




COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215, Denver, CO 80203 P 303.866.3567 F 303.832.8106 <http://mining.state.co.us>

PERMIT INFORMATION

Permit Number: C-1981-022 Mine Name: Elk Creek Mine Operator: Oxbow Mining, LLC Operator Address: Mr. Doug Smith 3737 Hwy 133 P. O. Box 535 Somerset, CO 81434	County: Delta, Gunnison Operation Type: Underground Permit Status: Active Ownership: Federal
	Operator Representative Present: Doug Smith
Operator Representative Signature: (Field Issuance Only) 	

INSPECTION INFORMATION

Inspection Start Date: October 10, 2018 Inspection Start Time: 14:00 Inspection End Date: October 11, 2018 Inspection End Time: 08:50		Inspection Type: Coal Partial Inspection Inspection Reason: Normal I&E Program Weather: Cloudy	
Joint Inspection Agency: None		Joint Inspection Contacts: 	
Post Inspection Agency: None		Post Inspection Contacts: 	
Inspector(s): Robert D. Zuber, P.E.	Inspector's Signature: 		Signature Date: 10/15/2018

Inspection Topic Summary

NOTE: Y=Inspected N=Not Inspected R=Comments Noted V=Violation Issued NA=Not Applicable

N - Air Resource Protection

N - Availability of Records

R - Backfill & Grading

R - Excess Spoil and Dev. Waste

N - Explosives

N - Fish & Wildlife

R - Hydrologic Balance

N - Gen. Compliance With Mine Plan

N - Other

N - Processing Waste

N - Roads

N - Reclamation Success

R - Revegetation

N - Subsidence

N - Slides and Other Damage

R - Support Facilities On-site

N - Signs and Markers

N - Support Facilities Not On-site

N - Special Categories Of Mining

R - Topsoil

COMMENTS

This partial inspection was conducted by Rob Zuber of DRMS, with Doug Smith of Oxbow Mining. The weather was partly cloudy, and the ground was muddy.

BACKFILL and GRADING – Rule 4.14

Contemporaneous Reclamation 4.14.1; Approximate Original Contour 4.14.2; Highwall Elimination 4.14.1(2)(f); Steep Slopes 4.14.2, 4.27; Handling of Acid and Toxic Materials 4.14.3; Stabilization of Rills and Gullies 4.14.6:

The II West Haul Road has been reclaimed. Some seeding (east end) had not been completed at the time of the inspection.

EXCESS SPOIL and DEVELOPMENT WASTE – Rule 4.09

Placement; Drainage Control; Surface Stabilization:

No erosion or other problems were seen with the recent reclamation of the West Valley Coal Refuse Facility or II West Coal Refuse Facility; they both appeared stable at the time of the inspection.

The side ditches at the II West facility have the following dimensions: the west ditch (larger one receiving runoff from channel above the fill) is 3 – 4 feet deep and approximately 4 feet wide at the bottom. The east ditch is approximately 2 feet deep and approximately 3 feet wide at the bottom.

HYDROLOGIC BALANCE - Rule 4.05

Drainage Control 4.05.1, 4.05.2, 4.05.3; Siltation Structures 4.05.5, 4.05.6; Discharge Structures 4.05.7, 4.05.10; Diversions 4.05.4; Effluent Limits 4.05.2; Ground Water Monitoring 4.05.13; Surface Water Monitoring 4.05.13; Drainage – Acid and Toxic Materials 4.05.8; Impoundments 4.05.6, 4.05.9; Stream Buffer Zones 4.05.18:

Reconstruction of Elk Creek was apparently done well. The riprap was large enough for the design (D50 greater than 12 inches at steep sections), and smaller rocks were placed in between the larger rocks and boulders, which will reduce the possibility of erosion. The slope near the bottom of the channel (which appears to be the steepest

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section of this reconstructed channel) was measured with a clinometer and estimated to be 12 percent; this is within the specification of a maximum of 13 percent. The depth of the channel and bottom width of the channel are greater than the specifications of 1.8 feet and 10 feet, respectively, at all locations inspected (most of the reconstructed channel). This channel will not see runoff from the recently reclaimed areas to the east and the west of the channel, as long as T1 and T2 ditches remain in place.

Check dams may be needed in the future in T1 and T2, especially in the steep portion near the bottom of the Elk Creek reconstruction. These channels should be monitored closely.

The culverts below T1 and T2 should be routinely checked and cleared of sediment. One of the culverts between these channels and Pond B included sediment during the inspection and should be cleared.

Roadside ditches were found to be functioning during the inspection; a significant amount of runoff was flowing in them.

Wattles are needed at several locations on the mine site, including the reclamation above the Elk Creek channel and the bottom of the II West Coal Refuse Facility. All wattles, including those already placed, should be trenched in the ground (approximately four inches) to be effective.

Pond A1 was empty, and no problems were seen. The approximate dimensions of the pond are 60 feet by 40 feet by 6 feet deep. It is large enough per the spec in the PAP.

Pond B was holding water but not discharging. The elevations of the water line and emergency spillway invert were estimated with a laser tool (TruPulse 360R), and the difference was 6.5 feet. This value is larger than the elevation difference required for capacity for the 10-year event (4.9 feet per Exhibit 2.05-E3 in the PAP). Given this fact in light of recent rains, the pond is in compliance and may, in fact, be over designed at this time, which is prudent and an acceptable practice to the Division.

The bank below Pond B is very steep and has many coal fines on it. Doug Smith indicated that this area was disturbed pre-SMCRA; he also indicated that Oxbow may be compiling information on such areas in anticipation of bond release applications. This would be beneficial, and should be done in near future, if possible.

Given the change of its function (it no longer receives mine water but now receives runoff that previously went to Pond D), it is uncertain if Pond B is large enough. This should be confirmed by Oxbow.

Ponds C and E were empty and no problems were seen.

The East Yard Pond was not discharging, and the water level was approximately 3 feet below the emergency spillway invert. (This spillway is a corrugated plastic pipe.) No problems were identified with this pond.

The Substation 3 Pond was holding a couple inches of water and not discharging. No problems were seen.

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REVEGETATION – Rule 4.15**Vegetative Cover; Timing:**

Near the Elk Creek reconstruction, a patch of thistle was seen approximately 200 feet south (down the hill) from the lower CMP culvert. Cheat grass was seen at various locations.

SUPPORT FACILITIES - Rule 4.04:

No problems were seen at the Upper Elk Creek Pad other than the need for a ditch below the topsoil stockpile. The hill below the water tanks was stable.

TOPSOIL – Rule 4.06

Removal 4.06.2; Substitute Materials 4.06.4(4); Storage and Protection 4.06.3; Redistribution 4.06.4:

At the Upper Elk Creek Pad, an operator was moving soil on the topsoil stockpile to improve access to it. The soil has filled the ditch below it; this needs to be remedied in near future. Doug Smith said that this would be done this week.

The topsoil stockpile near the Substation 3 Pond appeared stable and well vegetated.

ENFORCEMENT ACTIONS/COMPLIANCE

No enforcement actions were initiated as a result of this inspection, nor are any pending.

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PHOTOGRAPHS



Elk Creek reconstruction



Riprap in Elk Creek channel

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Reclamation beside Elk Creek channel with temporary ditch at lower right



Ditch below topsoil stockpile (at Upper Elk Creek Pad) needs to be cleared of soil

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II West Coal Refuse Facility



Pond E

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Reclaimed haul road



Pond B

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Elk Creek facilities with water tanks above

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