



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

February 27, 2002

Chris Hansen, Environmental Manager
Canyon Fuel Company, LLC
HC 35 Box 380
Helper, Utah 84526

Re: Phase I Bond Release, Mountain Coal Company, Gordon Creek 2, 7 & 8, C/007/016-BR01B, Outgoing File

Dear Mr. Hansen:

The above-referenced amendment has been reviewed. There are deficiencies that must be adequately addressed prior to proceeding with the bond release process. A copy of our Technical Analysis is enclosed for your information. Please respond to these deficiencies by May 1, 2002. We are placing your bond release application on hold until these deficiencies are resolved.

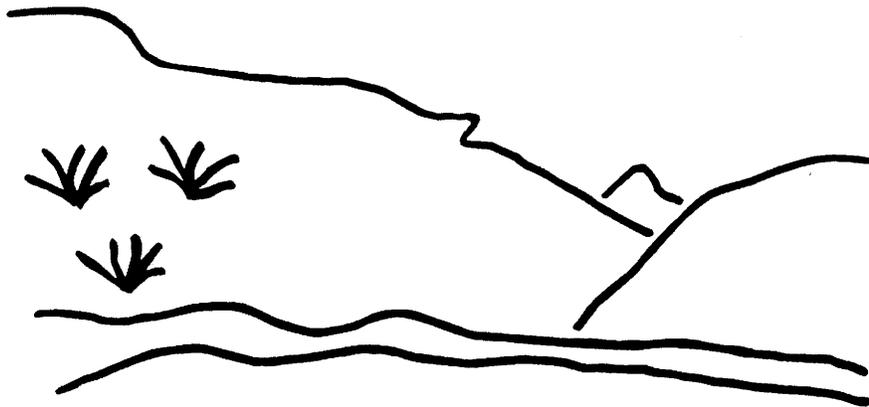
If you have any question, please call Susan at (801)-538-5258 or me at (801) 538-5268.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

sm
cc: Price Field Office
C:\sheila\ta's\def01B.doc

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Gordon Creek 2, 7 & 8
Phase I Bond Release
C/007/016-BR01B
Technical Analysis
February 25, 2002

TABLE OF CONTENTS

INTRODUCTION.....	1
SUMMARY OF DEFICIENCIES.....	3
ADMINISTRATIVE INFORMATION.....	5
RECLAMATION PLAN.....	7
GENERAL REQUIREMENTS	7
POSTMINING LAND USES	8
APPROXIMATE ORIGINAL CONTOUR RESTORATION.....	10
BACKFILLING AND GRADING.....	12
MINE OPENINGS.....	14
TOPSOIL AND SUBSOIL.....	15
HYDROLOGIC INFORMATION	18
General	18
Ground-Water Monitoring.....	18
Surface-Water Monitoring.....	19
Acid- and Toxic-Forming Materials	19
Transfer of Wells	19
Discharges into an Underground Mine.....	19
Gravity Discharges.....	19
Water Quality Standards and Effluent Limitations.....	19
Diversions	19
Stream Buffer Zones.....	20
Sediment Control Measures.....	20
Siltation Structures.....	20
Sedimentation Ponds.....	20
Impoundments.....	21
Casing and Sealing of Wells.....	21
MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS	22
Affected Area Boundary Maps	23
Bonded Area Map	23
Reclamation Backfilling and Grading Maps.....	23
Reclamation Facilities Maps.....	25
Final Surface Configuration Maps.....	25
BONDING AND INSURANCE REQUIREMENTS.....	26
RULES INDEX	27

INTRODUCTION

TECHNICAL ANALYSIS

INTRODUCTION

The Division received a bond release package for Phase I bond release for the Gordon Creek #2, #7, and #8 Mines on October 25, 2001. The permit area for the mine has been reduced and leases have been terminated. Backfilling and grading of the site occurred over a two-year period, from 1995 to 1997, with additional work conducted in 1999. The Permittee is applying for Phase I bond release of 32.52 acres. Excluded from the bond release are the sediment ponds (1.63 acres) and Sweet's Pond (0.73 acres.).

Page 2
C/007/016-BR01B
February 25, 2002

INTRODUCTION

SUMMARY OF DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical Analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the Division, result in denial of the proposed permit changes, or may result in other executive or enforcement action as deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

- R645-301-142**, Provide the Division and incorporate into the MRP the results of the soil testing as described in Section 3.5.1.1 of the Mining and Reclamation Plan..... 17
- R645-301-242**, Describe the approximate placement location and thickness of the 6,000 cu yds of topsoil and 8,000 cu yds of subsoil that was stored in piles at the Gordon Creek Mine No. 7 site..... 17
- R645-301-412.200**, The Permittee must provide a copy of the comments concerning the proposed use by the legal or equitable owner of record (Robert F. & Linda M. Jewkes) of the surface of the land following reclamation. 9
- R645-301-542.300 and R645-301-121.200**, The Permittee must clarify which maps in the MRP and bond release package are design maps and cross sections and which ones are as-builts. In the MRP, there are two copies of Plate 3-7. One copy is date received May 19, 1998 and the other is dated received Nov. 4, 1999. The Division assumes that the May 19, 1998 copy is the design plan and the Nov. 4, 1999 copy is the as-builts. In order to avoid confusion the Permittee needs to label each copy of Plate 3-7 as "design" or "as-built". 25
- R645-301-542.320**, Indicate on the Final Reclamation (Phase I) Plate 3-7 the location of buried acid/toxic or other unsuitable material..... 17
- R645-301-764**, The applicant should update the timetable and plans to remove each structure as appropriate. 7
- R645-301-830.140**, The Permittee must provide the Division detailed reclamation cost estimate for reclaiming the sediment ponds, Sweets pond and the vegetation costs for the entire site. . 26

SUMMARY OF DEFICIENCIES

- R645-301-880.120**, The public notice must include: 1) A statement indicating that a request for public hearings or informal conferences may be made to the Division and 2) A statement that comments or requests must be made within 30 days of the last date of publication. 6
- R645-301-880.130**, The bond release application must include a notarized statement which certifies that all applicable reclamation activities have been accomplished in accordance with the requirements of the Act, the regulatory program, and the approved reclamation plan..... 6
- R645-301-880.210**, The Permittee should summarize water quality data for the disturbed area and describe whether pollution of surface and subsurface water is occurring, and the probability of future occurrences of such pollution. 21

ADMINISTRATIVE INFORMATION

ADMINISTRATIVE INFORMATION

Regulatory Reference: R645-301-880.100, R645-301-880-200

Analysis:

The Phase I bond release request is for 32.52 acres. The disturbed area is 34.88 acres. (This excludes the 2.36 acres associated with the sediment pond and the Sweet's pond site.) The application explains that this number increases the disturbed area by 14.58 acres because of an on the ground survey after reclamation verses numbers generated from maps prior to reclamation.

The application contains a copy of the advertisement for newspaper publication run in the Sun Advocate for four consecutive weeks beginning on October 30, 2001¹. All of the required information is contained in the advertisement except for a statement indicating that a request for public hearings or informal conferences may be made to the Division. A statement is provided indicating written comments or objections may be made to the Division. The advertisement does not specify that comments or requests must be made within 30 days of the last date of publication.

