necessary to insure long-term mass stability and prevent mass movement. The fill shall be drained and graded to allow surface and subsurface drainage to be compatible with the natural surroundings.

9D.05. Drainage - The disposal area shall not contain springs, natural water courses or wet weather seeps unless lateral drains are constructed from the wet areas to the under drains in such a manner that infiltration of the water into the fill shall be prevented. The drains shall be designed and constructed of coarse rock. If no filter is designed for the under drain,

sufficient capacity shall be provided to allow for partial plugging of the drain. No rock shall be used in under drains if it tends to disintegrate or if it is acid forming or toxic forming.

9D.06. Construction - Construction of the fill shall be as follows:

a. All areas upon which the fill is to be placed shall first be progressively cleared of all trees, brush, shrubs, and other organic material. This material shall be removed from the fill area;

b. Depositing and compacting the fill in layers shall begin at the toe of the fill. The layers shall be constructed approximately parallel with proposed finish grade. All material shall be deposited in uniform horizontal layers and compacted with haulage equipment.

c. The thickness of the layers shall not exceed four feet;

d. The outer slope shall be no steeper than 2 horizontal to 1 vertical. A 20-foot wide bench shall be installed at a maximum of every 50 feet in vertical height of the fill with a 3% to 5% slope toward the fill area, normal to such, and a 1% slope toward a rock rip-rap channel or natural drainway; and

e. When construction of each lift (maximum of every 50 feet in vertical height) of the fill is completed, topsoil or other suitable material which will support vegetation shall be spread over the completed slope and bench. The slopes and benches shall then be seeded and mulched immediately in accordance with the approved revegetation plans.

9E. Disposal of Spoil Materials in Valley or Head-of-Hollow Fills

9E.01. Applicability - Spoil not required to achieve the approximate original contour shall be transported to and placed in a controlled manner;

spoil to be disposed of in natural valleys must be placed in accordance with the following requirements.

9E.02. Location of Spoil Areas - The disposal areas shall be within the permit area and they must be approved by the director as suitable for construction of fills. The disposal area shall be located on the most moderate slopes and naturally stable areas available. Where possible, fill materials suitable for disposal shall be placed upon or above a natural terrace, bench, or berm, if such placement provides additional stability and prevents mass movement.

9E.03. Certification - Certification of the fill shall be as follows:

a. The fill shall be designed using recognized professional standards and certified by an approved registered professional engineer or other approved professional specialist; and

b. The fill shall be inspected for stability by an approved registered professional engineer or other approved professional specialist after completion of the first 50-foot lift, to assure removal of all organic material and topsoil, placement of under-drainage systems, and proper construction in accordance with the approved pre-plan. The approved registered professional engineer or other approved professional specialist, shall also provide a certified report upon completion of the fill that the fill has been constructed as designed in the approved pre-plan.

9E.04. Stabilization - Where the slope in the disposal area exceeds 2.8 horizontal to 1 vertical (36 percent) or where necessary to achieve a static safety factor of 1.5, measures such as keyway cuts, rock toe buttresses or other techniques shall be used. All organic material shall be removed from the disposal area and the topsoil must be removed and segregated before the material is placed in the disposal area. Suitable organic ma-

terial may be used as mulch or may be included in the topsoil. The spoil shall be transported and placed in a controlled manner, concurrently compacted as necessary to insure long-term mass stability and prevent mass movement. The fill shall be drained and graded to allow surface and subsurface drainage to be compatible with the natural surroundings.

9E.05. Drainage - The disposal area shall not contain springs, natural water courses or wet weather seeps unless lateral drains are constructed from the wet areas to the rock core in such a manner that infiltration of the water into the fill will be prevented. If springs, natural water courses or wet weather seeps are encountered, a system of under drains shall be constructed from each spring or seepage area as lateral drains to the rock core. If no filter is designed for the under drain sufficient capacity shall be provided to allow for partial plugging of the drain. No rock shall be used in under drains if it tends to disintegrate or if it is acid forming or toxic forming.

9E.06. Construction - Construction of the fill shall be as follows:

a. All areas upon which a valley fill is to be placed shall first be cleared progressively of all trees, brush, shrubs, and other organic material. This material shall be removed from the fill area. No more than 3.0 acres, excluding roadway for construction of fill, shall be cleared in the valley fill site until the first lift is completed;

b. A rock core shall be progressively constructed as the layers are brought up through the valley fill. The rock core shall be a minimum of 16 feet in width and composed of rock with a minimum dimension of 12 inches. The rock core shall consist of no more than 10% fines as determined by visual inspection (fines being a material with a dimension of less than 12 inches);

c. Depositing and compacting valley fill in layers shall begin at the

toe of the fill. The layers shall be constructed approximately parallel with proposed finish grade. All material shall be deposited in uniform horizontal layers and compacted with haulage equipment;

d. The thickness of the layers shall not exceed four feet;

e. During and after construction, the top of the fill shall be graded to drain back to the head of the fill on a slope no greater than 3%. A drainage pocket shall be maintained at the head of the fill at all times to intercept surface runoff. Maximum size of the drainage pocket shall be 10,000 cubic feet;

f. The outer slope shall be no steeper than 2 horizontal to 1 vertical. A minimum 20-foot wide bench shall be installed at a maximum of every 50 feet in vertical height of the fill with a 3% to 5% slope toward the fill area, normal to such, and a 1% slope toward the rock core; and

g. When construction of each lift (maximum of every 50 feet in vertical height) of the valley fill is completed, topsoil or other suitable material which will support vegetation shall be spread over the completed slope and bench excluding the rock core. The completed slope and bench shall then be seeded and mulched immediately in accordance with the approved revegetation plan.

