



State of Utah

Department of Natural Resources

MICHAEL R. STYLER  
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA  
Division Director

JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

Representatives Present During the Inspection:	
OGM	Priscilla Burton Environmental Scientist III

**Inspection Report**

Permit Number:	C0070011
Inspection Type:	TECHNICAL
Inspection Date:	Friday, April 18, 2008
Start Date/Time:	4/18/2008
End Date/Time:	4/23/2008
Last Inspection:	Wednesday, April 02, 2008

Inspector: Priscilla Burton, Environmental Scientist III

Weather: variable, 40 -50 F

InspectionID Report Number: 1621

Accepted by: jhefric *OK*  
4/28/2008

Permitee: **HIAWATHA COAL CO INC**  
 Operator: **HIAWATHA COAL CO INC**  
 Site: **HIAWATHA MINE COMPLEX**  
 Address: **PO BOX 1245, HUNTINGTON UT 84528**  
 County: **CARBON**  
 Permit Type: **PERMANENT COAL PROGRAM**  
 Permit Status: **ACTIVE**

**Current Acreages**

12,177.00	<b>Total Permitted</b>
290.00	<b>Total Disturbed</b>
	<b>Phase I</b>
	<b>Phase II</b>
	<b>Phase III</b>

**Mineral Ownership**

- Federal
- State
- County
- Fee
- Other

**Types of Operations**

- Underground
- Surface
- Loadout
- Processing
- Reprocessing

**Report summary and status for pending enforcement actions, permit conditions, Division Orders, and amendments:**

Evaluation of the soil cover depth over the refuse in Slurry Pond 4/Refuse pile 2 and Slurry Pond 5. Noted extreme erosion of the toe of Slurry Pond 4/Refuse Pile 2 along the north ditch and minor erosion on all other refuse pile toe slopes. Observed vegetation and soil conditions in Borrow Area A and F.

Inspector's Signature:

*Priscilla Burton*

Date

Thursday, April 24, 2008

Priscilla Burton, Environmental Scientist III

Inspector ID Number: 37

**Note:** This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas and Mining.

**REVIEW OF PERMIT, PERFORMANCE STANDARDS PERMIT CONDITION REQUIREMENTS**

1. Substantiate the elements on this inspection by checking the appropriate performance standard.
  - a. For COMPLETE inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check Not Applicable.
  - b. For PARTIAL inspections check only the elements evaluated.
2. Document any noncompliance situation by reference the NOV issued at the appropriate performance standard listed below.
3. Reference any narratives written in conjunction with this inspection at the appropriate performance standard listed below.
4. Provide a brief status report for all pending enforcement actions, permit conditions, Divison Orders, and amendments.

	Evaluated	Not Applicable	Comment	Enforcement
1. Permits, Change, Transfer, Renewal, Sale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Signs and Markers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Topsoil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.a Hydrologic Balance: Diversions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.b Hydrologic Balance: Sediment Ponds and Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.c Hydrologic Balance: Other Sediment Control Measures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.d Hydrologic Balance: Water Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.e Hydrologic Balance: Effluent Limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Explosives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Disposal of Excess Spoil, Fills, Benches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Coal Mine Waste, Refuse Piles, Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Noncoal Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Protection of Fish, Wildlife and Related Environmental Issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Slides and Other Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Contemporaneous Reclamation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Backfilling And Grading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Revegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Subsidence Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Cessation of Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.a Roads: Construction, Maintenance, Surfacing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.b Roads: Drainage Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Other Transportation Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Support Facilities, Utility Installations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. AVS Check	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Air Quality Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Bonding and Insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **3. Topsoil**

Notes were taken of 18 auger holes drilled into REFUSE PILE #5 at Stations identified on MRP Ex. V-13. Notes included location description, soil cover depth (inches), brief soil description, brief vegetation description. Photographs were taken. The complete notes are an attachment to this report and are also filed in the 2008/Internal file. The Refuse Pile #5 has an average of 15 inches cover depth over the mine waste, based upon 23 auger holes dug. The Slurry Pond #4/Refuse Pile #2 has an average of 16 inches of cover depth based upon the 11 auger holes dug.

