




Mineral Materials Site Inspection
U.S. Department of the Interior
Bureau of Land Management
Royal Gorge Field Office



Date: 04/27/2017 Time: 9:10 - 10:45 a.m. Weather: Clear Inspection Purpose: General	Project Name: Mica White Operator: Colorado Quarries Location: Howard, CO BLM COC #: 078191 CDRMS Permit #: M-1992-058
Attendees BLM: William Jenkins Operator(s): Greg Cleaves Other(s): Tim Cazier (CDRMS)	Project Status: Active Commodity: Quartzite (aquarium rock) Type of Operation: 112 Contract Acres/Amount: 10 acres/30,000 tons Contract Expiration Date: 04/2018
General Compliance Compliance with the approved Mine and Reclamation Plan per the requirements outlined in 43 CFR §3601.40-42.	In general, the operation is in compliance with the Mine and Reclamation Plan on file with BLM. x Yes <input type="checkbox"/> No <input type="checkbox"/> N/A In general, the operation and disturbances on site coincide with the method of mining, reclamation, and access described in the Mine and Reclamation Plan. x Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

INTERNAL	
	Inspection Status: Y Y = Inspected and in Compliance, N = Inspected and Violations/ Problems Noted, NA = Not Applicable
	Inspector's Initials: WTJ
	BLM Supervisor's Initials:
	Date:
	Date sent to Operator:
	Date sent to CDRMS:

SITE MANAGEMENT

<p style="text-align: center;"><u>Site Conditions</u></p> <p><input type="checkbox"/> Housekeeping</p> <p><input type="checkbox"/> Access (clear, bermed, signed, accurate with Mine/Rec Plan?)</p> <p><input type="checkbox"/> Acreage (disturbance per plan? site secured per Mine/Rec Plan?)</p>	<p>Good Housekeeping. The site is located behind a locked gate. Per MSHA regulation (and recent direction), the operator has installed new berms along the site's access road. The berms were to the axle of their largest vehicle (Volvo Haul Truck). The operator has signs posted along the access road, and a DRMS permit sign at the mine site. The acreage and disturbance footprint are in accordance with the Mine/Rec plan on file with BLM.</p>
<p style="text-align: center;"><u>Erosion Control</u></p> <p><input type="checkbox"/> Grading</p> <p><input type="checkbox"/> Vegetation</p> <p><input type="checkbox"/> Drainage Control</p> <p><input type="checkbox"/> Best Management Practices (berms, armored drainage)</p>	<p><input type="checkbox"/> N/A</p> <p>The operator has several check dams located along the access road, all of which appeared to be clean and not choked with sediment. There was abundant vegetation along the drainage channel and access road.</p>
<p style="text-align: center;"><u>Materials Management</u></p> <p style="text-align: center;">-Topsoil -Overburden -Waste Rock -Fines</p> <p style="text-align: center;"><input type="checkbox"/> Location</p> <p style="text-align: center;"><input type="checkbox"/> Best Management Practices</p> <p><input type="checkbox"/> Stability (angle of repose, size of material)</p>	<p><input type="checkbox"/> N/A</p> <p>The site's topsoil is, in part, sourced by the lower fines staging area. Fines are stockpiled on the quarry's working floor and in the lower staging area. Minor sloughing was occurring at the fine's pile stored at the upper working area, but it did not appear to present a safety hazard. The operator does not have any overburden or waste rock. The fines stored in the staging area will be raised and seeded upon final reclamation. Product material is stockpiled on the working floor where it is loaded directly into haul trucks, and transported off site.</p>
<p style="text-align: center;"><u>Container/Tank Management</u></p> <p><input type="checkbox"/> Substance</p> <p><input type="checkbox"/> Storage Container/Tank (overall condition, tank capacity, secondary containment)</p> <p><input type="checkbox"/> Spill Contingency (fixed in a timely manner? Or controlled to prevent hazardous conditions?)</p> <p><input type="checkbox"/> Substance appropriately labeled? (NFPA, SDS accessible)</p> <p><input type="checkbox"/> Best Management Practices</p>	<p><input type="checkbox"/> N/A</p> <p>The operator stores fuel and oil on the site. During the inspection, there was inadequate secondary containment of the fuel barrels, and the operator said that they would construct a rubber lined tub to fit all 3 barrels immediately. No spills were observed during the inspection, and the substances were appropriately labeled.</p>
<p style="text-align: center;"><u>Weed Management</u></p> <p><input type="checkbox"/> Weed Control Plan</p> <p><input type="checkbox"/> Control Methods</p> <p><input type="checkbox"/> Type & Percent Surface Cover</p> <p><input type="checkbox"/> Best Management Practices</p>	<p><input type="checkbox"/> N/A</p> <p>No weeds were observed during the inspection.</p>
<p style="text-align: center;"><u>Highwall/Working Face Conditions</u></p> <p style="text-align: center;">x Working <input type="checkbox"/> Reclaimed</p> <p>-Ravelling or rock fall present</p> <p>-Tension cracks</p> <p>-Benches (are they clean?)</p> <p>-Adequate ingress/egress</p> <p>-Measurements (Per filed plan - height, depth, slope)</p>	<p><input type="checkbox"/> N/A</p> <p>The operator has recently developed benches on the quarry's highwall, and they appeared to be clean and free of debris. These benches measure approximately 12 feet wide, and also serve as road for the operator's dozer. There were no issues with stability observed during the inspection. The rockwall to support the fines from ravelling appeared to be functioning well. There</p>

	appeared to be adequate ingress and egress across the working areas of the quarry.
<u>General Safety Conditions</u> <input type="checkbox"/> Fencing <input type="checkbox"/> Flagging <input type="checkbox"/> Signage (mine site, direction of travel, etc.) <input type="checkbox"/> Does it appear that the mining is conducted in a manner that will minimize highwall, material, and bank instability?	<input type="checkbox"/> N/A The access road is now bermed for safety (per MSHA), and there is signage across the site. During the inspection, CDRMS asked that the operator place a permit sign at the entrance gate. There were no issues with site safety observed during the inspection.