9E.07. Variance - Where it can be demonstrated that other design criteria are justified, certain requirements of this section may be waived. The basis for justification are, but not limited to, land use potential, inavailability of durable rock, and site stability.

9F. [Reserved]

SECTION 10.

POSTMINING USE OF LAND

SECTION 10. POSTMINING USE OF LAND

10.01. General - All disturbed areas shall be restored in a timely manner to conditions that are capable of supporting the uses which they were capable of supporting before any mining, or to a higher or better use achievable under criteria and procedures set forth in Section 10.04 of these regulations.

10.02. Determining Premining Use of Land - The premining uses of land to which the postmining land use is compared shall be those uses which the land previously supported if the land had not been previously mined and had been properly managed.

a. The postmining land use for land that has been previously mined and not reclaimed, shall be judged on the basis of the highest and best use that can be achieved and is compatible with surrounding areas.

b. 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.

c. If the premining use of the land was changed within five (5) years of the beginning of mining, the comparison of postmining use to premining use shall include a comparison with the historic use of the land as well as its use immediately preceding mining.

10.03. Land Use Categories - Land use is categorized in the following groups. Change from one to another land use category in premining to postmining constituted an alternate land use and the operator shall meet the requirements of Section 10.04 of the section and all other applicable sections of these rules and regulations.

a. Heavy Industry - Manufacturing facilities, powerplants, airports

or similar facilities.

b. Light Industry and Commercial Services - Office buildings, stores, parking facilities, apartment houses, motels, hotels, or similar facilities.

c. Public Services - Schools, hospitals, churches, libraries, water-treatment facilities, solid waste disposal facilities, public parks and recreation facilities, major transmission lines, major pipelines, highways, underground and surface utilities, and other servicing structures and appurtenances.

d. Residential - Single - and multiple-family housing (other than apartment houses) with necessary support facilities. Support facilities may incude commercial services incorporated in and comprising less than 5 percent of the total land area of housing capacity, associated open space, and minor vehicle parking and recreation facilities supporting the housing.

e. Cropland - Land used primarily for the production of cultivated and close-growing crops for harvest alone or in association with sod crops. Land used for facilities in support of farming operations are included.

f. Rangeland - Includes rangelands and forestlands which support a cover of herbaceous or scrubby vegetation suitable for grazing or browsing use.

g. Hayland or pasture - Land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or cut and cured for livestock feed.

h. Forestland - Land with at least a 25 percent tree canopy or land at least 10 percent stocked by forest trees of any size, including

land formerly having had such tree cover and that will be naturally or artificially reforested.

i. Impoundments of water - Land used for storing water for beneficial uses such as stock ponds, irrigation, fire protection, recreation, or water supply.

j. Fish and wildlife habitat and recreation lands - Wetlands, fish and wildlife habitat, and areas managed primarily for fish and wildlife or recreation.

k. Combined uses - Any appropriate combination of land uses where one land use is designated as the primary land use and one or more other land uses are designated as secondary land uses.

10.04. Criteria for Approving Alternative Postmining Use of Land - An alternative postmining land use shall be approved by the director after consultation with the landowner or the land-management agency having jurisdiction over state or federal lands. Proposals to remove 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, must also meet these criteria.

a. The proposed land use is compatible with adjacent land use and, where applicable, with existing local, state or federal land use policies and plans. A written statement of the views of the authorities with statutory responsibilities for land use policies and plans shall accompany the request for approval. The permittee shall obtain any required approval of local, state or federal land management agencies, including any necessary zoning or other changes necessarily required for the final land use.

b. Specific plans have been prepared which show the feasibility of the proposed land use as related to needs, projected land use trends, and markets and that include a schedule showing how the proposed use will be developed and achieved within a reasonable time after mining and be sustained. The director may require appropriate demonstrations to show that the planned procedures are feasible, reasonable, and integrated with mining and reclamation, and that the plans will result in successful reclamation.

c. Provision of any necessary public facilities is assured as evidenced by letters of commitment from parties other than the permittee, as appropriate, to provide them in a manner compatible with the permittee's plans.

d. Specific and feasible plans for financing attainment and maintenance of the postmining land use including letters of commitment from parties other than the permittee as appropriate, if the postmining land use is to be developed by such parties.

e. The plans are designed under the general supervision of a registered professional engineer, or other appropriate professional, who will ensure that the plans conform to applicable accepted standards for adequate land stability, drainage, and vegetative cover, and aesthetic design appropriate for the postmining use of the site.

f. The proposed use or uses will neither present actual or probable hazard to public health or safety nor will they post any actual or probable threat of water flow diminution or pollution.

g. The use or uses will not involve unreasonable delays in reclamation.

h. Necessary approval of measures to prevent or mitigate adverse effects on fish and wildlife has been obtained from the director

and appropriate state and federal fish and wildlife management agencies.

i. Proposals to change premining land uses of range, fish and wildlife habitat, forestland, hayland, or pasture to a postmining cropland use, where the 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 director to assure that:

   1. There is a firm written commitment by the operator or by the landowner or land manager to provide sufficient crop management after release of applicable performance bonds to assure that the proposed postmining cropland use remains practical and reasonable;

   2. There is sufficient water available and committed, to maintain crop production; and

   3. Topsoil quality and depth are shown to be sufficient to support the proposed use.

j. The director has provided by public notice not less than 45 days nor more than 60 days for interested citizens and local, state and federal agencies to review and comment on the proposed land use.

