



Minerals 3600 Mine and Reclamation 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 noncompliant. Any non-compliance issues are reported in the Additional Actions Necessary section of this inspection.

Operation Type: ☒ Surface – continual ☐ Surface – intermittent ☐ Underground

Date: March 18, 2022 Time: 11:03 Weather: Sunny	Operation Name: Fremont Co - Qaugmire Pit Case Number: COC-078247 CDRMS #: M-1990-047
<u>Attendees</u> BLM: A. Pike Operator(s): Not Present Other(s): None	<u>General</u> Operation(s) are in compliance with documentation on file <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Operation(s) and disturbance on-site coincide with the operations and access on file <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

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

Objective: An inspection was conducted to determine if all reclamation standards have been met. Per the inspection, revegetation along the highwall is still not sufficient and does not meet reclamation conditions per the reclamation plan. Reference the noncompliance section for additional information.

Inspection Items	Compliant	Non-Compliant	N/A
1. Method of Operations			
Hardrock Quarry, Pit, Other			
a. Hardrock Quarry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Operations Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Processing Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Blasting <input type="checkbox"/> Internal <input type="checkbox"/> External	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Interim Benches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Final Benches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Working Floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Pit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Operations Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Processing Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Slopes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Operations Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Processing Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Site Conditions			
a. Material/Waste Rock Management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Erosion & Stormwater Control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Man-made Structures	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d. Weed Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Safety Hazards	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Interim Reclamation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Inspection Items	Compliant	Non-Compliant	N/A
3. Housekeeping			
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"/>
4. Access			
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Surface Water Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Quality Assurance/Quality Control			
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"/>
7. Final Reclamation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. Exploration/Sampling Location	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Access Roads/Trails	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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

7.d. Final Reclamation – Revegetation

- Revegetation is still inadequate along the regraded highwall. Vegetation is visible including native grasses and trees; however, adequacy has not been met per the reclamation requirements (ref. images 7-11). Reseeding was conducted in 2019 and fall 2020 on the upper highwall. NOTE - Adequate vegetation is based on 80% of the surrounding undisturbed desirable vegetative canopy area. Desirable vegetation is vegetation that contains natural vegetation relative to the surrounding undisturbed vegetative species.
- Reclamation “Path Forward”:**
 - Future Inspection:* Watch revegetation efforts for an additional growing season. Tentative inspection scheduled for August 2022 to inspect the revegetation progress along the recontoured highwall.

- *05/02/22 CDRMS and BLM coordination:* Suggestion was presented to plant ponderosa trees along the barren highwall to provide soil stabilization, additional moisture and cover for grass regrowth. Cut timber scattered throughout the site was also suggested to help with moisture retention, erosion and deter other public land users from disturbing the reclaimed areas.
- *05/06/22 BLM Range Specialist Consultation:* The top layer seems to be mostly decomposed granite vs organic matter which could cause the seed to resist germination/growth. Using some type of netting or tackifier or heavier mulch such as wood chips rather than straw could help germinate the seed when minimal soil is present. The seed mix is adequate for this area; however, going heavier on the native seed and adding an annual such as trilakalia or annual oat grass to serve as a cover crop could help build some organic matter. A little moisture wouldn't be beneficial as well.
- *05/10/22 BLM Forester Specialist Consultation:* About 50 ponderosa seedlings would be a good start. Make sure to place logs along the hillside contour, as some soil stabilization will be needed before any trees will take.

7.e. Final Reclamation – Removal of Structures

- Boulders were placed along the edge of the county road right-of-way (ROW) to deter the public/road users from disturbing the reclamation work conducted last spring/summer (ref. images 1-2). BLM will require these boulders to be removed prior to finalizing reclamation and releasing reclamation obligations.
- A small pull trailer potentially is located on BLM lands along the southern reclamation boundary near the mine sign (ref. image 3-4). Is this trailer owned by Fremont County? If so, this trailer needs to be removed in order to meet reclamation requirements.

Final Notes

General Comments:

- NE highwall slope is adequate (reclamation plan states at least 2.5H:1V final slope) - calculated slope from images taken during inspection = 2.4:1 slope (ref. image 5).
- Ponderosa pine saplings along the southern disturbance area have grown to ~2-4 ft tall (ref. image 6).
- Tentative inspection scheduled for August 2022 to inspect the revegetation progress and determine if all reclamation requirements have been met per the reclamation plan.

Date inspection shared with CDRMS: 04/07/2022

Date inspection shared with Operator:

Images

Image(s) 1-2:



Comment: Boulders were placed between the mine boundary and C.R. 12 right-of-way pullout. These boulders need to be removed to meet final reclamation requirements.

Image(s) 3-4:





Comment: A small pull trailer potentially is located on BLM lands along the southern reclamation boundary near the mine sign. The pull trailer will need to be removed, if this structure is property of Fremont Co.

Image(s) 5:



Comment: Per the reclamation plan, the final highwall will have an $\sim 2.5:1$ slope which is a 40% gradient with an angle = 21.8° . Per the images measured slope in the field, the reclaimed highwall slope is $\sim 2.4:1$ with

a slope angle of 24° . Therefore, the slope of the reclaimed highwall is considered adequate to meet the reclamation standards outlined in reclamation plan. Scale = 9 inches : 0.25 inches

Image(s) 6:



Comment: Ponderosa pine trees along the ridge of the southern reclaimed area

Images 7-11:







Comment: Grass growth is improving since the last inspection in the lower (southern) section of the reclaimed area. The upper portion of the highwall still lacks vegetation.