

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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September 15, 2009

TO: Internal File

THRU: April Abate, Team Lead. *CCB 10-26-2009*

FROM: Priscilla Burton, Environmental Scientist III/Soils. *PWB by SAS*

RE: Mid-Term Review, Hiawatha Coal Company, Inc., Hiawatha Mine, C/007/0011, Task 3352.

### SUMMARY:

The Division is conducting a midterm review of the Hiawatha Mine permit, in accordance with R645-303-211 (letter dated July 21, 2009 from Division to Hiawatha Coal Co.). Item number six of this letter states that the Division will review commitments and reporting requirements outlined in the Mining and Reclamation Plan (MRP). A site visit was conducted September 16, 2009. See inspection report #2136 for details.

An AVS check was run on September 15, 2009 and there are two outstanding Abandoned Mine Lands (AML) violations are listed against Hiawatha Coal Co. Inc. (entity 144578). One was written to Hiawatha Coal Company Incorporated (HCCI) for permit #007/011 and a second was written for permit #015/025. A narrative for this evaluation has been sent to the internal file.

The following information is requested to update the MRP:

**R645-301-112.300**, The MRP should list a current address and telephone number for the Hiawatha Coal Co. Inc. and Resident Agent, Elliot Finley. • The MRP must include federal identification numbers for each business entity listed: ANR Company Inc. and Hiawatha Coal Company, Inc. (HCCI) and the last four digits of each officer in ANR Company, Inc. and in HCCI. • The application must include a telephone number for ANR Company, Inc. • Current MRP information indicates J.O. Kingston became President and L.A. Miller became Vice President of ANR Company, Inc. on June 30, 1997. However Appendix I-1 contains a document signed by D.O. Kingston as President of the ANR Co. Inc on December 15, 1997. Please verify the start and end dates for D.O. Kingston, President ANR

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TECHNICAL MEMO

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Co., Inc. and the start dates of J.O. Kinston and L.A. Miller. •The application must include notarized, Secretary signature for all changes in corporate officers and their begin and end dates.

**R645-301-114.100**, Section 114.100 of the MRP indicates that the Right of Entry sublease from ANR Co expired on July 25, 2007. Please identify the new Right of Entry by type of document and date of execution and identify the specific lands to which it pertains.

**R645-301-121.100, R645-301-112.500 and R645-301-112.600**, Adjacent ownership information referenced on Surface Ownership Map (Ex. IV-1) and Subsurface ownership Map (Ex. IV-2) must be brought up to date and maps must include the Township and Range boundaries.

**R645-301-113.300**, The list of violations received over a three-year period preceding the next permit application or renewal date must be provided in Appendix I of the MRP.

**TECHNICAL ANALYSIS:**

**IDENTIFICATION OF INTERESTS**

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

**Analysis:**

The MRP Chapter I contains information on corporate ownership for the Hiawatha Mine. (Section R645-301-112). HCCI is the Permittee and operator of the site. Elliot Finley is the Resident Agent and President of HCCI. An AVS check was run on September 15, 2009 and there are two outstanding AML violation listed against Hiawatha Coal Co. Inc. (entity 144578). A narrative for this evaluation has been sent to file.

Surface lands and leases are owned by ANR Company. From 1997 to 2008, CW Mining subleased the coal from ANR Co. Information under review as Task 3084 indicated that this lease was transferred to HCCI in 2008. However this information was not accepted or approved (2008/Outgoing/0038.pdf). The MRP pages 1-1 and 1-2 refer to CW Mining Company as a controller of the ANR leases. Several deficiencies were identified with the revised pages dated November 19, 2008. These deficiencies are repeated below:

**Findings:**

An AVS database evaluation reveals two Office of Surface Mining (OSM)/AML violations against Hiawatha Coal Co., Inc. One was written to HCCI for permit #007/011 and a second was written for permit #015/025.

**R645-301-112.300,** The MRP should list a current address and telephone number for the Hiawatha Coal Co. Inc. and Resident Agent, Elliot Finley. • The MRP must include federal identification numbers for each business entity listed: ANR Company Inc. and Hiawatha Coal Company, Inc. (HCCI) and the last four digits of each officer in ANR Company, Inc. and in HCCI. • The application must include a telephone number for ANR Company, Inc. • Current MRP information indicates J.O.Kingston became President and L.A. Miller became Vice President of ANR Company, Inc. on June 30, 1997. However Appendix I-1 contains a document signed by D.O. Kingston as President of the ANR Co. Inc on December 15, 1997. Please verify the start and end dates for D.O. Kingston, President ANR Co., Inc. and the start dates of J.O. Kinston and L.A. Miller. •The application must include notarized, Secretary signature for all changes in corporate officers and their begin and end dates.