SECTION 11.

PRIME FARMLANDS

SECTION 11. PRIME FARMLANDS

11.01. Applicability - Surface operations conducted on prime farmlands shall comply with all requirements set forth in Article 6, Chapter 20, Code of West Virginia, as amended, and all rules and regulations promulgated by the Reclamation Commission and in addition, must meet the special requirements of this section.

11.02. Identification of Prime Farmland - Prime Farmland shall be identified on the basis of soil surveys submitted by the applicant. The director also may require data on drainage, flood control, and subsurface water management.

The requirement for submission of soil surveys may be waived by the director if the applicant can demonstrate according to its procedure outlined in 11.03 of this section that no prime farmlands are involved. Soil surveys shall be conducted according to standards of the National Cooperative Soil Survey, which includes the procedures set forth in the U. S. Department of Agriculture Handbooks 436 (Soil Taxonomy) and 18 (Soil Survey).

11.03. Negative Determination of Prime Farmland - The land shall not be considered as prime farmland where the applicant can demonstrate one or more of the following situations:

a. Lands within the proposed permit boundaries have been used for production of cultivated crops for less than 5 years out of 20 years preceding the date of the permit application;

b. The slope of all land within the permit area is 10 percent or greater;

c. Land within the permit area is not irrigated or naturally subirrigated, has no developed water supply that is dependable and of adequate quality, and the average annual precipitation is 14 inches

or less;

d. Other factors exist, such as a very rocky surface, or the land is frequently flooded, which clearly places all land within the area outside the purview of prime farmland;

e. A written notification based on scientific findings and soil surveys that land within the proposed mining area does not meet the applicability requirements for prime farmlands and is submitted to the director by a qualified person other than the applicant, and is approved by the director.

11.04. Plan for Restoration of Prime Farmland - The applicant shall submit to the director a plan for the mining and restoration of any prime farmland within the proposed permit boundaries. This plan shall be used by the director in judging the technological capability of the applicant to restore prime farmlands. This plan shall include:

a. A description of the original undisturbed soil profile, as determined from a soil survey, showing the depth and thickness of each of the soil horizons that collectively constitute the root zone of the locally adapted crops and are to be removed, stored, and replaced;

b. The proposed method and type of equipment to be used for removal, storage, and replacement of the soil in accordance with Section 11.05 of these regulations;

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

horizon, 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 mine land and the conservation practices to control erosion and sedimentation during the first 12 months after regrading is completed. Proper adjustments for seasons must be made so that final graded land is not exposed to erosion during seasons when vegetation or conservation practices cannot be established due to weather conditions; and

f. Available agricultural school studies, company data, or other scientific data for comparable areas that demonstrate that the applicant using his proposed method of reclamation will achieve, within a reasonable time, equivalent or higher levels of yield after mining as existed before mining.

11.05. Special Requirements - For all prime farmlands to be mined and reclaimed, the applicant shall meet the following special requirements.

a. All soil horizons to be used in the reconstruction of the soil shall be removed before drilling, blasting, or mining to prevent contaminating the soil horizons with undesirable materials. Where removal of soil horizons result in erosion that may cause air and water pollution, the director shall specify methods of treatment to control erosion of exposed overburden. The operator shall:

1. Remove separately the entire A horizon or other suitable soil materials which will create a final soil having an equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material before replacement;

2. Remove separately the B horizon of the natural soil or a combination of B horizon and underlying C horizon or other suitable soil material that will create a reconstructed root zone of equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material; and

3. Remove separately the underlying C horizons or other strata, or a combination of such horizons or other strata to be used instead of the B horizon that are equal or greater thickness and that can be shown to be equal or more favorable for plant growth than the B horizon, and that when replaced will create in the reconstructed soil a final root zone of comparable depth and quality to that which existed in the natural soil.

b. If stockpiling of soil horizons is allowed by the director in lieu of immediate replacement, the A horizon and B horizon must be stored separately from each other. The stockpiles must be placed within the permit area and where they will not be disturbed or exposed to excessive erosion by water or wind before the stockpiled horizons can be redistributed on terrain graded to final contour. Stockpiles in place for more than 30 days shall be protected from erosion.

c. Scarify the final graded land before the soil horizons are replaced.

d. Replace the material from the B horizon, or other suitable material specified in Section 11.04 (2) or 11.05 (3) of these regulations in such a manner as to avoid excessive compaction of overburden and to a thickness comparable to the root zone that existed in the soil before mining.

e. Replace the A horizon or other suitable soil materials, which will create a final soil having an equal or greater productive capacity than existed prior to mining, as the final surface soil layer to the thickness of the original soil as determined in Section 11.05 (1) of these regulations in a manner that:

1. Prevents excess compaction of both the surface layer and underlying material and reduction of permeability to less than 0.06 inch per hour in the upper 20 inches of the reconstructed soil profile; and
2. Protects the surface layer from wind and water erosion before it is seeded or planted.

f. Apply nutrients and soil amendments as needed to establish quick vegetative growth.