A copy of letter sent to adjoining property owners on October 24, 2001¹, local governmental bodies, planning agencies, sewage and water treatment authorities, and water companies in the area notifying them of the intention to seek release from the bond. Letters were sent to:

BLM	Price River Distribution System
Price DWR	Carbon County Commission
Calvin K. Jacob & Sons	Mrs. Agnes Peirce
Helper Associates	Wasatch Coal Company (c/o George N. Cannon Co.)
G. Pete & Betty Frandsen	Mr. Robert Jewkes
Helen Marakis	

The property owners of the reclaimed area are Calvin K. Jacob & Sons and Robert F. & Linda M. Jewkes. The Jewkes own land around the #7 and #8 Mine and Jacob owns the majority of the disturbed area near the #2 Mine and areas east to the sediment ponds. E.E. Pierce owns Sweets Pond, which has been excluded from this Phase I bond release.

¹ Dates of publication and mailings were obtained from Dan Guy, Blackhawk Engineering, a consultant to the Permittee in a fax dated January 29, 2002

ADMINISTRATIVE INFORMATION

The bond release application must include a notarized statement that certifies that all applicable reclamation activities have been accomplished in accordance with the requirements of the Act, the regulatory program, and the approved reclamation plan. No statement was found.

Findings:

Information provided in the application is not considered adequate to meet the minimum Administrative Information requirement of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-880.130, The bond release application must include a notarized statement which certifies that all applicable reclamation activities have been accomplished in accordance with the requirements of the Act, the regulatory program, and the approved reclamation plan

R645-301-880.120, The public notice must include: 1) A statement indicating that a request for public hearings or informal conferences may be made to the Division and 2) A statement that comments or requests must be made within 30 days of the last date of publication.

RECLAMATION PLAN

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Minimum Regulatory Requirements:

Provide a plan for the reclamation of the lands within the proposed permit area, showing how the applicant will comply with the regulatory program and the environmental protection performance standards. The plan shall include, at a minimum, contain the following information for the proposed permit area: a detailed timetable for the completion of each major step in the reclamation plan; a detailed estimate of the cost of the reclamation of the proposed operations required to be covered by a performance bond, with supporting calculations for the estimates; a plan for backfilling, soil stabilization, compacting, and grading, with contour maps or cross sections that show the anticipated final surface configuration of the proposed permit area; a plan for redistribution of topsoil, subsoil, and other material along with a demonstration of the suitability of topsoil substitutes or supplements shall be based upon analysis of the thickness of soil horizons, total depth, texture, percent coarse fragments, pH, and areal extent of the different kinds of soils; other chemical and physical analyses, field-site trials, or greenhouse tests if determined to be necessary or desirable to demonstrate the suitability of the topsoil substitutes or supplements may also be required; a plan for revegetation including, but not limited to, descriptions of the schedule of revegetation, species and amounts per acre of seeds and seedlings to be used, methods to be used in planting and seeding, mulching techniques, irrigation, if appropriate, and pest and disease control measures, if any, measures proposed to be used to determine the success of revegetation, and, a soil testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation; a description of the measures to be used to maximize the use and conservation of the coal resource; a description of measures to be employed to ensure that all debris, acid-forming and toxic-forming materials, and materials constituting a fire hazard are disposed of accordingly and a description of the contingency plans which have been developed to preclude sustained combustion of such materials; a description, including appropriate cross sections and maps, of the measures to be used to seal or manage mine openings, and to plug, case, or manage exploration holes, other bore holes, wells, and other openings within the proposed permit area; and, a description of steps to be taken to comply with the requirements of the Clean Air Act, the Clean Water Act, and other applicable air and water quality laws and regulations and health and safety standards.

Analysis:

The permittee conducted backfilling and grading operations of the Gordon Creek #2, #7 and #8 mines a two-year period, from 1995 to 1997. The Division approved the permit reduction in September 2001, which reduced the permit area from 2286.05 acres to 180.0 acres.

A schedule for reclamation is found in Chapter 3, p. 3-64. A current schedule should be submitted to reflect the best estimate for continuing reclamation.

The permittee maintains a sedimentation pond and monitors discharges in accordance with UPDES discharge standards.

Findings:

R645-301-764, The applicant should update the timetable and plans to remove each structure as appropriate.

RECLAMATION PLAN

POSTMINING LAND USES

Regulatory Reference: 30 CFR 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Minimum Regulatory Requirements:

In general, all disturbed areas shall be restored in a timely manner to conditions that are capable of supporting: the uses they were capable of supporting before any mining; or higher or better uses.

Provide a detailed description of the proposed use, following reclamation, of the land to be affected within the proposed permit area by surface operations or facilities, including a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land-use policies and plans. This description shall explain: how the proposed postmining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use; where a land use different from the premining land use is proposed, all materials needed for approval of the alternative use; and, the consideration given to making all of the proposed underground mining activities consistent with surface owner plans and applicable State and local land-use plans and programs.

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

Determine premining uses 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 has not been previously mined and has been properly managed. The postmining land use for land that has been previously mined and not reclaimed shall be judged on the basis of the land use that existed prior to any mining; Provided that, if the land cannot be reclaimed to the land use that existed prior to any mining because of the previously mined condition, the postmining land use shall be judged on the basis of the highest and best use that can be achieved which is compatible with surrounding areas and does not require the disturbance of areas previously unaffected by mining.

Criteria for alternative postmining land uses. Higher or better uses may be approved as alternative postmining land uses after consultation with the landowner or the land management agency having jurisdiction over the lands, if the proposed uses meet the following criteria: there is a reasonable likelihood for achievement of the use; the use does not present any actual or probable hazard to public health and safety, or threat of water diminution or pollution; and, the use will not be impractical or unreasonable, inconsistent with applicable land use policies or plans, involve unreasonable delay in implementation, or cause or contribute to violation of Federal, State, or local law.

Approval of an alternative postmining land use, may be met by requesting approval through the permit revision procedures rather than requesting such approval in the original permit application. The original permit application, however, must demonstrate that the land will be returned to its premining land use capability. An application for a permit revision of this type must be submitted in accordance with the requirements of filing for a Significant Permit Revision and shall constitute a significant alternation from the mining operations contemplated by the original permit, and shall be subject to the requirements for permits, permit processing, and administrative and judicial of decisions on permits under the regulatory program.

Surface coal mining operations may be conducted under a variance from the requirement to restore disturbed areas to their approximate original contour, if the following requirements are satisfied:

- 1.) The Division grants a variance from approximate original contour restoration requirements.
- 2.) The alternative postmining land use requirements are met.
- 3.) All applicable requirements of the act and the regulatory program, other than the requirement to restore disturbed areas to their approximate original contour, are met.
- 4.) After consultation with the appropriate land use planning agencies, if any, the potential use is shown to constitute an equal or better economic or public use.
- 5.) The proposed use is designed and certified by a qualified registered professional engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site.
- 6.) After approval, where required, of the appropriate State environmental agencies, the watershed of the permit and adjacent areas is shown to be improved.
- 7.) The highwall is completely backfilled with spoil material, in a manner which results in a static factor of safety of at least 1.3, using standard geotechnical analysis.
- 8.) Only the amount of spoil as is necessary to achieve the postmining land use, ensure the stability of

RECLAMATION PLAN

spoil retained on the bench, and all spoil not retained on the bench shall be placed in accordance with all other applicable regulatory requirements.