A herd of about 50 deer were present April 18 on Borrow Area A. The site is heavily grazed and has a lot of sagebrush regenerating. No erosion or revegetation problems were noted in Borrow Area A.

Borrow Area F was stripped down to the rocky subsoil. Vegetation on the rocky soils consists of penstamen, sage, rabbitbrush, wild rose, salina wild rye, a vetch and grass. There is evidence that deer, elk, and a large cat have frequented the area. Rill erosion about five inches deep on the eastern slope of Slurry Pond #4/Refuse Pile #2 has been carrying coal fines to the center of Borrow Area F.

#### **4.b Hydrologic Balance: Sediment Ponds and Impoundments**

Sediment pond at the base of Refuse Pile #5 was dry. Borrow Area F acts as a sediment pond for Slurry Pond #4/Refuse Pile #2.

#### **4.c Hydrologic Balance: Other Sediment Control Measures**

Slurry Pond #4/Refuse Pile #2 is separated from Miller Creek by a diversion ditch and berm. Extreme erosion along the diversion ditch at the toe of the North slope of Slurry Pond #4/Refuse Pond #2 was measured at five feet deep and 24 inches wide. The eroded ditch was followed to a point on the east side of the pile where it levels out. No impacts to Borrow Area F or off site were noted. This erosion was reported to the Division Inspector, for his evaluation.

**7. Coal Mine Waste, Refuse Piles, Impoundments**

On April 2, 2008, the Division conducted a cursory pre-Phase 1 bond release inspection of the 40 acre Slurry Pond 5, the 26 acre Slurry Pond 4/Refuse Pile 2, the 9 acre Borrow Area F, and the 17 acre Borrow Area A. In total 95.92 acres was included in the Phase 1 bond release application (Task ID #2895), which was returned as deficient on March 14, 2008 (Outgoing document 0004.pdf). There was not time on April 2, to adequately evaluate the soil cover over the refuse or to even visit the borrow areas.

I returned to Hiawatha to take measurements of the soil cover over the refuse in expectation of being asked to make a finding for the revised Phase 1 bond release application. Using Ex. V-13, I walked across the site and augered the soil cover, making notes on cover depth, moisture content, salt accumulation and total live cover in a 3 ft X 3 ft area around each soil auger site. Photographs were taken of most auger sites.

## INSPECTION REPORT #1621 Attachment

DATE: April 18 - 24, 2008

FROM: Priscilla Burton, Environmental Scientist III/Soils.

RE: Soil Cover Depth Evaluation. Phase I Bond Release Slurry Pond 4 and 5. Co-Op Mining Corporation, Hiawatha Mine, C/007/0011, Task 2895

### SUMMARY:

Inspection Report #1621 summarizes the technical site visit. 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. This Attachment provides the details of the cover depth analysis. Auger sites were plotted along the stations shown on Exhibit V-13, Hiawatha Processing Plant and Waste Disposal Sites. A copy of that map is attached. The following tables summarize the notes taken over three days at the site. Photographs are available in the database.

REFUSE PILE #5

STATION from MRP Ex. V-13	Location description	Soil cover depth (inches)	Soil description	Vegetation description
14+00	At top of NE slope	13	Silt loam soil no rock fragments, soft	grass
14+00	At low point, midway across pile	22	Same as above	Same as above
14+00	100 ft. from County Rd. on West side	24	Surface soil saturated.	Grass
12+00	150 ft. from County Rd.	12	Moist at 16 inches	Rabbitbrush
12+00	600 ft from County Rd	16	Loam	Wildrye/grass
12+00	725 ft. from County Rd.	16	Eroded soil	50% living cover Crowns of dead rabbitbrush
12+00	900 ft. from County Rd.	9	Low spot, saturated at surface. Mounded soil (from gouging treatment) is salt encrusted.	3 in above soil surface Bunch grass
12+00	100 ft East of low spot (1000 ft east of County Rd)	22	Moist, but not saturated soil. Thick mat of roots. 6 inches mixed soil and refuse above compacted refuse.	50% cover around site and 100% cover at auger hole.