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TECHNICAL MEMO

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**R645-301-114.100**, Section 114.100 of the MRP indicates that the Right of Entry sublease from ANR Co expired on July 25, 2007. Please identify the new Right of Entry by type of document and date of execution and identify the specific lands to which it pertains.

**R645-301-121.100, R645-301-112.500 and R645-301-112.600**, Adjacent ownership information referenced on Surface Ownership Map (Ex. IV-1) and Subsurface ownership Map (Ex. IV-2) must be brought up to date and maps must include the Township and Range boundaries.

## VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

### Analysis:

An AVS check was run on September 15, 2009 and there are two outstanding AML violation listed against Hiawatha Coal Co. Inc. (entity 144578).

A Cessation Order written to Hiawatha Coal Company on February 5, 2009 for conducting mining operations without a permit at the Bear Canyon Mine, (015025/2009/Outgoing/0014.pdf). The list of violations provided in Appendix I of the MRP requires updating.

### Findings:

**R645-301-113.300**, The list of violations received over the three-year period preceding the next permit application or renewal date must be provided in Appendix I of the MRP.

## POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 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.

### Analysis:

The premining land use is residential/industrial (Exhibit IV-4). The post mining land use will be the same, with vegetation seeded for wildlife and range (Sec. 333). Reclamation is

designed to leave the historic portals associated with the Hiawatha #1 and #2 mines and the two Consolidated Fuel Co. mines (Sec. 412.140). The Hiawatha cemetery will not be affected by the reclamation (Section 411.141.2). An alternate historical district for the railroad corridor is discussed on page 5-41.

### **Findings:**

The information provided meets the minimum requirements of the Regulations.

## **TOPSOIL AND SUBSOIL**

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

### **Analysis:**

#### **Redistribution**

There are 290 acres in the Hiawatha disturbed area (as listed on the Hiawatha Inspection Report form). However, the MRP reports a total of 360 disturbed acres, of which, 250 acres will be reclaimed to wildlife and range habitat (Sec. 333, p. 36, dated 07/11/08).

On February 18, 2009, HCCI received Phase I bond release for the 95.9 acres associated with Slurry pond 4/Refuse Pile 2, Slurry Pond 5 Main Cell, Borrow area F, and a portion of the Preparation Plant and a portion of Borrow Area A. The regraded and topsoiled bond release area is located in Sec. 27, 34 and 35 of T. 15 S., R. 8 E., east of the railroad tracks (mainline), as detailed on page 2-37 of the MRP, Section 241.

Excluding roads, there are 221.36 disturbed acres are in the lower Hiawatha area (Sec. 241, p 37). According to information on page 2-37, there remains 39.23 acres to be reclaimed in the lower Hiawatha area. Exhibit II-4A provides a reference for the location of the reclaimed and remaining acres identified on page 2-37. Table II-13 itemizes the remaining reclamation work to be completed, including some areas not listed on page 2-37, such as Slurry Pond 5A.

Table III-3 lists approximately 112 acres within the lower Hiawatha area that will not be reclaimed as follows: roads 30.3 acres; railroad yard 15.2 acres; town 66.3 acres. The areas of reclamation in the vicinity of the preparation plant are illustrated on Exhibit II-4. Exhibit II-4A and pg. 2-37 provides the status of reclaimed and affected lands as of 2008 as follows:

- 26.37 acres of the 26.37-acre slurry pond 4/refuse pile 2 reclaimed;
- 5.51 acres of the 23.87-acre preparation plant reclaimed;
- 9.12 acres of Borrow Area F (all) reclaimed;

TECHNICAL MEMO

40.39 acres of the 40.39-acre Slurry pond 5 main cell reclaimed (15.51 acres remain active as a sediment basin as reported in Table II-13);  
19.83 acres of the 29.11 "Affected" acres (in the preparation plant vicinity) reclaimed.

Earthwork (including seeding) at the Slurry pond 4/Refuse Pile 2, Slurry Pond 5 Main Cell, a portion of the Preparation Plant, and Borrow areas A and F was undertaken during the years 1996 – 2001 (according to Division records and the 2005 Annual Report). Refuse pile No 2 was constructed over Slurry Ponds 2 and 3 (pg. 5-78). Coarse refuse from Refuse pile #2 was pushed over the fines in Slurry Pond #4 during reclamation. The outslope was reduced to 4h:1v. The Slurry Pond #4/Refuse 2 site, along with borrow area F was seeded in 1996 (p. 2-39).