SECTION 12.

REVEGETATION

SECTION 12. REVEGETATION

12.01. Approval of Private Revegetation Contractor - In the event the operator contracts with a private contractor to carry out the planting, the private revegetation contractor shall first submit to the director a written resume of his past experience and training. On the basis of such resume, he shall be adjudged qualified or not, as the case may be, and so notified by the director in writing. Should experience warrant, a private revegetation contractor may be adjudged disqualified and so notified by the director in writing.

12.02. Objective in Revegetation - The objective in revegetation is to quickly establish a vegetative cover on all disturbed areas to minimize erosion, provide economic benefits, and restore aesthetic appeal. Plants that will give a quick permanent cover and enrich the soil shall be given priority. A temporary or permanent cover should be established by the end of the first growing season and a permanent cover by the end of the second growing season. All plants shall be considered a tool in achieving stabilization and an appropriate land use objective.

12.03. Reference Areas - Success of revegetation shall be measured on the basis of reference areas approved by the director.

12A. Seeding and Planting

12A.01. Seasonal Feasibility - Appropriate vegetation shall be planted, seeded, aerial-seeded, or hydro-seeded in accordance with accepted agricultural and reforestation practices when the season is favorable for seed germination and plant survival except as otherwise specified in these regulations.

12A.02. Minesoil Characteristics - Surface mining of minerals and removal of overburden results in minesoil which varies greatly in fertility,

acidity, and stoniness. These three characteristics, together with steepness of slope, shall be used in determining characterization for the purpose of establishing vegetation. Premining overburden sampling and analysis or previous experience and correlation data, shall be submitted with the pre-plan for all acid-producing seams. The plan shall identify toxic strata and provide planned handling and final placement for acid strata. Overburden analysis to be in accordance with standard procedures outlined in Environmental Protection Agency Manual No. 600/2-78-054 (Field & Laboratory Methods Applicable to Overburdens and Minesoils) or other approved methods by the Department of Natural Resources. Minesoil classification shall be in accordance with Table 6.

12A.03. Minesoil Analysis - Tests for minesoil acidity, expressed as pH, shall be made after final grading and before seeding or planting. As a guide, until experience is achieved, a minimum of ten (10) random samples shall be taken at points distributed uniformly over the disturbed area. Minesoil tests may be made with accepted field indicators or other approved techniques. Minesoils with chemical characteristics that could restrict vegetation establishment and growth shall be analyzed by an approved soils laboratory. The results of these tests shall be filed with the final planting plan.

12A.04. Function of Annual and Biennial Cover Crops - On areas where excessive erosion is likely to occur, rapid establishment of vegetative cover shall be required. Seeding of annuals and biennials on such areas shall be considered as a means for achieving temporary vegetative cover only and not acceptable in the achievement of permanent cover. See Table 5.

12A.05. Development of Planting Plan - Planting plans will be a part of the premining and reclamation plan. The mining plan and the projected

configuration after mining will be the basis for classifying the area as follows:

a. A prediction of the minesoil class and the basis for the same;

b. Treatment to neutralize acidity;

c. Mechanical seed bed preparation;

d. Rate and analysis of fertilization;

e. Rates and types of mulch;

f. Perennial vegetation including herbaceous and woody plants where appropriate, rate and species;

g. Areas to be planted or seeded to trees and shrubs;

h. Land use objective;

i. Maintenance schedule if appropriate; and

j. Identify who will complete revegetation treatments.

Seeding will be concurrent with the operation as mining and backfilling progresses.

12A.06. Development of Final Planting Plan - A final planting plan shall be prepared and submitted to the director for his approval within thirty (30) days after the grading and backfilling of the operation have been approved.

12B. Plant Material Selection and Treatment

12B.01. Specifications - All planting plans for woody vegetation will include provisions for herbaceous cover using a suitable mixture from Table One. The following specifications should govern the selection and establishment of seeds and plants used in the revegetation of surface minesoil and based upon the following capability class:

a. On favorable minesoil material, prepared for perennial cover crop use, non-stony and with pH 5.5 or higher, one of the following

mixtures should be used:

1. Seed mixtures #1, 2, 3, 4, or 5 from Table One, of these regulations should be applied where annual maintenance treatment is assured. Mixture #4 should be applied where the graded portion of minesoil is to be used as a firebreak or occasionally as a haulageway.
2. Establishment of grass, legume or perennial grass cover crop should require the following treatment:
   (i) Innoculation of legume seed with proper strain;
   (ii) Triple innoculation rate if hydro-seeded;
   (iii) Protection of seeded minesoil area from grazing livestock;
   (iv) Application of lime to pH 6.0 for mixture #4, to pH 6.5 to 7.0 for all other mixtures;
   (v) Application of fertilizer will be based on a minesoil test for lime, phosphorus, and potash from a soils lab or will be a minimum of 200 lbs. ammonium nitrate and 200 lbs. triple super phosphate;
   (vi) Preparation of seed bed by harrowing, discing or other approved methods; and
   (vii) completion of fall seeding for legumes should be completed by September first.
3. Maintenance of cover crop should be carried out by the operator or his assignee until the cover crop is adjudged by the director to be satisfactorily established and may require the following treatment:
   (i) Maintain pH 6.5 - 7.0 for Mixture 1;
   (ii) Maintain pH 6.0 - 6.5 for Mixture 2, 3, 4 and 6;

(iii) Maintain pH 5.5 - 6.0 for Mixture 4;

(iv) Topdress every two years with 400 lbs. per acre 0-20-20 for Mixture 5.

b. On favorable minesoil material prepared for woodland and wildlife use, any one mixture from Table Two of this regulation, along with proportions and treatment prescribed for it, should be selected for use in the direct seeding of herbaceous species and planting of trees and seedlings.

