



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

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February 19, 1999

TO: File

THRU: Joe Helfrich, Permit Supervisor *JH*

FROM: Priscilla Burton, Soils Reclamation Specialist *PB*

RE: Soils Technical Technical Deficiency Review of Hiawatha Response to Division Order 97A, Hiawatha Coal Company, Hiawatha Complex, ACT/007/011-97A. Folder #2, Carbon County, Utah

SUMMARY

Hiawatha Coal Co. has rewritten portions of Chapter 2, Soils, of their Mining and Reclamation Plan (MRP) to address the concerns itemized in my previous Technical Analysis dated September 28. There remain some outstanding deficiencies which will require further paper work. The environmental resource information presented is sound. A summation of the environmental information can be read in the 9/28/98 memo. This deficiency review covers only the topics which were previously identified but not addressed by the permittee in their response.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: R645-301-121.100.

Analysis:

The MRP contains errors which should be corrected. The following errors are noted again:

- The reclamation plan is inconsistent in the detail of mulch application. Page 16 describes 1T/acre of mulch over the reclaimed slurry ponds; Page 20 calls for 2T/acre;

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- The reclamation plan is inconsistent in the detail of mulch application. Page 16

describes 1T/acre of mulch over the reclaimed slurry ponds; Page 20 calls for 2T/acre; and pages 40 and 55 state 1.5 T/ac of mulch will be applied at the preparation plant. Table II-14 indicates that 2.5T of hay, straw or other acceptable organic additive is needed. The rate of mulch application should be clarified.

- Page 16 describes a six inch layer of topsoil to be replaced over the regraded coal refuse materials. However, sixteen inches of cover is referred to on pages 12 and 40. According to discussions with Charles Reynolds on September 17, 1998, six inches of cover is an error of fact. Hiawatha Coal Co. plans to apply 16 inches of substitute topsoil to slurry ponds and coal refuse. This has been the approved practice with reclamation of slurry pond 4 and 5. Page twelve must correctly state sixteen inches of substitute topsoil will be replaced over slurry ponds and coal refuse.
- Total available topsoil is recorded in a table on page 10. This table does not reflect the fact that 42,000 CY of soil from Borrow area F has already been applied to slurry pond 4. The table on page 10 should reflect available topsoil.

findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-121.200 correct the text to accurately reflect the location of information within the document and to accurately reflect the permittee's intentions with regard to operations and reclamation plans, see discussion above which itemizes errors of fact in the text.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil and Subsoil Removal

The MRP describes the salvage and handling of undisturbed soils in section 231.100. It is unlikely that any undisturbed soils will be encountered during the life of the mine, unless an expansion is planned. Should an expansion be considered, a soil survey of the site must be undertaken prior to any disturbance. An Order-I soil survey would be required to ascertain the topsoil salvage depth. The MRP should further state that a non-biased, third party, professional soil scientist will be on-site during soil salvage to monitor and supervise soil salvage operations for the purpose of maximizing soil salvage volumes and quantities. Surface disturbance activities will only take place after topsoil removal.

The estimated volumes of stockpiled soils are presented in Table II-12 and discussed in the narrative under 231.400 (page 31). Five topsoil stockpiles were identified: Middle Fork, containing 354 CY; South Fork, containing 1,206 CY; Hiawatha area east of Pond 4, containing 1,488 CY; Hiawatha area east of Pond 5, containing 1,028 CY; and Hiawatha area west of the equipment storage yard, containing 4,480 CY. In total, 8,556 CY of topsoil has been salvaged and stockpiled over the years. The total listed in Table II-12 of the plan should clearly show that of the 8,556 CY salvaged, 4,480 CY were utilized in the reclamation of Pond 5 reclamation and 1,488 CY will be used for the Pond 4 outslope reclamation. Thus, the available topsoil material stored in piles on site is 3,048 CY.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-231.400, The total listed in Table II-12 of the plan should clearly show that of the 8,556 CY salvaged, 4,480 CY were utilized in the reclamation of Pond 5 reclamation and that 1,488 CY will be utilized for the Pond 4 reclamation. Thus, the available topsoil material stored in piles on site is 3,048 CY.

R645-301-222, The MRP should state that, an Order-I soil survey is required to ascertain topsoil salvage depth, in the event of any additional new disturbance at the mine site. The MRP should further state that a non-biased, third party, professional soil scientist will be on-site during soil salvage to monitor and supervise soil salvage operations for the purpose of maximizing soil salvage volumes and quantities and that surface disturbance activities will only take place after topsoil removal.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Reclamation of Coal Waste

Exhibit V-9A, Hiawatha Processing Plant and Waste Disposal Sites Post and Pre-Law, illustrates the extent of disturbance in the Hiawatha area. Hiawatha Coal Company does not accept responsibility for areas designated as pre-law which have not been redisturbed by the post-law operations. Exhibit II-4A illustrates three locations (affected areas) where coal waste will be vacuumed or scraped from the soil surface and permanently placed in Slurry Pond 5, cell 5A. Any additional areas identified by the Division or the Permittee will be treated in the same manner (see Chapter 5, page 56).

Slurry Pond 5A and Slurry Pond 1/Refuse Pile 1 will be graded to final reclamation countour, topsoiled with 16 inches of substitute topsoil, surface gouged or otherwise roughened and seeded. The plan indicates on page 40 of Chapter 2 that Slurry Pond 1/Refuse Pile 1 will be resampled and analyzed for pH, EC, SAR, Na, Mg, Ca, Se, B, Al, Fe, Mn, Zn, and acid/base potential. The metals were added to the list due to high levels of Al, Fe, Mn and Zn and low pH values being previously recorded in some samples from Pond 1 and Pond 4 (see Tables II-2, II-5).

Soil Redistribution

Reclamation of Borrow Areas is described on pages 41 and 43 of Chapter 2, and pages 58 - 60 of Chapter 3. In general, the sites will be graded (Exhibit V-13), ripped, disked, raked, seeded, fertilized and mulched. Pages 41 and 43 of Chapter 2 clearly indicates that the top 12 inches of soil from a borrow site will be returned to that site to expedite reclamation of the borrow area. This information should be repeated where borrow areas are again discussed within the text on pages 58-60, to ensure that the permittee understands this procedure and to ensure that the DOGM inspector has the correct information at hand.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-242, The MRP should clearly indicate that the top 12 inches of soil from a

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from a borrow site will be returned to that site to expedite reclamation of the borrow area. This information should be repeated in the MRP wherever the reclamation of substitute topsoil is addressed. i.e. pages 58-60.

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