9.) The surface landowner of the permit area has knowingly requested, in writing, that a variance be granted, so as to render the land after reclamation, suitable for an industrial, commercial, residential, or public use (including recreational facilities.)

10.) Federal, State, and local government agencies with an interest in the proposed land use have an adequate period in which to review and comment on the proposed use.

Analysis:

The premining land use for the Gordon Creek area was wildlife, hunting, sightseeing, watershed, logging and hiking. Currently the landowners administer the lands for limited livestock forage (Section 4.4.2). There are no range improvements in the area. The stated premining land use is wildlife habitat to which the postmining land use will be restored. Private landowners presently manage the lands surrounding the mine site for limited livestock forage.

Appendix 4-1 contains a copy of a letter to the landowner from Mountain Coal Company stating the postmining land use of wildlife habitat. The two sons, James and Mark Jacob, returned the letter signed acknowledging the land use and acknowledging they are an owner of record. No statement from Calvin Jacob was found. A letter from Calvin Jacob is found in Appendix 3-5 approving the small water pond to be left at the forks of Bryner Canyon. James and Mark Jacob also acknowledge and request the mine to leave the small pond. They state: "This pond is located at a critical location for the watering of our livestock".

No letter or statement is present from Robert F. and Linda M. Jewkes, landowners in the #7 and #8 Mine area concerning the postmining landuse.

Findings:

Information provided in the application is not considered adequate to meet the minimum Postmining Land Use requirement of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-412.200, The Permittee must provide a copy of the comments concerning the proposed use by the legal or equitable owner of record (Robert F. & Linda M. Jewkes) of the surface of the land following reclamation.

RECLAMATION PLAN

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Minimum Regulatory Requirements:

Note: The following requirements have been suspended insofar as they authorize any variance from approximate original contour for surface coal mining operations in any area which is not a steep slope area.

Criteria for permits incorporating variances from approximate original contour restoration requirements.

The Division may issue a permit for nonmountaintop removal mining which includes a variance from the backfilling and grading requirements to restore the disturbed areas to their approximate original contour. The permit may contain such a variance only if the Division finds, in writing, that the applicant has demonstrated, on the basis of a complete application, that the following requirements are met:

- 1.) After reclamation, the lands to be affected by the variance within the permit area will be suitable for an industrial, commercial, residential, or public postmining land use (including recreational facilities).
- 2.) The criteria for the proposed post mining land use will be met.
- 3.) The watershed of lands within the proposed permit and adjacent areas will be improved by the operations when compared with the condition of the watershed before mining or with its condition if the approximate original contour were to be restored. The watershed will be deemed improved only if: the amount of total suspended solids or other pollutants discharged to ground or surface water from the permit area will be reduced, so as to improve the public or private uses or the ecology of such water, or flood hazards within the watershed containing the permit area will be reduced by reduction of the peak flow discharge from precipitation events or thaws; the total volume of flow from the proposed permit area, during every season of the year, will not vary in a way that adversely affects the ecology of any surface water or any existing or planned use of surface or ground water; and, the appropriate State environmental agency approves the plan.
- 4.) The owner of the surface of the lands within the permit area has knowingly requested, in writing, as part of the application, that a variance be granted. The request shall be made separately from any surface owner consent given for right-of-entry and shall show an understanding that the variance could not be granted without the surface owner's request.

If a variance is granted, the requirements of the post mining land use criteria shall be included as a specific condition of the permit, and, the permit shall be specifically marked as containing a variance from approximate original contour.

A permit incorporating a variance shall be reviewed by the Division at least every 30 months following the issuance of the permit to evaluate the progress and development of the surface coal mining and reclamation operations to establish that the operator is proceeding in accordance with the terms of the variance. If the permittee demonstrates to the Division that the operations have been, and continue to be, conducted in compliance with the terms and conditions of the permit, the review specified need not be held. The terms and conditions of a permit incorporating a variance may be modified at any time by the Division, if it determines that more stringent measures are necessary to ensure that the operations involved are conducted in compliance with the requirements of the regulatory program. The Division may grant variances only if it has promulgated specific rules to govern the granting of variances in accordance with the provisions of this section and any necessary, more stringent requirements.

Analysis:

The requirements for achieving the approximate original contour requirements are coached in the backfilling and grading requirements of the R645 rules. Technical Directive 002 clarifies those requirements that are as follows:

Final Surface Configuration

The main question that needs to be answered when evaluating the final surface configuration is, does the postmining topography, excluding elevation, closely resemble its

RECLAMATION PLAN

premining configuration? The approved backfilling and grading plan called for restoring the area to AOC. When the Division compares the design plans (Plate 3-7 received May 19, 1998) with the as-built drawings (BR-1 received October 25, 2001) the Permittee appears to have backfilled and graded the area according to the approved plan.

The Division will verify that the reclaimed area blends into the undisturbed area during the bond release inspection. During the inspection, the Division will field check the as-built maps, look at how the disturbed area was transitioned into the undisturbed area and verify that the topography within the disturbed area is similar to the surrounding area.

Cut-slopes will remain after backfilling and grading. Cut-slopes may be left if the permittee does not have enough fill material or if safety factors cannot be achieved. The Division does not have any regulations or guidelines for cut-slope retention. During the bond release inspection, the Division will evaluate the cut-slopes.

Spoil Pile Elimination

Neither the designs nor the as-builts show the location of the reclaimed spoil piles. This issue is addressed in the map section. During the bond release inspection, the Division will field check the site to determine if the spoil piles have been reclaimed.

Highwall Elimination

The surface area at the No. 2 Mine was originally disturbed in 1969 so the site is a pre-SMCRA site. The No. 7 Mine was developed in 1983 and 1984 (post-SMCRA) and the No. 8 Mine was disturbed in 1989. The Permittee committed in the MRP to completely eliminate the highwalls at the No.7 and No. 8 Mines. The Division will verify the highwall elimination during the bond release inspection.

The highwall at the No. 2 Mine may not be eliminated completely due to stability concerns. The main stability concern is a seep that is located at the Right Fork drainage. Because the site is pre-SMCRA, the Division can allow highwall remnants if fill material were not reasonably available, safety factor concerns, or elimination would disrupt drainage patterns. The as-builts drawing show that the Permittee followed the approved plan. The Division will verify the as-builts during the bond release inspection.

Drainages

The permittee has regraded, and contoured the disturbed area to direct runoff to the proper drainages. The surface was ripped and gouged to help store water for vegetation hydration and to help prevent sediment loading to drainages, before vegetation cover is established. During some storms several gouged areas were breached, but a high percentage performed as intended.

RECLAMATION PLAN

The restored drainages are shown in the as-built drawing and cross-sections. During the bond release inspection, the Division will verify that the drainages were properly installed.

Postmining Land Use

The post-mining land use is identified as the "the same as the pre-mining land use" which is wildlife habitat, hunting, and grazing. During the reclamation period the post-mining land use will be wildlife habitat. At the end of the 10-year bond period the land will revert back to the landowner. The land use will then depend on the landowner's decision. Information in the plan, Appendix 3-4 indicates that the pond Mr. Jacob wants retained on site will be used for livestock. Chapter 4, p. 4-55 doesn't specifically identify grazing as a post-mining land use, however it is implied, because of the pre-mining land use statement.

