



STATE OF
COLORADO

Zuber - DNR, Rob <rob.zuber@state.co.us>

Bowie #2 inspection report

1 message

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Fri, Aug 30, 2024 at 8:17 AM

To: Basil Bear <basilbear@wolverinefuels.com>, Ryan Wilson <RWilson@wolverinefuels.com>, Tamme Bishop <tammekb@gmail.com>, Daniel MacKinnon <dmackinnon@osmre.gov>

Good morning, All -

Please see my attached report and let me know if you have questions or comments.

Rob

Rob Zuber, P.E.
Environmental Protection Specialist
Active Mines Regulatory Program



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

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INSP-REPORTC_C1996083_RDZ_08302024.pdf


2346K



PERMIT INFORMATION

Permit Number: C-1996-083 Mine Name: Bowie No. 2 Mine Operator: Bowie Resources, LLC Operator Address: Mr. Basil Bear P.O. Box 1488 Paonia, CO 81428	County: Delta Operation Type: Underground Permit Status: Active Ownership: Private
	Operator Representative Present: B. Bear, K. Pitt, R. Wilson
Operator Representative Signature: (Field Issuance Only) 	

INSPECTION INFORMATION

Inspection Start Date: August 28, 2024 Inspection Start Time: 07:00 Inspection End Date: August 28, 2024 Inspection End Time: 12:00		Inspection Type: Coal Partial Inspection Inspection Reason: Normal I&E Program Weather: Clear	
Joint Inspection Agency: None		Joint Inspection Contacts:	
Post Inspection Agency: None		Post Inspection Contacts:	
Inspector(s): Robert Zuber, P.E.	Inspector's Signature: 		Signature Date: 8/30/2024

Inspection Topic Summary

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

R - Air Resource Protection**N** - Availability of Records**Y** - Backfill & Grading**NA** - Excess Spoil and Dev. Waste**NA** - Explosives**N** - Fish & Wildlife**R** - Hydrologic Balance**Y** - Gen. Compliance With Mine Plan**N** - Other**R** - Processing Waste**R** - Roads**Y** - Reclamation Success**R** - Revegetation**Y** - Subsidence**R** - Slides and Other Damage**Y** - Support Facilities On-site**Y** - Signs and Markers**N** - Support Facilities Not On-site**N** - Special Categories Of Mining**Y** - Topsoil**COMMENTS**

A partial inspection was conducted by Rob Zuber of DRMS on August 28, 2024. He was joined by Dan MacKinnon from the Office of Surface Mining Reclamation and Enforcement and three employees of Wolverine Fuels (parent company of BRL): Basil Bear, Ryan Wilson, and Ken Pitt.

The primary activity onsite by BRL was reclamation of Gob Pile #2.

The primary topics for the inspection included weeds and construction of the gob piles. At Gob Pile #3, the depth of coverfill material was measured after BRL staff dug holes with a backhoe. Also side slopes were measured by DRMS and OSMRE inspectors with a laser device.

The weather was clear and warm. The ground was muddy in places from significant rain events in late August.

AIR RESOURCE PROTECTION – Rule 4.17:

A water truck was seen filling up during the inspection. The road to Gob Pile #2 had been dampened by the water truck, where grading was being performed.

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:

Two sediment ponds were inspected: F and J. Neither of the ponds was close to discharging. Pond F contained visible water. The bottom of Pond J is obscured by cattails, and no water was seen. No significant problems were identified with embankments, spillways, inlet channels, or other features of the ponds.

Number of Partial Inspection this Fiscal Year: 2

Number of Complete Inspections this Fiscal Year: 0

A delta of sediment was seen at the eastern inlet to Pond F (northeast corner), which is to be expected given the dirt work at Gob Pile #2. The elevation differences between the approximate sediment levels of the two ponds and the emergency spillways were measured with a laser device. Both ponds appear to have sufficient capacity with the measurements being ten feet or greater.

It was apparent that ditches have been recently cleaned.

The Fire Mountain Canal was flowing full. The underdrain below the center of Gob Pile #3 had significant flow. No flow was seen at the east end of this pile.