OPERATIONS

<u>Operations</u> <input type="checkbox"/> Location <input type="checkbox"/> Temporary/permanent structures? <input type="checkbox"/> Any observed impacts outside of Mine/Rec Plan?	There were no observed impacts outside of what was described in the Mine/Rec plan.
<u>Operating Practices</u> <input type="checkbox"/> Mining Methods (Surface or Underground) <input type="checkbox"/> Equipment (types, concurrent with Mine/Rec Plan, good working condition) <input type="checkbox"/> Surface Disturbances (size, and removed quantity) <input type="checkbox"/> Processed Material Management (stockpiles, etc.)	
<u>Material Processing</u> <input type="checkbox"/> Crushing, screening, washing <input type="checkbox"/> Equipment condition, water source	<input type="checkbox"/> N/A Product material is crushed for use as gravel (darker colors) and aquarium rock (whites).
<u>Quality Assurance/Monitoring</u> <input type="checkbox"/> Reporting Procedures <input type="checkbox"/> Systematic Monitoring (frequency, sampling procedures, adverse results response, monitoring programs - air, water, revegetation, stability, noise, etc.)	<input type="checkbox"/> N/A Quality assurance monitoring in compliance. The operator monitors the discharge below the quarry (along the access road) while working, and completes a monitoring report that is stored in the office locker on the quarry working floor. The form appeared to be related to the CDPHE permit for the site.
<u>Drilling</u> <input type="checkbox"/> Method (Air, Fluid) <input type="checkbox"/> Drill Pads (location) <input type="checkbox"/> Mud Pits (location, containment) <input type="checkbox"/> Drill Hole Plugging and Re-Contour	x N/A
<u>Underground Operations</u> <input type="checkbox"/> Groundwater (Is there water coming from the adit?) <input type="checkbox"/> General Safety (roof stability, ventilation, cribbing condition, monitoring practices, etc.) <input type="checkbox"/> Dimensions (Have the adits, shafts, trenches been advanced?)	x N/A

<p style="text-align: center;"><u>Water Management</u></p> <p><input type="checkbox"/> Dust Mitigation (water trucks)</p> <p><input type="checkbox"/> Mitigation Measures (exposed groundwater, dewatering/pumps, sediment containment, stormwater runoff controls)</p> <p><input type="checkbox"/> Ditch/Impoundment Capacity (will they contain the volume generated by a 100 year 24 -hour rain event?)</p> <p><input type="checkbox"/> Impoundment Structures (Water, tailings ponds, etc.) - adequate freeboard - dimensions, stability - leaking at base?</p>	<p><input type="checkbox"/> N/A</p> <p>The operator monitors discharge in a written log for their CDPHE permit. The operator expressed that the material is naturally damp, and does not generate any significant quantity of dust when they are operating (previous inspection photographs support this claim). Several catchments and check dams have been installed along the drainage below the quarry. No water was observed in this drainage at the time of the inspection and the check dams were not choked with sediment. The sediment check dam (w/ culvert) below the fines staging area was dry, and there was no evidence of recent sedimentation on its downstream end.</p>
<p style="text-align: center;">Actions to be taken by the Operator</p> <p>Operators should read this report carefully because it may require corrective action and/or response to the BLM in order to avoid consideration of possible enforcement action.</p>	<p>Install an adequate secondary containment structure for the 3 hydrocarbon barrels on the quarry working floor.</p>
<p style="text-align: center;">General Comments</p> <p>Other observations and notes from the inspection</p>	<p>During the inspection, several boundary posts were located for the lower staging area.</p>

Photo Summary

Photo 1. The newly installed berm along the Quarry access road.



Photo 2. Showing the operator's haul truck (w/ fines). Note that the berm is axle height for this vehicle.



Photo 3. The CDRMS permit sign posted at the entrance to the quarry site.



Photo 4. Facing the working floor of the quarry from the access road.



Photo 5. The access road leading to the crushing and screening unit.



Photo 6. The operator's fines pile on the quarry floor.



Photo 7. The three hydrocarbon barrels needing secondary containment.



Photo 8. The crushing and screening unit on the quarry floor.



Photo 9. The newly benched highwall.



Photo 10. Material that was removed from the lower staging area for use in the construction of the access road berms.



Photo 11. An overview of the fines staging area, note that the right-hand slope has been reclaimed.



Photo 12. The reclaimed Southwestern slope of the staging area fines stockpile. Note the successful vegetation growth.



Photo 13. The outlet culvert of the sediment catchment basin below the reclaimed staging area slope. Note that the drainage below the culvert is armored.