1. Establishment of plant growth for woodland cover should require:

(i) Spring planting of seedlings not later than May 1st and preferably before April 15th; and

(ii) Spacing of shrubs and all trees in a pattern eight feet by eight feet apart of 680 trees per acre.

2. Establishment of crown vetch-rye grass or Serecia-tall Fescue mixtures for wildlife cover may be done in accordance with 12B.01, a, (2), of this regulation.

c. On moderately favorable minesoil material, prepared for woodland and wildlife use, with pH 5.5 and above, graded but stony, on moderate to steep slopes, non-stony and stony, one of the mixtures with specified proportion and treatment from Table Three, of this regulation should be used.

1. Overseeding on moderate to steep slopes on tree planting sites shall be carried out on minesoil in order to prevent siltation, establish ground cover and minimize erosion. Seed one of the mixtures from Table One.

2. Establishment of plant growth shall require innoculation of legume seed with proper strain, and shall be protected from grazing by

livestock. Triple innoculation rate if hydroseeding.

d. On favorable minesoil material prepared for woodland and wildlife use, which includes all extremely steep and/or stony minesoil, one of the mixtures with specified proportions and treatment from Table Three of this regulation should be used.

1. Establishment of plant growth should require:

(i) Broadcasting Mixture 1 and 3 before May 1st and frost seeding mixture 2 by early March.

(ii) Black Locust seed must be seventy percent (70%) or more viable. All legumes must be innoculated and must be protected from grazing by livestock. Triple innoculation rate if hydroseeding.

(iii) Mixture No. 1 of Table Three, should be used for extremely stony areas when tested acidity indicates a pH of 4.0 or better.

e. Other species of trees, shrubs, grasses, legumes or vines may be approved by the director.

12C. Mulch

12C.01. Mulch specifications - Mulch shall be used on all disturbed areas. Annual grains such as oats, rye, wheat, etc. may be used instead of mulch when it is shown to the satisfaction of the director that the substituted grains will provide adequate stability and that they will be replaced by species approved for the postmining use.

Approved materials and minimum rates to be applied are as follows:

Material	Rate/Acre
Straw or Hay	1 - 2 tons - material may be anchored with asphalt emulsion or other techniques approved by the director
Wood fiber or wood cullulose products	1,000 lbs.
Shredded bark	50 cubic yards

The following materials may be used with wood fiber or wood cellulose on a limited basis upon approval by the director or his duly authorized agent.

Material	Rate/Acre	Minimum Rate/Acre for Wood Fiber or Wood Cellulose
Genaqua 743	25 gallons	500 lbs.
Curasol AK or HA	25 gallons	500 lbs.
Aerospray 70	25 gallons	500 lbs.

Any other suitable materials including latex or plastic compounds may be approved by the director.

12D. Standards for Evaluating Vegetative Cover

12D.01. Final Planting Report - A planting report shall be prepared by the operator and filed with the director on the prescribed form when the planting of a permit area is completed. All planting reports shall be certified by the operator or by the party with which the operator contracted for planting.

12D.02. Time for Inspection - The operator shall review all areas he has under bond prior to the recognized spring and fall planting seasons. The operator shall cause those areas deficient of vegetative cover to be retreated,

graded, seeded, planted, mulched, limed, or whatever, to establish a satisfactory stand of vegetation.

12D.03. Standards for Perennials - Standards for legumes and perennial grasses shall require at least an eighty percent (80%) ground cover. Substandard areas shall not exceed one-fourth (1/4) acre (100' x 100') in size nor total more than twenty percent (20%) of the area seeded. The ground cover of living plants on the revegetated area shall be equal to the ground cover of living plants of the approved reference area for a minimum of two growing seasons. The ground cover shall not be considered equal if it is less than ninety percent (90%) of the ground cover of the reference area for any significant portion of the mined area.

12D.04. Standards for Woody Plants with Perennials - Standards for woody plants with legumes and perennial grasses overseeded shall require a sixty percent (60%) establishment of ground cover of legumes and perennial grasses, and 400 trees (included volunteer tree species) and/or planted shrubs per acre, comprising a satisfactory vegetative ground cover as determined by the director. Substandard areas shall not exceed one-fourth (1/4) acre (100' x 100') in size nor total more than twenty percent (20%) of the area seeded or planted. The ground cover of living plants on the revegetated area shall be equal to the ground cover of living plants of the approved reference area for a minimum of two growing seasons. The ground cover shall not be considered equal if it is less than ninety percent (90%) of the ground cover of the reference area for any significant portion of the mined area.

12D.05. Final Inspection Report - In no instance shall the official vegetative cover evaluation be carried out until the planting and seeding concerned has survived two growing seasons or a minimum of 18 months. A final inspection report shall be prepared and filed following inspection to determine that

the above evaluative standards have been compled with. If acceptable, the director may then cause the remainder of the bonds to be released.

