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 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF OIL, GAS AND MINING

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September 13, 2002

TO: Internal File

FROM: Wayne H. Western, Sr. Reclamation Specialist/III *WHW*

RE: Phase I Bond Release, Mountain coal Company, Gordon Creek 2/7/8 Mine, C/007/016-BR01B1

**SUMMARY:**

On October 25, 2001, the Division received a bond release package for Phase I bond release for the Gordon Creek 2/7/8 mine. The permit area for the mine has been reduced as leases have been terminated. The Permittee want Phase I bond release for 32.52 acres, excluded from the bond release are the sediment ponds (1.63 acres) and Sweet's Pond (0.73 acres.)

On August 2, 2002, the Division received a response to the deficiencies listed in the October 25, 2001 submittal. On September 10, 2002 the Division (Priscilla Burton, Dave Darby, Joe Helfrich and Wayne Western) visited the site with Dan Guy as a pre bond release inspection.

**TECHNICAL ANALYSIS:**

**RECLAMATION PLAN**

**APPROXIMATE ORIGINAL CONTOUR RESTORATION**

Regulatory Reference: 30 CFR Sec. 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.

**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:

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TECHNICAL MEMO

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### **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 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 and August 2, 2002) and the on site conditions with the AOC requirements the Division finds that the Permittee met those requirements.

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

Cut-slopes were left because the Permittee did not have enough fill material or the required safety factor of 1.3 could not be achieved without blocking the stream.

The Division does not have any regulations or guidelines for cut-slope retention. The Division has allowed cut does allow cuts slopes to be retained if they are stable and there is no reas

During the bond release inspection, the Division evaluated the cut-slopes. The cut-slopes appear to be stable concerning mass soil movement. However, some rills had formed. The Division recommended that the Permittee reseed and mulch those areas.

### **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 pre bond release inspection, the Division determined that all 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 eliminate the highwalls at the No.7 and No. 8 Mines. The Division verified that the highwall elimination during the pre bond release inspection.

The highwall at the No. 2 Mine was not eliminated due to stability concerns. The main stability concern is a seep that in 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.

### **Drainages**

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

### **Postmining Land Use**

During the pre bond release inspection, the Division verified that the site is adequate for the postmining land use.

### **Findings:**

The Permittee has met the minimum requirements for reclaiming the site to AOC standards are required by the regulations.

## **BACKFILLING AND GRADING**

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

### **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.
- 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 pre bond release inspection the Division evaluated the slope and found them to be stable.

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.

**TECHNICAL MEMO**

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**Findings:**

The Permittee has met the minimum backfilling and grading requirements for the site as required by the regulations.

**MINE OPENINGS**

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

**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 verified that the portals and coal seams have been backfilled during the pre bond release inspection.

**Findings:**

The Permittee has met the minimum requirements for sealing mine opens as stated in the regulations.

**MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS**

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

**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 No. 2/7/8 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 bond area for the Gordon Creek No. 2/7/8 Mines is the same as the permit area. See Plates BR-1 and Br-1 for permit 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.

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

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**TECHNICAL MEMO**

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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.
- 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.

#### **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.

#### **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:**

**R645-301-521.190 and R645-301-553.650**, The Permittee must show on maps what areas were disturbed pre-SMCRA and what areas were disturbed post-SMCRA.

**R645-301-521.190 and R645-301-542**, The Permittee must show on maps the following  
1) Delineated all disturbed areas, 2) Show the reclamation dates and acreages of each reclaimed area, 3) Show the operation or reclamation status of each area, such as active; temporary cessation; or phase bond release and 4) Show areas proposed for bond release.

## **BONDING AND INSURANCE REQUIREMENTS**

**Analysis:**

**Determination of bond amount**

The posted bond for the site is \$641,443. The Permittee proposes to reduce the bond amount by 60% as outlined by R645-301-880.310. The most that the Division could release is \$384,865. Because the Division wants the bonds to be rounded to the nearest \$1,000, the Division would retain a minimum of \$256,000.

The Division calculated the reclamation costs for Phase II based on the information supplied by the Permittee. Based on that information the Division needs a minimum of \$232,000 in 2007 dollars. Because of the major change in the bond the Division decided to escalate the bond for 5 years.

**Findings:**

The Permittee has meet the minimum regulatory requirements for the bonding and insurance section of the regulations.

**RECOMENDATIONS:**

Before the bond release the Permittee must correct the technical deficiencies that are described in this memo. After the deficiencies are corrected, the Division should conduct a bond release inspection to verify that all the requirements for Phase I bond release have been met.