Water quality monitoring and is being conducted to evaluate the reclaimed site's potential for meeting post-mining land use standards, Chapter 7, p. 7-21 and 7-25. During the bond release inspection, the Division will verify that the site is adequate for the postmining land use.

Findings:

The Permittee appears to have met the minimum requirements for reclaiming the site to AOC standards. The Division will verify that AOC has been achieved during the bond release inspection.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Minimum Regulatory Requirements:

General

Disturbed areas shall be backfilled and graded to: achieve the approximate original contour; eliminate all highwalls, spoil piles, and depressions; achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long term static safety factor of 1.3 and to prevent slides; minimize erosion and water pollution both on and off the site; and, support the approved postmining land use.

The postmining slope may vary from the approximate original contour when approval is obtained from the Division for a variance from approximate original contour requirements, or when incomplete elimination of highwalls in previously mined areas is allowed under the regulatory requirements. Small depressions may be constructed if they are needed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation.

If it is determined by the Division that disturbance of the existing spoil or underground development waste would increase environmental harm or adversely affect the health and safety of the public, the Division may allow the existing spoil or underground development waste pile to remain in place. Accordingly, regrading of settled and revegetated fills to achieve approximate original contour at the conclusion of underground mining activities shall not be required if: the settled and revegetated fills are composed of spoil or nonacid- or nontoxic-forming underground development waste; the spoil or underground development waste is not located so as to be detrimental to the environment, to the health and safety of the public, or to the approved postmining land use; stability of

RECLAMATION PLAN

the spoil or underground development waste must be demonstrated through standard geotechnical analysis to be consistent with backfilling and grading requirements for material on the solid bench (1.3 static safety factor) or excess spoil requirements for material not placed on a solid bench (1.5 static safety factor); and, the surface of the spoil or underground development waste shall be vegetated in accordance with the revegetation standards for success, and surface runoff shall be controlled in accordance with the regulatory requirements for diversions.

Spoil shall be returned to the mined-out surface area. Spoil and waste materials shall be compacted where advisable to ensure stability or to prevent leaching of toxic materials. Spoil may be placed on the area outside the mined-out surface area in nonsteep slope areas to restore the approximate original contour by blending the spoil into the surrounding terrain if the following requirements are met: all vegetative and organic materials shall be removed from the area; the topsoil on the area shall be removed, segregated, stored, and redistributed in accordance with regulatory requirements; the spoil shall be backfilled and graded on the area in accordance with the general requirements for backfilling and grading.

Disposal of coal processing waste and underground development waste in the mined-out surface area shall be in accordance with the requirements for the disposal of spoil and waste materials except that a long-term static safety factor of 1.3 shall be achieved.

Exposed coal seams, acid- and toxic-forming materials, and combustible materials exposed, used, or produced during mining shall be adequately covered with nontoxic and noncombustible materials, or treated, to control the impact on surface and ground water, to prevent sustained combustion, and to minimize adverse effects on plant growth and the approved postmining land use.

Cut-and-fill terraces may be allowed by the Division where: needed to conserve soil moisture, ensure stability, and control erosion on final-graded slopes, if the terraces are compatible with the approved postmining land use; or, specialized grading, foundation conditions, or roads are required for the approved postmining land use, in which case the final grading may include a terrace of adequate width to ensure the safety, stability, and erosion control necessary to implement the postmining land-use plan.

Preparation of final-graded surfaces shall be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage.

Previously mined areas

Remining operations on previously mined areas that contain a preexisting highwall shall comply with all other reclamation requirements except as provided herein. The requirement that elimination of highwalls shall not apply to remining operations where the volume of all reasonably available spoil is demonstrated in writing to the Division to be insufficient to completely backfill the reaffected or enlarged highwall. The highwall shall be eliminated to the maximum extent technically practical in accordance with the following criteria:

- 1.) All spoil generated by the remining operation and any other reasonably available spoil shall be used to backfill the area. Reasonably available spoil in the immediate vicinity of the remining operation shall be included within the permit area.
- 2.) The backfill shall be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability.
- 3.) Any highwall remnant shall be stable and not pose a hazard to the public health and safety or to the environment. The operator shall demonstrate, to the satisfaction of the Division, that the highwall remnant is stable.
- 4.) Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbances will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.

Analysis:

The backfilling and grading requirements are as follows:

- The site will achieve AOC.
- Elimination of highwalls, spoil piles and depression
- Achieve a postmining slope that does not exceed either the angle-of-repose or a lesser slope to achieve a static safety factor of 1.3 and prevent slides.
- Minimize erosion and water pollution both on and off the site.

RECLAMATION PLAN

- Support the approved postmining land use.

Some of those requirements were address in the AOC section. In the AOC section the Division evaluated AOC and elimination of highwalls and spoil piles.

The slopes were designed to have a minimum safety factor of 1.3 and prevent slides. The designs were evaluated for slope stability and found to have a safety factor of 1.3. During the bond release inspection the Division will evaluate if the slope as stable or if slides have occurred.

The erosion and water pollution issue will be examined in detail in the hydrology, soils and biology sections of this TA. The postmining land use requirements will be discussed in that section of the TA.

Findings:

The information provided in the application meets the minimum backfilling and grading requirements of the regulations.

MINE OPENINGS

Regulatory Reference: 30 CFR 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Minimum Regulatory Requirements:

Each exploration hole, other drillhole or borehole, shaft, well, or other exposed underground opening shall be cased, lined, or otherwise managed as approved by the Division to prevent acid or other toxic drainage from entering ground and surface waters, to minimize disturbance to the prevailing hydrologic balance and to ensure the safety of people, livestock, fish and wildlife, and machinery in the permit area and adjacent area. Each exploration hole, drill hole or borehole or well that is uncovered or exposed by mining activities within the permit area shall be permanently closed, unless approved for water monitoring or otherwise managed in a manner approved by the Division. Use of a drilled hole or monitoring well as a water well must meet the provisions required to protect the hydrologic balance. This section does not apply to holes drilled and used for blasting, in the area affected by surface operations.

Each mine entry which is temporarily inactive, but has a further projected useful service under the approved permit application, shall be protected by barricades or other covering devices, fenced, and posted with signs, to prevent access into the entry and to identify the hazardous nature of the opening. These devices shall be periodically inspected and maintained in good operating condition by the person who conducts the underground mining activities.

Each exploration hole, other drill hole or borehole, shaft, well, and other exposed underground opening which has been identified in the approved permit application for use to return underground development waste, coal processing waste or water to underground workings, or to be used to monitor ground water conditions, shall be temporarily sealed until actual use.

When no longer needed for monitoring or other use approved by the Division upon a finding of no adverse environmental or health and safety effects, or unless approved for transfer as a water well, each shaft, drift, adit, tunnel, exploratory hole, entry way or other opening to the surface from underground shall be capped, sealed, backfilled, or otherwise properly managed, as required by the Division and consistent with the requirements of 30 CFR Section 75.1711. Permanent closure measures shall be designed to prevent access to the mine workings by people, livestock, fish and wildlife, machinery and to keep acid or other toxic drainage from entering ground or surface waters.