Slurry pond 5 (main cell) was re-mined and the embankments were pushed inward to a grade of 5h:1v. ( 2-39). Refuse in Slurry pond 5 was sampled on September 25, 1996 by the Division and Dan Guy, Blawhawk Engineering (consultant to US Fuel). The results of the refuse analysis are included in Appendix VII-18. As a result of these analyses, the Division found the refuse to be non-toxic/nonacidic (Davidson, Field report and memo dated 11/5/1996). However, after having found these analytical reports in the MRP and seeing them first hand, I am of the opinion that these analytical results indicate that the refuse has the potential to become acid forming over time, based upon its pyritic sulfur content and the reported pyritic AcidBase Potential between 7.6 and -0.19 Tons/1000Tons.

Substitute topsoil from Borrow Area "A" was applied to the regraded surface to a depth of sixteen inches. Seeding of at Slurry Pond #5 (main cell) was completed in the fall 1999 (p. 2-37, 2-39 and Table 5-7) or in the fall of 2000 (Appendix VIII-5). The work is described in Sections R645-301-241, -242, -243, -244 and R645-301-541 of the MRP. Depth of topsoil application and seeding treatments are shown on Ex. II-4. Seed mix No 1 (Table III-5) was used on the borrow areas and seed mix #2 (Table III-6) was used on the slurry impoundments and refuse areas. Inspection Report #1621 summarizes the technical site visit conducted on April 24-28, 2008 for Phase I bond release. There is an average of 15 inches of cover over Refuse Pile #5 and an average of 16 inches of cover over Slurry Pond #4/Refuse Pile #2. The Inspection Report #1621 Attachment provides the details of the cover depth analysis made of the 40 acre Slurry Pond #5, the 26 acre Slurry Pond 4/Refuse Pile #2.

Site visits on April 18 and 23, 2008 documented surface roughening and the 16-inch topsoil cover depth on slurry ponds and refuse piles (shown on Ex II-4). In addition, I noted accumulations of salt on the eastern level surface of slurry pond #5 and marked the location on the PFO copy of Exhibit V-13. These salt accumulations are areas of limited vegetation growth and excessive erosion. Sediment from this area drains into slurry pond 5A.

HCCI committed to sampling and analysis of replaced topsoil (pg. 2-10, and pg. 5-104). Division records dated March 17, 1997 indicate that soil analysis from topsoil on Slurry pond #5 were received. The analyses resulted in a fertilizer recommendation. (These soil analyses of

cover material could not be found in the MRP.) A fertilizer recommendation was also made for Slurry Pond #4 (Davidson memo dated October 8, 1996). Due to a fire in the engineering building at the Hiawatha town site in 2006, HCCI cannot confirm methods of fertilization of the reclaimed sites (slurry, refuse, and borrow areas), nor can they provide results of any testing done since 1997, on the east half of slurry pond 5.

Borrow Area A reclamation topography is shown on App. VII-18, Figure VII-18B, with cross-sections on Ex. A-VII-18A. Table II-12 and page 2-10 relates the depth of and volume of soil cut from Borrow Area A (114,000 yd<sup>3</sup>) and cut from Borrow Area F (42, 000 yd<sup>3</sup>). The MRP describes separate handling of the surface horizons from borrow area A for replacement onto the borrow areas after reclamation (pg.2-41 and pg. 5-108 and App VII-18). However, a Division field report dated December 3, 1996 indicates that this procedure may have been abandoned. Due to a fire in the engineering building at the Hiawatha town site in 2006, HCCI cannot verify whether the lowest excavated horizon at borrow area A was ripped and seeded or whether the lowest horizon excavated was covered with stockpiled surface horizon soil and then seeded. Ex. V-13 and associated cross sections, show final configuration of Borrow Areas A and F in accordance with R645-301-542.300.

Almost twenty acres described as "Affected Areas" have been reclaimed and are shown on Ex. II-4A as RA-1. They include sediment ponds and areas of coal fine accumulations. Future accumulations of coal fines will be placed either in slurry pond #1 or in Slurry pond #5A (pp. 5-104 and 5-106 of Sec. 541).