SECTION 12

TABLE ONE

USE: HAY, PASTURE OR OTHER WHERE HERBACEOUS COVER IS DESIRED

1.	Alfalfa	20 lbs.
	Orchardgrass	10 lbs.
2.	Birdsfoot Trefoil	10 lbs.
	Tall Fescue	15 lbs.
3.	Birdsfoot Trefoil	10 lbs.
	Orchardgrass	10 lbs.
4.	Sericea (Hulled)	20 lbs.
	Red Top	3 lbs.
	Tall Fescue	15 lbs.
5.	Crown Vetch	15 lbs.
	Tall Fescue	20 lbs.
	**Weeping Lovegrass	3 lbs.
6.	Crown Vetch	15 lbs.
	Rye Grass	15 lbs.
	**Weeping Lovegrass	3 lbs.

* APPROVED SEED MIXTURES FOR OVERSEEDING TREE AND SHRUB SEEDLINGS

7.	Tall Fescue	30 lbs.
	Sericea	15 lbs.
8.	Tall Fescue	20 lbs.
	Rye Grass	10 lbs.
	Sericea	15 lbs.
9.	Tall Fescue	20 lbs.
	Weeping Lovegrass	3 lbs.
	Sericea	15 lbs.

FOR ELEVATIONS ABOVE 2500'

10.	Tall Fescue	20 lbs.
	Red Top	4 lbs.
11.	Tall Fescue	20 lbs.
	Weeping Lovegrass	3 lbs.
12.	Tall Fescue	20 lbs.
	Sweet Clover	10 lbs.

* Establishment of vegetation includes liming to pH range 5.5 - 7.0. Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply 600 lbs. 10-20-10 or equivalent, and protection from grazing during the seedling state.

** Red Top may be substituted for Weeping Lovegrass for late summer and fall seedings at a rate of 3 lbs. per acre.

SECTION 12

TABLE TWO

APPROVED WOODLAND PLANT MIXTURES
(Nursery Grown Seedlings)

1.	Black Locust (3000') White Pine	Plant in bands 6 rows or more in width Black Locust not to exceed 50%
2.	Black Locust (3000') Virginia Pine	Plant in bands 6 rows or more wide Black Locust not to exceed more than 50%
3.	Scotch Pine White Pine Red Pine (above 2000') Virginia Pine (below 2500')	Use mixture of two or more if available Plant in bands 6 rows or more
4.	Black Locust (below 3000') Tulip Poplar (below 3000') Sycamore (below 2500') Red Oak	Use up to one-half locust with one or more of hardwood species. Plant in bands 6 or more rows in each species
5.	Autumn Olive and adapted pines or hardwoods	Where owner's interest is wildlife improvement, plant in bands of 3 to 6 rows preferable with pines or in blocks of one-fourth acre spaced 600' apart
6.	European Black Alder (below 2500') Sycamore Indigo Bush Autumn Olive	Use these plants where protection from grazing is impractical or protection will not be maintained. For wildlife habitat improvement use 3 to 6 row bands where two or more species are planted.
7.	European Black Alder	Use European Black Alder where pH is near 5.5.
8.	Black Locust	Use only on steep erodible outslopes.
9.	Sweet Crab Apple* Washington Hawthorne*	On bench of areas where owners primary interest is wildlife habitat improvement, plant in clumps of 12 spaced 10' to 12' apart. Clumps should be spaced 200' to 300' apart, planted in between with pine, Indigo Bush or Autumn Olive.
10.	Blackberry*	Plant on bench spaced 6 X 6 in blocks 100 plants per block.
11.	Grey Dogwood* Silky Cornell*	On bench near water impoundments spaced 8 X 8.

*Should be planted only on the more favorable sites. Preferably a north or northeastern aspect with a pH of 5.5 or above.

SECTION 12

TABLE THREE

*APPROVED MIXTURES
HERBACEOUS AND WOODY SPECIES FOR DIRECT SEEDING

1.	Tall Fescue	30 lbs.	
	Sericea	15 lbs.	
	Black Locust**	3 lbs.	
2.	Tall Fescue	20 lbs.	
	Rye Grass	10 lbs.	
	Sericea	15 lbs.	
	Black Locust **	3 lbs.	
3.	Tall Fescue	20 lbs.	
	Weeping Lovegrass	3 lbs.	
	Sericea	15 lbs.	
	Black Locust**	3 lbs.	
4.	Tall Fescue	30 lbs.	Better suited to higher
	Birdsfoot Trefoil	10 lbs.	elevations above 2500'
	Black Locust	3 lbs.	
5.	Tall Fescue	20 lbs.	Better suited to higher
	Red Top	3 lbs.	elevations above 2500'
	Birdsfoot Trefoil	10 lbs.	
	Black Locust**	3 lbs.	

* Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply a minimum of 200 lbs. ammonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.

** Black Locust seed may be omitted on the bench areas or where erosion is not a serious problem, or at elevations above 2000', 1/4 lb/acre Virginia Pine; 1/4 lb/acre White Pine; and 3 lbs/acre Japonica Intermedia may be substituted for Black Locust.

SECTION 12

TABLE FOUR

*APPROVED MIXTURES FOR WATERWAYS, DIVERSIONS
DRAINAGE STRUCTURES, HAULAGEWAYS, HIGHWALL ACCESS, ETC.