RECLAMATION PLAN

Analysis:

The Permittee sealed and backfilled the portals. The portals structures have been removed and the exposed coal seam has been covered. The mines are considered dry; no water discharge from the portals is expected. Gordon Creek Mine No. 2 was sealed in 1985 and the No. 7 and No. 8 mines were sealed in 1990.

The maps in the bond release package BR-1 show that the area has been backfill according to the reclamation plan. That plan called for the sealing and backfilling of all portals and exposed coal seam. The Division will verify that the portals and coal seams have been backfilled during the bond release inspection.

Findings:

The Permittee appears to have met the minimum requirements for sealing mine opens. The Division will verify that the portals and coal seams have been backfilled during Phase I bond release inspection.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR 817.22; R645-301-240.

Minimum Regulatory Requirements:

Redistribution

Topsoil materials shall be redistributed in a manner that: achieves an approximately uniform, stable thickness consistent with the approved postmining land use, contours, and surface-water drainage systems; prevents excess compaction of the materials; and, protects the materials from wind and water erosion before and after seeding and planting.

Before redistribution of the material, the regarded land shall be treated if necessary to reduce potential slippage of the redistribution material and to promote root penetration. If no harm will be caused to the redistributed material and reestablished vegetation, such treatment may be conducted after such material is replaced.

The Division may choose not to require the redistribution of topsoil or topsoil substitutes on the approved postmining embankments of permanent impoundments or of roads if it determines that placement of topsoil or topsoil substitutes on such embankments is inconsistent with the requirement to use the best technology currently available to prevent sedimentation, and, such embankments will be otherwise stabilized.

Nutrients and soil amendments shall be applied to the initially redistributed material when necessary to establish the vegetative cover.

The Division may require that the B horizon, C horizon, or other underlying strata, or portions thereof, removed and segregated, stockpiled, be redistributed as subsoil in accordance with the requirements of the above if it finds that such subsoil layers are necessary to comply with the revegetation requirements.

Analysis:

Tech Directive 006 requests that technical information such as item II B 3 d and e (dates and depths of topsoil replacement) and II B 4 (overburden chemical analyses results), and II B 5 (evaluation of topsoil or substitute topsoil), and II B 6 (evaluation of the subsoil including replacement depths) is included in the Phase I bond release application.

Lacking such information in the bond release application, the Division assumes the following activities occurred during soil redistribution (After reviewing the Mining and Reclamation Plan):

- Compacted zones were eliminated by deep chiseling prior to final reclamation (MRP, Section 8-10 and Section 3.5.4.4)
- Fill at the Gordon Creek No. 7 mine site provided 3,684 cubic yards of topsoil and 8,000 cubic yards of subsoil for topsoil substitute material (MPR, Section 3.4.4, page 3-16).
- Topsoil from the No. 8 mine provided 2,514 cubic yards of soil (MRP, Section 3.4.4, page 3-17).
- Approximately 37,000 cubic yards of fill at the Gordon Creek No. 7 mine site was considered suitable topsoil substitute, with the exception of soils in the vicinity of sample site No. 3 (MRP, Section 8.6.2 and Section 8.8).
- The total fill required for the property was 198,386 cubic yards (MRP, Section 3.5.4.1, page 3-36).
- Ninety days prior to reclamation, additional tests were run on the fill beginning with location No. 3 and extending outward, sampling every ten feet in four directions until suitable SAR values are obtained (MRP, Section 8.6.4, page 8-33).
- Special handling of the fill will include laboratory analysis of any material suspected of having greater than 50% coal fines (MRP, Section 3.4.4, page 3-15).
- Unsuitable material was covered with a minimum of four feet of suitable material (MRP, Section 8.8).
- Additional soil sampling occurred prior to earthwork and soil redistribution as described in Section 3.5.5.1 and shown on Plate 3-1 (MPR, Section 8.9 and Section 3.5.5.1, page 3-50 and 3-51).
- Soil sampling occurred on 70% or greater slopes remaining during final reclamation (MRP, Section 3.4.4, page 3-17).
- At the fan portal, 12-18 inches of soil was removed prior to grading, sampled and replaced after grading (MRP, Section 3.5.4.4, page 3-47A).
- Topsoil was salvaged and placed on the pond embankments when the 2/7/8 sediment pond was created (MRP, Section 3.5.4.4, page 3-47A)

After reviewing the Mining and Reclamation Plan, the Division assumes the following measures were taken to achieve soil stabilization and erosion control:

RECLAMATION PLAN

- The final surface was left roughened by the bucket of a backhoe with depressions that are 2 to 3 feet in diameter (MRP, Section 8.8).
- The regraded surface was scarified to a depth of 18 inches (MRP, Section 3.5.4).
- Once the vegetation is deemed adequate, the sediment ponds will be removed and reclaimed (MRP, Section 3.5.3.3, page 3-31).
- Large rock fragments were utilized at the toe of the outcrop (to a depth of 3 feet) to enhance stability. The rocks were covered with one foot of soil. (MRP, Section 3.5.4, page 3-34).
- Erosion controls such as straw dikes were placed below the backfill areas (MRP, Section 3.5.4.1).
- Surface control for water from the seep near the top of the cut slope at Mine No. 7 was provided (MRP, Section 3.5.4.1, page 3-40).
- Seepage from the rock face at the No. 7 mine is controlled as it reaches the lower bench where it is intercepted and conveyed to the main restored channel via a rip rapped ditch. Specifications of the ditch are as described (MRP, Section 3.5.4.3, page 3-45).
- A seep in the road cut just below the No. 8 Mine pad is controlled as described in the MRP, Section 3.5.4.1, page 3-43.
- A seep at the No. 8 Mine flows into a basin of native rock for wildlife watering (MRP, Section 3.5.4.1, page 3-43).
- Areas without topsoil cover received 1500 lbs/ac of organic matter (alfalfa) incorporated with gouging or hand tools (in steep areas). Steep areas also received tackifier and mulch as described in Section 3.5.5.3 (MRP, Section 3.5.5.1, page 3-51 and 3-52)
- 2000 lbs/ac wood fiber mulch with 60 lbs/ac of tackifier will be placed on slopes less than 3H:1V.
- Erosion control mat will be used on slopes 2H:1V or steeper.
- On severe slopes that do not receive topsoil, 2500 lbs/acre of mulch and 120 lbs/acre of tackifier will be applied.

Findings:

Information provided does not meet the Bond Release Application requirements of the Regulations. Prior to approval, the applicant must supply the following in accordance with:

R645-301-142, Provide the Division and incorporate into the MRP the results of the soil testing as described in Section 3.5.1.1 of the Mining and Reclamation Plan.

R645-301-542.320, Indicate on the Final Reclamation (Phase I) Plate 3-7 the location of buried acid/toxic or other unsuitable material.