There are 54.74 acres remaining to be reclaimed in the Hiawatha Area (pg. 2-37 and Table II-13). The proposed reclamation of Slurry Ponds 1 and 5A is described on pages 2-39 through 2-42. Sampling commitments for acid/toxic forming materials are included in this description. The northern portion of slurry pond 5, which is referred to as pond 5A was authorized in 2001\* to receive coal mine waste from the Bear Canyon Mine. Slurry pond 5A is also being remined (pg 5-29, dated 2007). Slurry pond 5A is also used for run-off control (pg. 5-64) and will be the last structure to be reclaimed (pg. 5-78).

### **Findings:**

The information provided meets the requirements of the Utah Coal Rules. Several reclamation commitments are listed on the Annual Report form. These commitments pertain to soil and refuse sampling, analysis and reporting.

TECHNICAL MEMO

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## SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

### Analysis:

#### Coal Mine Waste and Refuse Piles

The northern portion of slurry pond 5, which is referred to as pond 5A was authorized in 2001\* to receive coal mine waste from the Bear Canyon Mine and Slurry pond 5A was also authorized for remining (pg 5-29, dated 2007). Slurry pond 5A is also used for run-off control (pg. 5-64) and will be the last structure to be reclaimed (pg. 5-78). Refer to Plate V-9 Surface Facilities map for the location of Slurry and Refuse in the lower preparation plant area. The reclamation topography is shown on Exhibit V-13, and associated cross-sections for Slurry Pond 4 and borrow area F on V-13C and for Slurry pond 5 on V-13D. Exhibit V-13 does not clearly indicate existing contours of Slurry Pond 5A. An updated surface facility map showing accurate surface contours of slurry pond 5A should be requested if the pond is utilized as a sediment pond in the future, as discussed during the site inspection on 09/16/2009.

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\*According to amendment AM01C waste was to be sampled and analyzed. Potentially acid/toxic forming refuse placed in Slurry pond 5A will be covered with four feet of soil. The 2005 and 2006 annual reports indicate that no refuse had been brought to "the north cell" of slurry pond 5 since 2001.

The proposed reclamation of Slurry Ponds 1 and 5A is described on pages 2-39 through 2-42. Sampling commitments for acid/toxic forming materials are included in this description. Slurry ponds/refuse cut and fill balance is stated on p.2-39 and in App. VIII-1, Tables 1-4. Remaining cut/fill work is estimated at 120,444 yd<sup>3</sup> cut, with approximately the equivalent 125,259 yd<sup>3</sup> fill for Slurry Pond 5A (see Table 1, App V-15) and 94,259 yd<sup>3</sup> cut (to be spread out as topsoil over preparation plant area) with 9,326 yd<sup>3</sup> fill at the upper railroad yard (see Table 4, App. V-15).

Lifts of two feet and compaction to 90% maximum dry density are described in Section 541 (pg. 5-90). The MRP describes sixteen inches of soil cover over the mine waste based on the characteristics of the coal mine waste and on test plots (Sec. 231.200 ,p. 2-12 through 2-21 and App. III-5). Four feet of cover is required by R645-301-553.252 over any acid/toxic forming waste.

#### **Findings:**

The information provided meets the requirements of the Utah Coal Rules.

## **STABILIZATION OF SURFACE AREAS**

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

#### **Analysis:**

Surface roughness for the slurry ponds were achieved by either a ripper or backhoe (Section 541, pg. 5-104). The borrow areas were to be ripped, disked, and raked prior to seeding and mulching (Sec. 541, pg. 5-109). Reclamation treatments are shown on Ex. II-5 and discussed in Sec. 341.230. The MRP states that mulch type and application may vary, but that the regraded borrow site and access road and the slurry ponds were to be treated with 1 ton/acre mulch. Method of mulch application and type of mulch is not known. As stated in the cover letter with the information received on January 5, 2009, HCCI cannot confirm reclamation treatments due to a fire in the engineering building at the Hiawatha town site in 2006.

Site visits on April 18 and 23, 2008 documented roughening on reclaimed areas, but revealed an erosion problem on the north side of Slurry Pond #4 (See Insp. Rpt. # 1621). I returned to the ditch north of Slurry Pond #4 on October 7, 2008, the day before the official bond release inspection and noted that the repair of the ditch was being undercut and should be observed closely by the Division regularly prior (see Insp. Rpt. #1793).

**TECHNICAL MEMO**

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**Findings:**

The information provided in the MRP meets the requirements of the Coal Mine Rules. Field inspection should include a close look at the ditch on the north side of Slurry Pond #4.

**RECOMMENDATIONS:**

The legal and financial information in Chapter 1 is out of date. Several deficiencies were identified. An AVS database evaluation reveals one OSM/AML violation against Hiawatha Coal Co., Inc.