



**Minerals Plan of Operations Inspection**  
**U.S. Department of the Interior**  
**Bureau of Land Management**  
**Royal Gorge Field Office**



The BLM has conducted an inspection of your operations, which concludes whether the documented operations on file with BLM are compliant or non-compliant. Any non-compliance issues are reported in the Additional Actions Necessary section of this inspection.

**Operation Type:** ☐ 3600 ☐ 3809 w/ occupancy ☒ 3809 w/o occupancy

<b>Date:</b> Nov 1, 2018 <b>Time:</b> 11:12 <b>Weather:</b> Sunny	<b>Operation Name:</b> 1st Bentonite <b>Case Number:</b> COC51303 <b>CDRMS Number:</b> M-1977-231
<b>Attendees</b> <b>BLM:</b> A. Sanderson <b>Operator(s):</b> Contacted, but not present <b>Other(s):</b> None	<b>General</b> <b>Operation(s) are in compliance with documentation on file</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <b>Operation(s) and disturbance on-site coincide with the operations and access on file</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

**Inspection Purpose:** ☐ Pre-Operations ☒ General ☐ Final ☐ Trespass ☐ Complaint

Inspection Items	Compliant	Non-Compliant	N/A
<b>1. Method of Operations</b>			
Drilling, Trenching/Surface Excavation & Underground Excavation			
<b>a. Drilling</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Pad Construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Mud Pits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Borehole Abandonment/Monitoring Well Conversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete			
iv. Pad Reclamation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>b. Trenching/Surface Excavation</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Trench/Excavation Construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Trench/Excavation Stability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Trench/Excavation Reclamation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>c. Underground Excavation</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Portal Construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Blasting Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Portal Reclamation/Conversion of Entry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. Site Conditions</b>			
<b>a. Material/Waste Rock Management</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>b. Erosion &amp; Stormwater Control</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>c. Man-made Structures</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>d. Weed Management</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>e. Safety Conditions</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>f. Interim Reclamation</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Inspection Items	Compliant	Non-Compliant	N/A
<b>3. Housekeeping</b>			
a. Container Management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Spills/Leaks Observed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Hazardous Substances/POL Management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. General Housekeeping	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>4. Access</b>			
a. Road Management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Berms	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Security	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Surface Water Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>5. Quality Assurance/Quality Control</b>			
a. Routine Site Conditions Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Air, Water, Noise, Other Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Monitoring Reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Regulatory Submittals	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other Agency/Entity Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>6. Final Reclamation</b>			
a. Exploration/Sampling Location	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Access Roads/Trails	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Grading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Revegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Removal of Structures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Free of Trash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Additional Actions Necessary

Non-Compliance Issues to be addressed by Operator

**6.b. & 6.d.** Minimal vegetation along the access road, haul roads (trending east to west), staging area and detention pond. The lack of vegetation has caused an abundant amount of erosion (e.g. rills, gullies, etc.) along the banks of the detention pond and roads.

#### Final Notes

General Comments:

- Natural erosion can occur due to the type of geologic material (bentonite), however vegetation would aid in stabilizing the site's soils.
- The road was ripped and seeded in fall 2017 and reseeded March 2018. The operator said reseeding would also reseed in the fall 2018. \*The haul road and staging area may need to be ripped or drill seeded to insure reseeding is successful.
- BLM will inspect the site in the spring to determine if all reclamation requirements have been completed and the above non-compliance items have been corrected.

Proprietary Information: None

Date inspection shared with CDRMS:

Date inspection shared with Operator:

## Images

**Image 1:**



Comment: Final reclamation sign at the entrance of the site

**Images 2-3:**



Comment: Site entrance and access road. Access road leading into the site and the haul roads, trending east to west still lack vegetation. **Image 2:** 11/02/18 inspection and **Image 3:** 06/22/18 inspection



## Images

**Image 4-5:**



Comment: **Image 4:** Natural drainage located to the west of the access road and **Image 5:** southern view of the access road located at the bottom of the T

**Image 6:**



Comment: Eastern view of the staging floor; erosion along the eastern portion of the haul road



## Images

**Image 7-10:**



Comment: Water erosion such as riles, gullies and mud cracks along the staging area

**Image 11-13:**







Comment: Western section of the road leading to the detention pond. Abundant amount of large riles from storm/meltwater runoff

**Image 14-15:**



Comment: Eastern banks of the detention pond still contain massive gullies. More vegetation is present than the previous inspection. This erosion may be a natural occurrence due to the type of geologic material.

**Image 16-18:**







Comment: SE/E view of road near the highwall. The areas north and south of the access roads are adequately vegetated.

**Image 19-21:**



Comment: Detention pond holding water from recent storm/melt water runoff



**Image 22-24:**



Comment: Drainage Channel leading from the detention pond

**Image 25:**



Comment: Reclaimed highwall with adequate 3:1 slope and vegetation



Image 26-28:



Comment: Natural erosion from surrounding topography