R645-301-242, Describe the approximate placement location and thickness of the 6,000 cu yds of topsoil and 8,000 cu yds of subsoil that was stored in piles at the Gordon Creek Mine No. 7 site.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Minimum Regulatory Requirements:

Hydrologic reclamation plan

The application shall include a plan, with maps and descriptions, indicating how the relevant regulatory requirements will be met. The plan shall be specific to the local hydrologic conditions. It shall contain the steps to be taken during mining and reclamation through bond release to minimize disturbance to the hydrologic balance within the permit and adjacent areas; to prevent material damage outside the permit area; and to meet applicable Federal and State water quality laws and regulations. The plan shall include the measures to be taken to: avoid acid or toxic drainage; prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow; provide water treatment facilities when needed; and control drainage. The plan shall specifically address any potential adverse hydrologic consequences identified in the PHC determination and shall include preventive and remedial measures.

Each application shall contain descriptions, including maps and cross sections, of stream channel diversions and other diversions to be constructed within the proposed permit area to achieve compliance with the performance standards for those structures.

Postmining rehabilitation of sedimentation ponds, diversions, impoundments, and treatment facilities

Before abandoning a permit area or seeking bond release, the operator shall ensure that all temporary structures are removed and reclaimed, and that all permanent sedimentation ponds, diversions, impoundments, and treatment facilities meet the requirements of this Chapter for permanent structures, have been maintained properly and meet the requirements of the approved reclamation plan for permanent structures and impoundments. The operator shall renovate such structures if necessary to meet the requirements of this Chapter and to conform to the approved reclamation plan.

Analysis:

General

Regulation R645-301-761, requires the operator to ensure all temporary structures are removed and all permanent structures meet the requirements of rules under R645-301 for bond release. The Permittee has already removed most of the temporary structures used during operation. Sedimentation ponds, 7a and 2 were removed during the regrading phase, along with drop drains, ditches, berms, silt fences and culvers. Plate 3-1

Several hydrologic structures will remain after bond release, they are mentioned below, also see Plate 3-7.

Ground-Water Monitoring

Groundwater monitoring is currently being conducted on spring source 2-10-W, the only groundwater source on the bond release area. Groundwater emanating from the spring flows into Jacob's Pond, which in turn flows to the main channel, Plate 3-7.

The permittee has not summarized water quality data to show that water pollution of groundwater is occurring or if there is a potential of future impacts.

RECLAMATION PLAN

Surface-Water Monitoring

Water monitoring will continue until final bond release. Post-mining water monitoring sites are identified on p. 7-56, Ch. 7. A recent application requesting to eliminate monitoring sites 2-3-W, 2-4-W, 2-5-W and 2-6-W near Beaver Creek has been review and recommended for approval. Active mining ceased in 1990. Subsidence monitoring continued through 1998.

The North Fork of Gordon Creek supports a fishery and other wildlife. The mine has a UPDES discharge permit for discharges from the sedimentation pond. No known discharges have occurred from the spillway.

The Permittee has not summarized water quality data to show that water pollution or surface water is occurring or if there is a potential of future impacts.

Acid- and Toxic-Forming Materials

The applicant has supplied water monitoring data from surface sites and one spring site. Soil sampling was conducted prior to regarding. The samples showed no signs of acid or toxic forming materials. The sedimentation pond has captured all runoff, since regarding of the site took place.

Transfer of Wells

There are no wells on the disturbed area, thus no transfers have taken place.

Discharges into an Underground Mine

All portals have been sealed, no discharges into underground mines have taken place.

Gravity Discharges

No gravity discharges have taken place since mine portals were sealed.

Water Quality Standards and Effluent Limitations

A sedimentation pond collects all runoff from the disturbed area.

Diversions

Rebuilt sections of the main channel in Bryner Canyon Creek, in the Right Fork of Bryner Canyon Creek and side drainages, SD-1, SD-2, SD-3, SD-4, SD-5 and SD-6 are shown on Plate 3-7. Bryner Canyon Creek, in the Right Fork of Bryner Canyon Creek are considered

RECLAMATION PLAN

intermittent to perennial. The channels were designed to transmit the 100 yr-6 hr storm. Side drainages, SD-1, SD-2, SD-3, SD-4, SD-5 and SD-6 are classified as ephemeral. Channels for ephemeral drainages were designed for the 10 yr-6 hr precipitation event, Appendix 7, p. 2-2.

Reclaimed channel flow calculations are in Appendix 7-6 and Channel construction certification is in Appendix 7-7. Channel profiles are shown on Plate 7-9. Channel cross-sections are shown on Plate 7-7A.

A 48-inch culvert still remains in the Right Fork of the South North Fork of the North Fork of Gordon Creek. The culvert was installed to protect the channel from further subsidence impacts. Subsidence had taken place in approximately 1982 when an entry collapsed. The entry had only 28 feet of cover between the coal seam and the channel. The caved entry was sealed by bulkheads made of timber. The subsidence hole was backfilled and compacted. The culvert was installed to protect the channel. Engineering studies have been conducted by CBC engineers and Associates that show the culvert to be sound and stable, and designed to meet the requirements of the regulations. The landowner concurred with leaving the culvert in place after reclamation and has accepted responsibility for the maintenance after final bond release. See Appendix 7-5.

Stream Buffer Zones

The whole disturbed area is adjacent to an intermittent stream. Disturbance was conducted prior to SMCRA. All area along the stream channels have been regraded to AOC. The only stream buffer zones that should exist should be along the North Fork of Gordon Creek.

Sediment Control Measures

Other than the sedimentation pond, regarding and the reestablishment of vegetation help control sediment loading. During logging operations above the disturbed area a mass of sediment breached the road embankment and ran down the mountainside, onto the disturbed area and into the sediment pond via channel SD-D. Sediment channels were carved out of the hillside and accumulated in the upper reaches of the canyon. A lot of sediment was washed into the sedimentation pond.

Siltation Structures

No other siltation structures exist on site than already discussed above.

Sedimentation Ponds

The existing sedimentation pond is a temporary structure that was built below the disturbed area at the beginning of the reclamation phase. It is a three celled structure built to treat the runoff, Chapter 7, p. 7-39. The pond will contain the capacity of a 10 yr-24 hr

RECLAMATION PLAN

precipitation event plus sediment storage. Each cell contains an emergency overflow designed to discharge a volume flow equivalent to a 25 yr-24 hr precipitation event.

The three-celled reclamation sediment pond will remain in place until vegetation standards and acceptable water quality limits are met, Chapter 3, p. 3-31. The details and designs for the pond are in shown in Plate 7-14 and Appendix 7-1. This will be Phase II. At the time of Phase II bond release the sedimentation pond will be removed and the main channel restored, Plate 3-7B.

A professional engineer or specialist experienced in the construction of impoundments will inspect the sedimentation pond, Ch. 3, p. 3-63. A certified report will be submitted to the Division after each inspection, at least quarterly.

Impoundments

Jacob's Pond is a reclaimed stock watering pond. During coal mining the original stock pond was destroyed by Swisher. It was later constructed as a Sedimentation Pond, 2A. Jacob's Pond was reconstructed to meet post mining land use for stock watering. The pond is designed as a free flow pond that allows filling and discharge of channel flows from areas in the North Fork of Gordon Creek. It will transmit the design flows generated during a 100 yr-24hr event. See appendix 3-4 and Chapter 7, p. 7-40.