STATION from MRP Ex. V-13	Location description	Soil cover depth (Inches)	Soil description	Vegetation description
12+00	Crest of east slope	17	Dry soil	25% cover wildrye/grass
8+00	On reclaimed road, 10 ft. below crest of slope	16	Moist soil	25% cover Indian rice grass
1+00	Up 100 ft. from ditch outlet to sed pond on SE facing slope	12	Bouldery	20% cover, wheatgrass
4+00	Up slope 100 ft. on east side (north of power pole)	15	Rills and gullies at base of slope exposing weathered coal	15% cover, penstamen grass
4+00	Crest of slope 300 ft. up from telephone pole on SE side	>16	Rocky	75% cover rabbitbrush/grass
4+00	300 ft. west of last pit on level surface of south end.	23	fine roots into coal mine waste	25% cover, rabbitbrush/sagebrush/grass
4+00	150 ft. from last hole (approximately 100 ft. from power pole on west side of pile @ station 4+00)	9	Gouges are salt crusted. Soil is cracked clay. Soil is wet. No drainage. Salts rising to surface.	Fine textured grass/sagebrush
2+00	SW slope 30 ft. from edge of pile	8	Loose friable no salt accumulation, adequate drainage	20% cover, Sagebrush (prickly pear 5 ft. away)
2+00	300 ft. from last site. In middle of south facing slope	>15	Bottom of gouge. Hit rock. Mounded portions of gouge are salt encrusted.	10% cover, sagebrush/grass

STATION from MRP Ex. V-13	Location description	Soil cover depth (inches)	Soil description	Vegetation description
0+00	20 ft. from ditch at base of slope on west side	8		<5% cover, sagebrush/ephedra
6+00	600 ft. east of power pole	10	Soil moist. Gouges have salt precipitation	25% grass
8+00	200 ft. north of last site	18	Soil is wet	25% grass cover
10+00	200 ft. north of last site	20	Top of mounded soil. Soil is wet. Sticks to auger	< 5% cover, grass/rabbitbrush
10+00	450 ft. west of last site	14	Flat location	30% grass cover
8+00	Directly south of last site, approx. 300 ft. from west edge	11	No salt accumulation. dry surface. moist below	20% cover sage/grass

**Summary for Refuse Pile #5: 15 inches cover depth was the average for the 23 auger holes dug.**

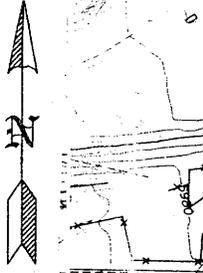
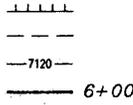
SLURRY POND #4 / REFUSE PILE #2

STATION from MRP Ex. V-13	Location description	Soil cover depth (inches)	Soil description	Vegetation description
12+00	300 ft. from west edge	20	Loose friable reddish brown soil	bunchgrass
12+00	1/2 way down NE slope (600 ft. from west edge)	16	Rocky loam	Ephedra, penstamen, bunchgrass
12+00	On NE edge of pile	7	Ditch has eroded to depth of 5 ft. Very rocky	
8+00	100 ft. east of Crest on East Sloppe	> 16	Very rocky	Wildrye/bunchgrass/rabbitbrush/sagebrush
8+00	300 ft. west of eastern crest of slope	17	Stony	Rabbitbrush/grass
8+00	50 ft. from west edge	16	Stony soil	Winterfat is dying out across pile.
Between 2+00 and 4+00	200 ft. from west edge	>16	Rocky stony soil	Bunch grass, evidence of cows
Between 2+00 and 4+00	Midway up slope between power poles on opposite side of County road	16	dry	Bunchgrass/penstamen Evidence of cows.
6+00	Midslope between two power poles on the other side of the County road	23	Rocky soil, very fine roots at interface with refuse	Rabbitbrush/salina wildrye/grass
6+00	300 ft. west of last site	>14	Could not penetrate rock	Rabbitbrush/bunchgrass
Between 6+00 and 4+00	200 ft. from west edge	>12	Rocky soil limited Auger penetration	Wildrye and bunchgrass