1.	Tall Fescue	50 lbs.
	Birdsfoot Trefoil	10 lbs.
	Red Top	3 lbs.
2.	Perennial Rye Grass	20 lbs.
	Tall Fescue	30 lbs.
	Birdsfoot Trefoil	10 lbs.
	Red Top	3 lbs.
3.	Tall Fescue	40 lbs.
	Crown Vetch	15 lbs.
	Red Top	3 lbs.
4.	Tall Fescue	50 lbs.
	Crown Vetch	15 lbs.
5.	Tall Fescue	30 lbs.
	Reed Canarygrass	20 lbs.
	Red Top	3 lbs.

NOTE: Weeping lovegrass at 3 lbs. per acre may be substituted for Red Top for spring and early summer seedings on well drained areas.

*Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply a minimum of 200 lbs. ammonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.

SECTION 12

TABLE FIVE

*ANNUAL AND BIENNIAL COVER CROPS
FOR TEMPORARY COVER

	Suggested Rates of Application - Pounds in Acres	Seeding Season
- Grasses -		
Balbo Rye	30 - 60	Fall
Abruzzi Rye	30 - 60	Fall
Wheat	30 - 60	Fall
Oats	30 - 60	Fall
Japanese Millet	10 - 15	Summer
Millets - German, Foxtail	10 - 15	Summer
Sudan Grass - Sorghum Hybrid	10 - 20	Summer
Pearl Millet	10 - 20	Summer
Sudan Grass	10 20	Summer
Annual Rye Grass	10 - 15	Spring or Fall
-Legumes-		
Kobe Lespedeza	5 - 10	Summer
Korean Lespedeza	5 - 10	Summer
Hairy Vetch	20 - 40	Fall
Sweet Clover	10 - 20	Spring
-Forbs-		
Buckwheat	30 - 60	Summer

*Application of fertilizer shall be based on soil test results from a soils laboratory. Without a soil test, apply a minimum of 200 lbs ammonium nitrate and 200 lbs. triple super phosphate. Equivalent amounts of nitrogen and phosphorus fertilizer is acceptable.

SECTION 12

TABLE SIX

CLASSIFICATION OF MINESOILS WITHIN SOIL TAXONOMY

Minesoils of all ages are now being grouped under the category called spolents. This means recognition that these highly disturbed or manmade soils deserve the same attention, classification and management as other soils.

1. Fieldcrest is a family of minesoils containing a mixture of rock types. It has an acid but not extremely acid profile. Texture is loamy; mineralogy is mixed and fertility is medium. These are probably the most widespread minesoils in West Virginia.

2. Postoak is a minesoil family containing a dominance of mudstone material. It is near neutral in profile reaction; fine loamy textures and relatively fertile.

3. Widen minesoils are dominated by carbon rich coarse fragments or mine waste. They are acid in reaction but respond well to liming and revegetation.

4. Brandonville minesoils are dominated by shaly (fissile) coarse fragments. They are loamy in texture, have mixed mineralogy, are moderately acid and moderately fertile.

5. *Valley Point minesoils are dominated by sandstone coarse fragments. They are coarse loamy in texture, have siliceous mineralogy, low fertility and are extremely acid. These minesoils provide stable roadways and building sites.

6. *Birdcreek minesoils are similar to Valley Point soils but are acid instead of extremely acid.

7. Killarm minesoils contain a mixture of rock types. The profile is neutral in reaction. Texture is medium loamy. Mineralogy is mixed and fertility (except nitrogen) is relatively high.

8. Overfield minesoils contain a mixture of rock types. The profile is extremely acid (pH is below 4 at 10 inches). Texture is medium loamy. Mineralogy is mixed. Fertility is medium but acid related toxicity must be remedied by topsoiling or massive liming in order to get desirable plant growth.

9. Shawneetown minesoils have less than 10% rock fragments in the profile. The reaction is neutral; texture is fine loamy; mineralogy is mixed and fertility is relatively high except for nitrogen. These minesoils are suitable for cultivated cropping, but may not be present in mappable units in West Virginia.

10. Pursglove minesoils are like Widen except that they are extremely acid and require covering with favorable material or massive liming for satisfactory revegetation.

*Soils 5 and 6 frequently occur together in complex patterns.

These ten spolents cover most but not all minesoils in West Virginia. Other named minesoils have been identified and described and can be classified on request.

SECTION 13.

~~OTHER-MINING-OPERATIONS-ON-SURFACE-MINED-AREAS~~

RESERVED

SECTION 13. ~~OTHER MINING OPERATIONS ON SURFACE MINED AREAS~~

~~13.01. Director's Approval. Reclamation plans for other mining operations to be carried out on a surface mined area on which the regrading, backfilling or revegetation have not been completed, shall require prior approval by the director.~~

~~13.02. Application Requirements. Application for approval of such reclamation plans shall be accompanied by the following:~~

~~a. Application form to be prescribed by the director,~~

~~b. A map of the surface mining permit area, showing the portion of land to be disturbed by the other mining operations, including haulageways or access roads,~~

~~c. A performance bond or equivalent, as provided in Section 16, Article 6, Chapter 20, Code of West Virginia, as amended, the requirement for the first acre or fraction thereof of disturbed lands being one thousand dollars ($1,000) and for each additional acre or fraction thereof disturbed land an additional one thousand dollars ($1,000),~~

~~d. Written permission for other mining operations from the owner of the surface rights and/or the owner of the mineral rights or the controlling parties of the same.~~

~~13.03. Applicability of Code and Regulations. All requirements for haulageways or access roads, drainage, blasting, backfilling regrading, revegetation, and bond release procedures as set forth in Article 6, Chapter 20, Code of West Virginia, as amended, and all regulations of the Reclamation Commission shall apply with equal force to the reclamation of disturbed areas from other mining operations.~~

SECTION 14.