Sweet's Pond is a truck fill station. The pond is a permanent structure that was not reconstructed for reclamation. It will require bond release. The operator is responsible for the pond through the reclamation period. Sweet's Pond will be excluded from the Phase I bond release proposal. It is planned that after the site meets bond release requirements, the pond would revert to E.E. Pierce, Appendix 3-5.

Casing and Sealing of Wells

There are no groundwater monitoring wells on the Gordon Creek #2, #7 and #8 Mine lease areas.

Findings:

R645-301-880.210, The Permittee should summarize water quality data for the disturbed area and describe whether pollution of surface and subsurface water is occurring, and the probability of future occurrences of such pollution.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Minimum Regulatory Requirements:

Each application shall contain maps, plans, and cross sections which show the reclamation activities to be conducted, the lands to be affected throughout the operation, and any change in a facility or feature to be caused by the proposed operations, if the facility or feature was shown and described as an existing structure.

The permit application must include as part of the reclamation plan information, the following maps, plans and cross sections:

Affected area boundary maps

The boundaries of all areas proposed to be affected over the estimated total life of all mining activities and reclamation activities, with a description of size, sequence, and timing of phased reclamation activities and treatments. All maps and cross sections used for reclamation design purposes shall clearly show the affected and permit area boundaries in reference to the reclamation work being accomplished.

Bonded area map

The permittee shall identify the initial and successive areas or increments for bonding on the permit application map and shall specify the bond amount to be provided for each area or increment. The bond or bonds shall cover the entire permit area, or an identified increment of land within the permit area upon which the operator will initiate and conduct surface coal mining and reclamation operations during the initial term of the permit. As surface coal mining and reclamation operations on succeeding increments are initiated and conducted within the permit area, the permittee shall file with the Division an additional bond or bonds to cover such increments. Independent increments shall be of sufficient size and configuration to provide for efficient reclamation operations should reclamation by the Division become necessary.

Reclamation backfilling and grading maps

Contour maps and cross sections to adequately show detail and design for backfilling and grading operations during reclamation. Where possible, cross sections shall include profiles of the pre-mining, operations, and post-reclamation topography. Contour maps shall be at a suitable scale and contour interval so as to adequately detail the final surface configuration. When used in the formulation of mass balance calculations, cross sections shall be at adequate scale and intervals to support the mass balance calculations. Mass balance calculations derived from contour information must demonstrate that map scale and contour accuracy are adequate to support the methods used in such earthwork calculations. Detailed cross sections shall be provided when required to accurately depict reclamation designs which include, but are not limited to: terracing and benching, retained roads, highwall remnants, slopes requiring geotechnical analysis, and embankments of permanent impoundments.

Reclamation facilities maps

Location of each facility that will remain on the proposed permit area as a permanent feature, after the completion of underground mining activities. Location and final disposition of each sedimentation pond, permanent water impoundment, coal processing waste bank, and coal processing water dam and embankment, disposal areas for underground development waste and excess spoil, and water treatment and air pollution control facilities within the proposed permit area to be used in conjunction with phased reclamation activities or to remain as part of reclamation.

Final surface configuration maps

Sufficient slope measurements to adequately delineate the final surface configuration of the area affected by surface operations and facilities, measured and recorded according to the following: each measurement shall consist of an angle of inclination along the prevailing slope extending 100 linear feet above and below or beyond the coal outcrop or the area disturbed or, where this is impractical, at locations specified by the Division; where the area has been previously mined, the measurements shall extend at least 100 feet beyond the limits of mining disturbances, or any other distance determined by the Division to be representative of the post-reclamation configuration of the land; and, slope measurements shall take into account variations in slope, to provide accurate representation of the range of slopes and reflect geomorphic differences of the area disturbed through reclamation activities.

RECLAMATION PLAN

Certification Requirements.

Cross sections, maps, and plans required to show the design, location, elevation, or horizontal or vertical extent of the land surface or of a structure or facility used to conduct mining and reclamation operations shall be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, a professional geologist, or in any State which authorizes land surveyors to prepare and certify such cross sections, maps, and plans, a qualified, registered, professional land surveyor, with assistance from experts in related fields such as landscape architecture.

Each detailed design plan for an impounding structure that meets or exceeds the size or other criteria of the Mine Safety and Health Administration, 30 CFR Section 77.216(a) shall: be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture; include any geotechnical investigation, design, and construction requirements for the structure; describe the operation and maintenance requirements for each structure; and, describe the timetable and plans to remove each structure, if appropriate.

Each detailed design plan for an impounding structure that does not meet the size or other criteria of 30 CFR Section 77.216(a) shall: be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, or in any State which authorizes land surveyors to prepare and certify such plans, a qualified, registered, professional land surveyor, except that all coal processing waste dams and embankments shall be certified by a qualified, registered, professional engineer; include any design and construction requirements for the structure, including any required geotechnical information; describe the operation and maintenance requirements for each structure; and, describe the timetable and plans to remove each structure, if appropriate.

Analysis:

Affected Area Boundary Maps

The affected area is assumed by the Division to be the same as the permit area for this mine. The permit boundary for the Gordon Creek #2, #7, and #8 Mines is shown on Plate BR-2. Plate BR-1 show the permit area with the exception of the Sweet's Pond area at a scale of approximately 1 inch equals 150 feet. Note: Sweet's Pond will not be part of this bond release. This information was submitted in the September 2001 submittal.

Additional information is also given in the MRP. Plate 3-7 in the MRP shows the permit boundaries.

Bonded Area Map

Because of lease relinquishments, the permit area has been reduced. In order to keep a simple legal description the permit area is made up of quarter-quarter sections. The bond area for the Gordon Creek #2, #7, and #8 Mines is an irregular shaped area within the permit area. See Plates BR-1 and BR-2 for permit and disturbed area boundaries.

Additional information is also given in the MRP. Plate 3-7 in the MRP shows the permit boundaries.

Reclamation Backfilling and Grading Maps

Because part of the site was disturbed pre-SMCRA and part was disturbed post-SMCRA, the Permittee must include backfilling and grading maps that show the location of the pre-SMCRA and post-SMCRA boundaries. This information is needed to determine what standards should apply.

RECLAMATION PLAN

The Division's technical directive Tech 006 outlines the information that should be shown on maps submitted for bond release. The general information that must be included for all bond phases is as follows:

- Delineated all disturbed areas.
- Show the reclamation dates and acreages of each reclaimed area.
- Show the operation or reclamation status of each area, such as active; temporary cessation; or phase bond release.
- Show areas proposed for bond release.

The specific information needed for Phase I bond release is as follows:

- Map must have a scale of no smaller than 1 inch equals 500 feet.
- Postmining features including restoration of natural drainages, ponds, diversions, wells and monitoring sites.
- Cross sections showing important topographic features, including to but not limited to, how the approximate original contour requirements were addressed and the roads.
- Dates of backfilling and grading activities
- Dates of topsoil replacement
- Topsoil replacement depths.

The maps in the MRP and bond release package address the general requirements as follows:

- The disturbed area boundaries are shown on several maps including Plate 3-7 in the MRP and Map BR-1 in the bond release package.
- The Permittee shows the number of acres in the bond release areas and the acreage excluded from Phase I bond release on Plate BR-2. However, the Permittee does not list the dates when reclamation work was completed.
- The Permittee does not label the operational status of each area in the disturbed area boundaries. The Permittee must state what areas are active; in temporary cessation; or in phase bond release
- Plate BR-2 in the bond release package shows the areas for which bond release is sought and the number of acres requested for bond release. However, the plate has a scale of 1 inch equals 2000 ft, at that scale the Division is unable to determine the exact area being sought for bond release.

