



Bureau of Land Management Colorado River Valley Field Office Minerals Inspection Report

General Information	
Date	8/28/2018
Project Name	Mid-Continent Limestone Quarry
Operator	RMR Aggregates, Inc.
Serial Number	COC-074205
Project Classification	Plan of Operations
Project Location	T5S R89W Sec36, Garfield County
Inspection Purpose	Regular site inspection (per 43 CFR 3809.600 (a))
Time Period Onsite	3 hours
Attendees	Jessica Lopez Pearce, BLM Geologist
	Bobby Wagner, RMR Aggregates, Inc. Vice President
	Justin Olin, RMR Aggregates, Inc. Mine Superintendent
	Wally Erickson, CO-DRMS Senior Environmental Protection Specialist
	Amy Yeldell, CO-DRMS Environmental Protection Specialist

Summary

I conducted an inspection of the RMR Aggregates, Inc. Mid-Continent Quarry on August 28, 2018. I visited the Transfer Trail access road, mill bench lower road, production bench, backfilled Dec 2016 exploratory drill holes, and mill bench. In addition to the immediate need for weed treatment, RMR must address the permit boundary discrepancy between agencies, mine bench design, topsoil slope requirements, and water management in any forthcoming proposed Plan of Operations modification.

New Remarks

On August 28, 2018, I inspected the RMR Aggregates, Inc. Mid-Continent Quarry and was joined by Amy Yeldell and Wally Erickson from CO-DRMS and Bobby Wagner and Justin Olin from RMR Aggregates, Inc. This site visit was a regular inspection per 43 CFR 3809.600. The weather was sunny and breezy; temperatures were in the 60's.

Transfer Trail

My inspection began on the access road to the quarry, Transfer Trail. At the intersection of Traver Trail and Transfer Trail, I observed a construction zone unrelated to the Mid-Continent Quarry and a yellow and black sign that stated: "Caution. Semi Truck Traffic. Mine in Operation 7 Days A Week. Park in Designated Areas Only. Do Not Block Road." As I drove up Transfer Trail to the quarry, I observed six "Heavy Truck Traffic" signs at various points along the road. Per the January 14, 2011 BLM letter to previous operator CalX regarding parking and access on Transfer Trail: "CalX will install a metal sign at the intersection of Transfer Trail Road and Traver Trail Road. The sign will be approximately 2 feet by 4 feet in size and will read: Caution, Semi Truck Traffic, Mine in Operation 7 Days a Week, Park in Designated Areas Only, Do Not Block Road." The 2011 letter further states: "CalX will install "Heavy Truck Traffic" signs at multiple points along Transfer Trail Road." These requirements are satisfied.



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I observed a stormwater detention and spillway structure at the intersection of the unnamed drainage and Transfer Trail switchbacks, approximately 0.7 miles north of the Traver Trail and Transfer Trail junction.

At the entrance gate to the operation, I observed a Rocky Mountain Resources sign and an open gate. Both sides of the gate were installed. There was a stormwater spillway at the gate as well. The gate, a scale shack, and a scale were approved under 43 CFR 3809 in a BLM letter dated November 20, 1986 which states: "The installation of a gate, scales, and scale shack is approved subject to item 3b(3) of the reclamation plan submitted by Mid-Continent Resources, Inc." The sign and gate were recently granted an occupancy authorization under 43 CFR 3715 in a letter dated January 9, 2017. The scale and scale shack that were previously located at the gate were not present, having been removed between my April 12, 2016 and January 30, 2017 inspections. Haul trucks are currently weighed on a digital scale located on the south side of the mill building.

I drove into the quarry on the lower access road and took photos at the photopoint established at the junction between the middle road and the lower road. There was a stormwater detention and spillway structure halfway along the lower road.

Mill Bench

On the mill bench, I took photos from my established photopoint. Two deer were observed on the west side of the mill bench.

As noted in my March 12, 2016 inspection report and observed during subsequent inspections as well as this inspection, portions of the Mid-Continent Quarry operations including the currently existing mill bench are located outside of the approved 1989 Plan of Operations Modification permit boundary. Records of approvals for the permitted boundary vary between the BLM and DRMS. The Mid-Continent Quarry operations are currently considered to be within the DRMS-approved permit boundary. DRMS permit boundary markers were observed at various locations surrounding the area of surface disturbance. On June 3, 1992, DRMS approved Amendment 2, which extended the permit boundary and increased the permitted area from 15.7 acres to 34.4 acres (other DRMS records state a permitted boundary of 32.78 acres) in order to include an area affected by crusher fines washout from the lower bench of the quarry. There is no record of approval for this proposal in BLM records. On March 8, 2018, DRMS subsequently updated its records with Administrative Revision 1 (AD-1), which corrects the existing permit boundary to 38 acres. BLM records reflect an approved permit area of 15.7 acres in the text of the Plan of Operations from the 1989 Amendment 1 (although the map included in the amendment shows the acreage to be approximately 24 acres), which was approved by the BLM on July 21, 1989. When measured by aerial imagery in ArcGIS, the currently disturbed area is calculated to be approximately 23 acres.