~~SURFACE-MINING-OTHER-THAN-COAL~~

COAL REFUSE DISPOSAL REGULATIONS

SECTION 14. ~~SURFACE-MINING-OTHER-THAN-COAL~~ COAL REFUSE DISPOSAL REGULATIONS

All requirements ~~as~~ set forth in ~~Article-6,-Chapter-20-of-the-Code of-West-Virginia,-as-amended, and all~~ the rules and regulations of the Reclamation Commission ~~shall-apply-with-equal-force-for-the-surface-mining-of-clay,-flagstone, gravel,-manganese,-shale,-iron-ore-and-any-other-metal-or-metallurgical-ore.~~ regarding coal refuse disposal as promulgated on July 22, 1981 are hereby incorporated by reference.

SECTION 15.

SURFACE-MINING-OF-LIMESTONE,-SANDSTONE-AND-SAND

SECTION 15. ~~SURFACE-MINING-OF-LIMESTONE,-SANDSTONE-AND-SAND~~

~~All-requirements-as-set-forth-in-Article-6,-Chapter-20,-Code-of-West Virginia,-as-amended,-excepting-those-covering-bonding-and-reclamation and-all-rules-and-regulations-of-the-Reclamation-Commission-with-the exception-noted,-shall-apply-with-equal-force-for-the-surface-mining-of limestone,-sandstone-and-sand.~~

SECTION 16.

SURFACE EFFECTS OF UNDERGROUND MINING OPERATIONS

SECTION 16. SURFACE EFFECTS OF UNDERGROUND MINING OPERATIONS

16.01. Applicability - The ~~Where~~ surface effects of underground mining operations ~~are incident to a mine as defined in Chapter 22, Article 1, Code of West Virginia, as amended,~~ shall be subject to all applicable requirements set forth in ~~Chapter 22, Article 6, Section 63,~~ Chapter 20, Article 6, Section 1 et. seq. of the Code of West Virginia, as amended; ~~excepting Chapter 20, Article 6, Sections 8, 11a, 13, 13a, 17, 18, 18a, 19, 20a, 20b and 31 shall apply~~. All rules and regulations promulgated pursuant to Chapter 20, Article 6, Subseries A, excepting Section 4.01, 4.12, 6 and 10 shall apply.

16.02. Director's Approval - A reclamation plan for the surface effects of underground mining operations shall require written approval of the director prior to any surface disturbance.

16.03. Certification - The certification that the access roads or haulageways and the drainage systems were constructed and installed in accordance with the approved underground opening reclamation plan, shall be submitted to the director of the Department of Natural Resources by an approved registered professional engineer or other approved person prior to mine opening or reopening.

16.04. Notification - The director, Department of Natural Resources, shall notify the director, Department of Mines, of the satisfactory installation of all haulageways or access roads, drainage systems, and site preparations incident to the mine opening or reopening.

16.05. Bonding - Each operator who shall make application for an underground Opening ~~Approval~~ Permit under Chapter ~~22~~ 20, Article ~~2~~ 6, Section ~~63~~ 9, Code of West Virginia, as amended, shall ~~at the time the approval plan is submitted~~ furnish bonds in accordance with provisions of Chapter 20, Article 6, Section ~~16~~ 12, Code of West Virginia, as amended.

16.06. Mine Closure - Upon completion of mining, the director, Department of Mines shall certify to the director, Department of Natural Resources, approval for mine closure. The director, Department of Natural Resources, shall have jurisdiction and control of final restoration and reclamation of the surface effects of underground mining operations including the release of all bonds.

16.07. Surface Effects of Existing Underground Mining Operations - The surface effects of all active underground mining operations in existence prior to the effective date of these rules and regulations shall comply with all applicable requirements set forth in ~~Chapter 22, Article 2, Section 63,~~ Article 6, Chapter 20, Code of West Virginia, as amended, and all rules and regulations of the Reclamation Commission shall apply with the exception of Subseries A, Sections 4.01, 6. and 10.

SECTION 17.

MODIFICATIONS

SECTION 17. MODIFICATIONS

Should the director determine that modifications are necessary because of geologic structure, topography, particular watershed or permit conditions, the director may at his discretion with the approval of the Reclamation Commission, make such modifications if the same are in conformity with Article 6, Chapter 20, Code of West Virginia, as amended.

SECTION 18.

STATE AND FEDERAL COMPLIANCE

SECTION 18. STATE AND FEDERAL COMPLIANCE

The issuance of a prospecting or surface mining permit pursuant to Article 6, Chapter 20, Code of West Virginia, as amended, and any rules and regulations promulgated thereunder authorizes the operations covered by said permit, but does not release the permit holder from any other legal duties imposed by the laws of this state or these United States.

SECTION 19.

VALIDITY OF REGULATIONS

SECTION 19. VALIDITY OF REGULATIONS

The various sections of these rules and regulations shall be construed as seperable and severable and should any of the sections, sentences, clauses or parts thereof be construed and held unconstitutional or for any reason be invalid, the remaining sections of these rules and regulations shall not be thereby affected.