The maps in the MRP and bond release package address the specific Phase I requirements as follows:

- Plate 3-7 and Plate BR-1 have scales of approximately 1 inch equals 125 feet.

RECLAMATION PLAN

- The Plate 3-7 and Plate Br-1 show the following features: (1) the restored channel including sections that have riprap, (2) French drains from the mine and (3) sediment ponds.
- The Permittee include cross section on 100 foot centers for bond release site. The Permittee also includes detailed cross section for side channel reclamation.
- The plates do not show the dates of backfilling and grading activities
- The plates do not show the dates of topsoil replacement.
- The plates do not show the topsoil replacement depths.

In the MRP, there are two copies of Plate 3-7. One copy is date received May 19, 1998 and the other is dated received Nov. 4, 1999. The Division assumes that the May 19, 1998 copy is the design plan and the Nov. 4, 1999 copy is the as-builts. In order to avoid confusion the Permittee needs to label each copy of Plate 3-7 as design or as-built.

The Division has incorporated the as-built maps and cross-sections into the MRP. Before just maps and cross-sections can be incorporated, the first must first verify that the information is correct.

Reclamation Facilities Maps

The Permittee shows the location of the sediment ponds that will be retained until vegetation has been established on Plate BR-1. In the MRP, there are two copies of Plate 3-7. One copy is date received May 19, 1998 and the other is dated received Nov. 4, 1999. The Division assumes that the May 19, 1998 copy is the design plan and the Nov. 4, 1999 copy is the as-builts. In order to avoid confusion the Permittee needs to label each copy of Plate 3-7 as design or as-built.

Final Surface Configuration Maps

Plate 3-7 and the associated cross-sections show the surface configuration after backfilling and grading. There is enough information on the maps for the Division to check the designs against the as-builts and do a field check.

Findings:

R645-301-542.300 and R645-301-121.200, The Permittee must clarify which maps in the MRP and bond release package are design maps and cross sections and which ones are as-builts. In the MRP, there are two copies of Plate 3-7. One copy is date received May 19, 1998 and the other is dated received Nov. 4, 1999. The Division assumes that the May 19, 1998 copy is the design plan and the Nov. 4, 1999 copy is the as-builts. In order to avoid confusion the Permittee needs to label each copy of Plate 3-7 as "design" or "as-built".

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR 800; R645-301-800, et seq.

Minimum Regulatory Requirements:

General

After a permit application has been approved, but before a permit is issued, the applicant shall file with the Division, on a form prescribed and furnished by the Division, a bond or bonds for performance made payable to the Division and conditioned upon the faithful performance of all the requirements of the Act, the regulatory program, the permit, and the reclamation plan.

The bond or bonds shall cover the entire permit area, or an identified increment of land within the permit area upon which the operator will initiate and conduct surface coal mining and reclamation operations during the initial term of the permit. As surface coal mining and reclamation operations on succeeding increments are initiated and conducted within the permit area, the permittee shall file with the Division an additional bond or bonds to cover such increments.

The operator shall identify the initial and successive areas or increments for bonding on the permit application map and shall specify the bond amount to be provided for each area or increment. Independent increments shall be of sufficient size and configuration to provide for efficient reclamation operations should reclamation by the Division become necessary.

An operator shall not disturb any surface areas, succeeding increments, or extend any underground shafts, tunnels, or operations prior to acceptance by the Division of the required performance bond.

The applicant shall file, with the approval of the Division, a bond or bonds under one of the following schemes to cover the bond amounts for the permit area as determined: a performance bond or bonds for the entire permit area; a cumulative bond schedule and the performance bond required for full reclamation of the initial area to be disturbed; or, an incremental-bond schedule and the performance bond required for the first increment in the schedule.

Determination of bond amount

The amount of the bond required for each bonded area shall: be determined by the Division; depend upon the requirements of the approved permit and reclamation plan; reflect the probable difficulty of reclamation, giving consideration to such factors as topography, geology, hydrology, and revegetation potential; and, be based on, but not limited to, the estimated cost submitted by the permit applicant.

The amount of the bond shall be sufficient to assure the completion of the reclamation plan if the work has to be performed by the Division in the event of forfeiture, and in no case shall the total bond initially posted for the entire area under 1 permit be less than \$10,000.

An operator's financial responsibility for repairing material damage resulting from subsidence may be satisfied by the liability insurance policy required in this section.

Analysis:

The Permittee needs to include a detailed reclamation cost estimate for all activities that will occur after Phase I bond release has been granted.

Findings:

R645-301-830.140, The Permittee must provide the Division detailed reclamation cost estimate for reclaiming the sediment ponds, Sweets pond and the vegetation costs for the entire site.

RULES INDEX

30 CFR

784.13.....	7
784.14.....	7, 18
784.15.....	7, 8, 10
784.16.....	7
784.17.....	7
784.18.....	7
784.19.....	7
784.20.....	7
784.200.....	8
784.21.....	7
784.22.....	7
784.23.....	7, 22
784.24.....	7
784.25.....	7
784.26.....	7
784.29.....	18
785.15.....	12
785.16.....	8, 10
800.....	26
817.102.....	10, 12
817.107.....	10, 12
817.13.....	14
817.133.....	8, 10
817.14.....	14
817.15.....	14
817.22.....	15
817.41.....	18
817.42.....	18
817.43.....	18
817.45.....	18
817.49.....	18
817.56.....	18
817.57.....	18

R645-

301-231.....	7
301-233.....	7
301-234.....	10, 12
301-240.....	15
301-270.....	10
301-271.....	10
301-322.....	7
301-323.....	7, 22

301-331	7
301-333	7
301-341	7
301-342	7
301-411	7
301-412	7
301-413	7, 8, 10
301-414	8, 10
301-422	8
301-512	7
301-513	7, 10, 18, 22
301-514	7, 14, 18
301-515	18
301-521	18
301-522	7, 22
301-525	7
301-526	7
301-527	7
301-528	7
301-529	7
301-531	7, 14
301-532	7, 10
301-533	18
301-534	7, 10, 18
301-536	7
301-537	7, 10
301-542	7, 12
301-551	7, 10, 18, 22
301-552	14
301-553	12
301-623	10, 12
301-624	7
301-625	7
301-626	7
301-631	7
301-632	7, 14
301-723	7, 22
301-724	7, 18
301-725	7, 18
301-726	7, 18
301-728	7, 18
301-729	7, 18
301-731	7, 18
301-732	7, 10, 18, 22
301-733	7, 10
301-742	7, 10, 18
.....	18

301-743	18
301-746	7
301-748	14
301-750	18
301-751	18
301-760	18
301-761	18
301-764	7, 10
301-765	14
301-800	26
301-830	7
302-230	12
302-231	12
302-232	12
302-233	12
302-270	8
302-271	8
302-272	8
302-273	8
302-274	8
302-275	8

O:\007016.GC2\FINAL\ta\TA_01B.doc