A stormwater retention pond is located on the southwestern side of the mill bench. The retention pond contained water during my visit. The most recent precipitation event was in the early morning of August 27, 2018. Stormwater management is briefly addressed in the 1982 Plan of Operations and 1989 Plan of Operations modification:

- The 1982 Plan of Operations describes water diversion and impoundments: "One short diversion ditch from one small intermittent stream bed to another will be constructed to divert runoff from [sic] stockpile areas. See Exhibit C-2 for specific location. A culvert will be placed under the haul road where it crosses the [sic] intermittent stream bed in the permit area. No sediment [sic] are believed necessary because runoff from the disturbed areas will be minimal and there will be no contaminating (toxic)



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materials utilized or stored in those areas. All natural or diverted water courses will be riprapped and all pad or working areas will be graveled. The quarry itself [sic] obviously solid rock. All water courses that are diverted [sic] be returned AOC or designed (rock, meandering, etc.) so [sic] to not chance the hydrologic balance of the area. We believe there will be less sediment produced from [sic] area than from premining conditions.”

- The 1989 Plan of Operations modification states: “Runoff from the affected areas is minimal because they are located at the head of a dry hollow. No contaminating (toxic) materials are utilized or stored at the quarry site.”

Per 43 CFR 3809.420(b)(5): “all operators shall comply with applicable Federal and state water quality standards, including the Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 et seq.).” The 2015 Colorado River Valley Field Office Resource Management Plan, Appendix K – Best Management Practices (BMPs) and Conservation Measures states: “MIN-17: Before activities take place, every pad, access road, or facility site will have an approved surface drainage plan (storm water management plan) for establishing positive management of surface water drainage, to reduce erosion and sediment transport. The drainage plan will include adaptive BMPs, monitoring, maintenance and reporting. BMPs may include run-on/run-off controls such as surface pocking or revegetation, ditches or berms, basins, and other control methods to reduce erosion. Pre-construction drainage BMPs will be installed as appropriate.” The BMPs also state: “MIN-24: As detailed in the site plan for surface/storm water management, drainage from disturbed areas will be confined or directed to minimize erosion, particularly within 100 feet of all drainages. No runoff, including that from roads, will be allowed to flow into intermittent or perennial waterways without first passing through sediment-trapping mechanisms such as vegetation, anchored bales or catchments.”

Topsoil is stored on the far western side of the mill bench. As in past inspections, the soil stockpile appeared to be at approximately 2:1 slope and the quantity inadequate for future site reclamation. According to the stipulations included in BLM’s approval of the Plan of Operations modification dated July 21, 1989: “The stored topsoil will be graded to a slope of approximately 4:1 to prevent erosion and to facilitate seeding and establishment of grasses.”

Several live mullein were observed growing on and around the topsoil stockpile. Thistle was observed growing north and south the stockpile as well. RMR had hired Native Habitat to spray the weeds in fall 2017. The weeds present require attention again. The July 21, 1989 Plan of Operations Modification authorization states: “5. The operator is responsible for eradication of noxious weeds on all disturbed areas during ongoing operations and through completion of reclamation.” The 2015 Colorado River Valley Field Office Resource Management Plan, Appendix K – Best Management Practices (BMPs) and Conservation Measures states: “WEED-17: Inspect and document all ground-disturbing activities in noxious weed infested areas for at least three growing seasons following completion of the project. For ongoing projects, continue to monitor until reasonably certain that no weeds are present. Plan for follow-up treatments based on inspection results.”

I observed a reclamation test plot on the northwest corner of the mill bench, north of the boneyard. RMR stated that the test plot was established in the late spring 2018. The plot consists of 3 inches of topsoil over crusher fines; it was seeded, hand-mulched, and tracked with a dozer. The soils within the test plot were very hard and had a crust on top. Grass establishment did not have a high level of success.

In the boneyard I observed scrap metal, stacked pallets, a portable restroom, tires, hazardous material storage, and various supplies. I observed a highway diesel tank within a metal trough, which served as secondary



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containment. There was also a grader, two large trailers, a personal vehicle, and two propane tanks behind concrete barriers.

Within the mill building, containers of lubricants were stored on spill pallets. The 2015 CRVFO RMP – Appendix K BMPs state: “MIN-7: Project materials which could be a hazard to public health, safety or resource value will be stored in appropriate secondary containment. No oil or lubricants will be drained onto the ground surface.” The mill facility was approved in BLM correspondence dated June 15, 2009. Per 43 CFR 3809.420 (b) (13): “During all operations, the operator shall maintain his or her structures, equipment, and other facilities in a safe and orderly manner.”

Mine Benches

While walking up to the east side of the production bench, I observed three small benches/landings. The lowest landing contained scrap wood. The middle landing contained a personal vehicle, a dozer with a ripper, and a storage container. The upper landing contained boulder storage and a large diesel tank with secondary containment.

Equipment on the production bench consisted of an excavator and a crusher. The crusher was not operating during my visit. Additional items on the production bench include a water tank for dust suppression and an electric panel.

Materials on the production bench included two large piles of crusher fines and four smaller stockpiles of crushed rock as well as several large stockpiles of boulders.