PROCESSING WASTE/COAL MINE WASTE PILES – Rule 4.10 and 4.11

Drainage Control; Surface Stabilization; Placement:

Gob Piles 1, 2, 3, and 4 appeared stable. No problem was identified at the repaired blow out on Gob Pile #4, which occurred in the spring of 2023.

Placement of coverfill on Gob Pile #2 is still in progress. A riprap channel has been constructed on this pile, and appears to be constructed well, with large rocks (D50 greater than 12 inches) and good gradation of rock. Per BRL managers, this channel was tested by large storms in 2024, and it has held up well.

No problems were seen with the upper (flat) portion of Gob Pile #2. It is graded for water to flow to the east side and off the pile. No erosion or low spots were identified. BRL management indicated that small ditches will be cut in this area (that were removed in recent weeks by grading) and sediment control structures will be added, including rocks and silt fence made of HDPE. The previous sediment control sump was removed while the slope was graded and channel reconstructed.

The depths of coverfill material on slopes were checked on Gob Pile #3 at six locations:

- On the west end, the depth was 36 inches.
- On the north end (towards the west), the depth was 44 inches.
- On the north end (towards the east), the depth was 43 inches.
- On the east end, the depth was 39 inches.
- On the south end (towards the east), the depth was 40 inches.
- On the south end (towards the west), the depth was 39 inches.

The target depth is 36 inches or more.

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The slopes on Gob Pile #3 were checked at several locations (see table below), and almost all were flatter than 3H:1V. Two exceptions were on the south side. However, these slopes are only slightly steeper than 3H:1V (34% and 35%), and the measurements were on the lower portions; slopes are flatter on the higher portions. Also, another slope was measured on the south side, and this slope was much flatter than 3H:1V (13%). The Division does not find the exceptions to be a problem.

Location	Vertical distance (feet)	Horizontal distance (feet)	%
West end	8.5	30	28
North end, towards west	9.0	27	33
North end, towards east	7.0	24	29
East end	9.0	28	32
South end, towards east	17.0	48	35
South end, near middle	13.0	103	13
South end, towards west	11.0	32	34

ROADS – Rule 4.03

Construction 4.03.1(3)/4.03.2(3), Drainage 4.03.1(4)/4.03.2(4), Surfacing and Maintenance 4.03.1(5) and (6)/4.03.2(5) and (6), Reclamation 4.03.1(7)/4.03.2(7):

The road to the portals was in adequate condition. The slopes adjacent to this road are generally stable, except for the slide at Curve 10 (see Slides and Other Damage section).

REVEGETATION – Rule 4.15

Vegetative Cover; Timing:

Thistle plants and other weeds have been killed in many locations, including the west side of Gob Pile #3, east of Gob Pile #2, at Curve 8, below the B Portal bench, above the D Portal bench, and in the parking lot beside the D Portal office.

Some weeds were seen in some location: cheat grass and halogeton along the road to Gob Pile #2, mullein by Topsoil Stockpile A, halogeton at the B Portal bench, and thistle at Curve 10.

SLIDES and DAMAGE - Rule 4.12:

No problems were seen on the slopes above and below the benches. The slides above the B Portal Bench and Curve 11 (noted in the past) look stable. The slide above Curve Number 10 appears to have not moved a large amount since June. This is an ongoing project for BRL.

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DOCUMENTS RECEIVED - none

OTHER (SPECIFY) - none

ENFORCEMENT ACTIONS/COMPLIANCE

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

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PHOTOGRAPHS



South side of Gob Pile #3



Halogeton on Gob Pile #2

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Soil pile that has been used for Gob Pile #2 reclamation



Reclamation on Gob Pile #2

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Channels at east end of Gob Pile #2



New channel on Gob Pile #2

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Number of Complete Inspections this Fiscal Year: 0



Upper portion of Gob Pile #2



West slope above B Portal bench

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Number of Complete Inspections this Fiscal Year: 0



Slide at Curve 10



Sediment delta at inlet to Pond F

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