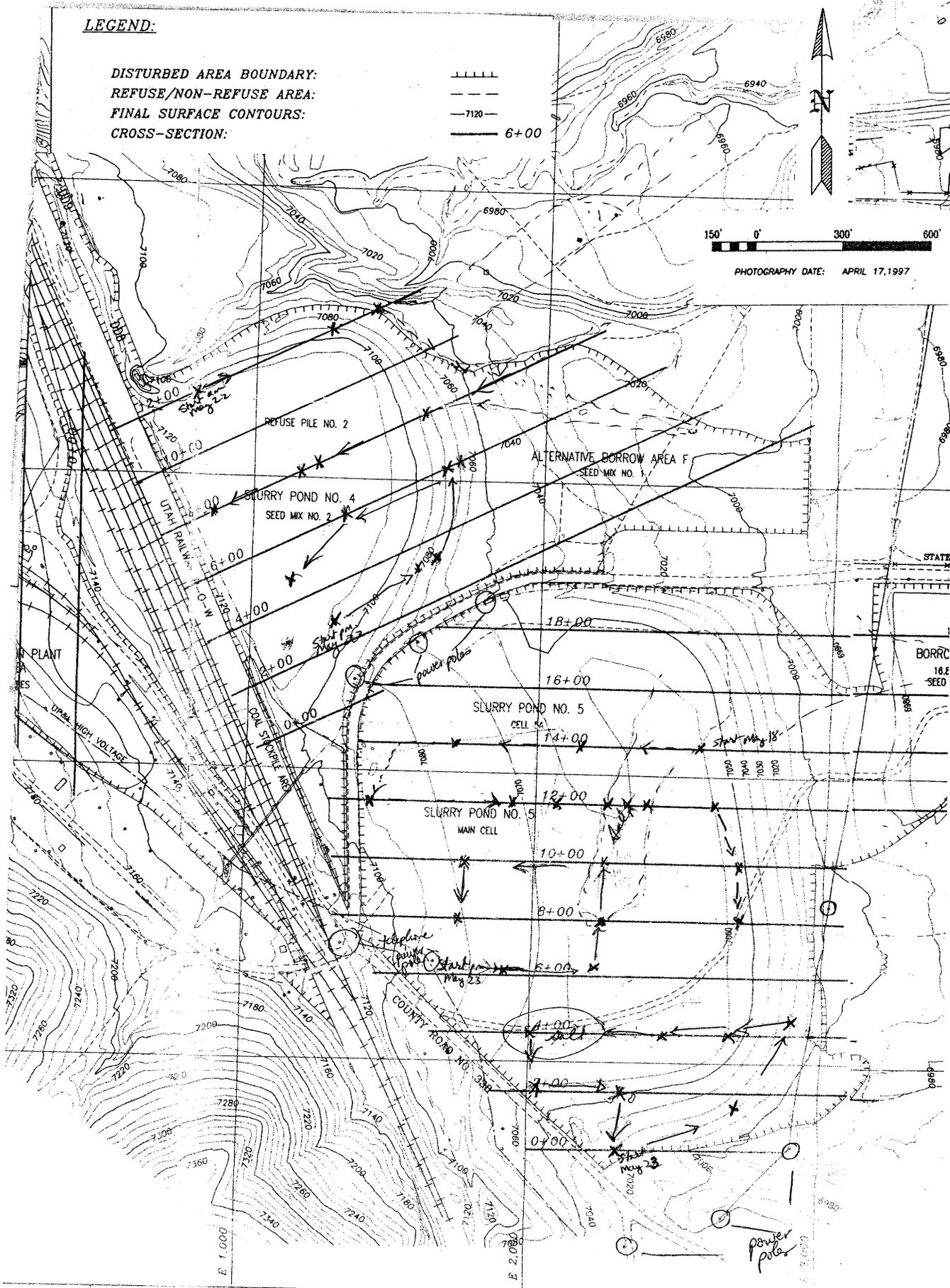
Summary Slurry Pond #4/Refuse Pile #2, 16 inches is the average for the 11 auger holes dug.

**LEGEND:**

DISTURBED AREA BOUNDARY:  
 REFUSE/NON-REFUSE AREA:  
 FINAL SURFACE CONTOURS:  
 CROSS-SECTION:



PHOTOGRAPHY DATE: APRIL 17, 1997



HIAWATHA COAL COMPANY  
 HIAWATHA, UTAH

HIAWATHA PROCESSING PLANT  
 AND WASTE DISPOSAL SITES  
 Ex. V-13