There are currently two main mine benches within the quarry. The lowest mine bench is separated from the production bench by a 30-40' tall slope of fractured rock. The lowest mine bench is approximately 600 feet long and 20 feet wide, with a 70 foot tall highwall above it. The western portion of the quarry has an additional small bench between the lowest and second bench that narrows and terminates to the east. The second mine bench is approximately 600 feet long and 20 feet wide, with a 50 foot tall highwall above it. The uppermost mine bench narrows and terminates to the east. There is an additional upper mine bench in development on the far west side of the quarry.

Quarrying activities include a combination of using an excavator attached with rotary rock cutters and drill-and-blast. The most recent blast occurred on October 5, 2017. Per the June 15, 2009 BLM authorization letter, neighboring property owners were notified in advance of blasting. On December 13, 2017, RMR was granted a winter timing limitation exception for quarrying operations (crushing and screening only) between December 15 and April 15. According to the 1982 Plan of Operations (Exhibit D, Section 4. Blasting Plan): “Limestone is quarried by developing benches in the solid rock with the bench width being at least twice the height of the high wall.” This statement does not match what currently exists on the mine benches. Additionally, according to the 1989 approved Plan of Operations modification: “Only one quarry bench will be worked at a time. Bench widths will not exceed 60 feet and the length of the portion being quarried will be approximately 300 feet.” Any upcoming Plan of Operations modification must include an update to the mining plan and mine bench design.

2016 Exploratory Drilling

On January 19, 2018, I was informed that RMR had conducted exploratory drilling in December 2016. This drilling was performed without BLM authorization. The drilling consisted of six exploratory drill holes (no



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coring). Five of the six drill holes are within the BLM-approved permit boundary; six are within the DRMS-approved permit boundary. The holes had been backfilled with cuttings and the surface disturbance reclaimed. The 1982 Plan of Operations for the Mid-Continent Quarry does not include an exploration component and there is no existing authorization for exploratory drilling within or around the quarry perimeter in the August 18, 1982 Plan of Operations approval. There is a brief reference to exploration having been conducted between 1983-1985 in the 1989 Plan of Operations modification (AM-1); however, there is no record of approval for this activity in the July 21, 1989 Plan of Operations modification approval. On January 31, 2018, BLM sent email correspondence requiring RMR to contact BLM prior to any future exploratory drilling.

During this inspection, we visited two of the reclaimed 2016 exploratory drill holes; drill holes #5 and 6. Surface evidence of the remaining four holes (drill holes #1, 2, 3, and 4) have been obliterated by subsequent blasting operations. Drill hole #6, located on the western access to the upper mine benches, is no longer visible. The drill hole and pad was located in the road and subsequent grading operations have removed traces of this drill site. Only light colored cuttings that contrast with the surrounding overburden provide evidence of past drilling at this site. Drill hole #5, located on the access to the upper-most mine bench, has a larger volume of dark grey cuttings remaining on the surface. All six drill holes were located within existing disturbance. RMR stated that water was not encountered during drilling operations for any of the six holes.

Recommended Changes to Operations or Corrective Actions Needed

- Any proposed Plan of Operations Modification must include a permit boundary increase in order to create consistency between BLM and DRMS authorizations. Alternatively, the operator may reclaim surface disturbance to within the BLM-approved permit boundary.
- Redesign the quarry highwall and mine benches to conform with the 1982 Plan of Operations and 1989 Plan of Operations modification or provide an updated mining plan and mine bench design in a proposed Plan of Operations modification to reflect the current mine operations.
- Regrade topsoil stockpile to the 4:1 slope as stated in the 1989 Plan of Operations modification (Amendment 1) or include the current topsoil conditions in a proposed Plan of Operations modification.
- A comprehensive water management plan will be required in any future Plan of Operations modification (43 CFR 3809.401((b)(2)(iii))).
- The operator must perform noxious weed eradication per the 1989 Plan of Operations Modification.



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Photos



Photo 1. A "Heavy Truck Traffic" sign and the required caution signage is present at the intersection of Traver Trail and Transfer Trail.



Photo 2. At entrance gate, looking northeast to gate and RMR sign.



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Photo 3. Looking north to Lower Road and Middle Road junction photopoint.



Photo 4. Looking east to sediment and stormwater control feature along the Lower Road.



Photo 5. Looking west, north, and east from the mill bench photopoint.



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Photo 6. Looking southwest to the sediment/stormwater detention feature on the mill bench.



Photo 7. Looking west the topsoil stockpile on the mill bench.



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Photo 8. Looking north to the reclamation test plot on the northwest corner of the mill bench.



Photo 9. Looking north at mill facility from the southwest corner of the mill bench.



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Photo 10. Looking east at a diesel tank with secondary containment and a boulder stockpile on the top landing on the east side of the crusher bench.



Photo 11. Looking west from the crusher bench to the mine benches.



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Photo 12. Looking east to the quarry's mine benches (left) and crusher bench (right).



Photo 13. Looking north to drill hole #6 on the mine bench access road. Clipboard for scale. Note thistle to the north of the clipboard.



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Photo 14. Looking north to drill hole #5. Notebook for scale.



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Site Map

