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

General Information	
Date	3/7/2018
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	2.5 hours
Attendees	Jessica Lopez Pearce, BLM Geologist
	Bobby Wagner, RMR Aggregates, Inc. Director of Operations
	Justin Olin, RMR Aggregates, Inc. Mine Superintendent

Summary

I conducted an inspection of the RMR Aggregates, Inc. Mid-Continent Quarry on March 7, 2018. I visited the Transfer Trail access road, mill bench lower road, production bench, backfilled Dec 2016 exploratory drill holes, and mill bench. Secondary containment of oils, lubricants, and hazardous materials require consistent attention. RMR must address mine bench design, topsoil slope requirements, and water management in any forthcoming proposed Plan of Operations modification.

New Remarks

On March 7, 2018, I inspected the RMR Aggregates, Inc. Mid-Continent Quarry and was joined by Bobby Wagner and Justin Olin from RMR Aggregates, Inc. This site visit was a regular inspection per 43 CFR 3809.600. The weather was clear and sunny; temperatures were in the 40's.

Transfer Trail

I began my inspection on the access road to the quarry. At the intersection of Traver Trail and Transfer Trail, I observed 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 related to 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 have been fulfilled.

At the entrance gate to the operation, I observed a RMR Aggregates sign and an open gate. Only the west side of the gate was installed; the east side of the gate was lying on the ground. 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.

At the mine office, located on the mill bench, I met Justin Olin and completed and signed a site-specific haz-mat awareness training checklist. Then, Bobby Wagner, Justin Olin, and I walked up to the production bench.

Mine Benches

There are currently two mine benches and a third mine bench in development on the far west side. The lowest mine bench is separated from the production bench by a 55-foot tall slope of fractured rock. The lowest mine bench is approximately 600 feet long and 10-50 feet wide, with a 55 foot tall highwall above it. The second mine bench is approximately 600 feet long and 15 feet wide, with a 60 foot tall highwall above it. 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.

While walking up to the east side of the production bench, I observed three small benches or landings. The lowest landing contained vehicle parking and a small metal shed. The shed contained plastic containers of hydraulic oil and diesel exhaust fluid. These items require secondary containment. 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.” Additionally, per BMP MIN-50: “Standard secondary containment shall hold 110% of the capacity of the largest single tank it contains and be impervious to any oil, glycol, produced water, or other toxic fluid for 72 hours. Earthen berms must be compacted and of fine material that will prevent seepage of any spill to surrounding area.” While I was on-site, Justin contacted a quarry employee to retrieve the containers and put them within secondary containment. The middle landing contained a large diesel tank with secondary containment and storage. The upper landing contained boulder storage.

Equipment on the production bench consisted of a dozer, and excavator, a grizzly, and a crusher. The crusher was not operating during my visit due to a broken belt.

Material stockpiles on the production bench included 10,000 tons or class 1 road base, several small piles of 3/8”, several small piles of 3/16”-1/2”, and class 6 road base piles.

During my last inspection on September 6, 2017, I observed two types of noxious weeds on the west side of the production bench; mullein and thistle. Justin informed me that RMR hired Native Habitat to spray the weeds last fall after my inspection. 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."

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 coring) 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, I 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) had been obliterated by subsequent blasting operations. Drill hole #6, located on the western access to the upper mine benches, had some moisture-related material swelling at the surface but no other evidence of surface disturbance. Drill hole #5, located on the access to the upper-most mine bench, had a larger volume of 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.

Mill Bench

On the mill bench, I took photos from my established photopoint.

Issues were noted and addressed within the mill building. When we first entered the east side of the mill building, the mill was operating. However, Justin and Bobby noted a damaged conveyor belt from the secondary crusher to the mill and subsequently powered it down to make repairs. On the west side of the mill building interior, I observed a 50-gallon tank of hydraulic oil outside of secondary containment. Justin and Bobby moved the barrel onto a spill pallet while I was present. Other 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."

In the boneyard west of the mill facility, 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 containment. There was also three large trailers, a personal vehicle, and two propane tanks behind concrete barriers.

Topsoil is stored on the far western side of the mill bench. The patches of mullein noted during my previous inspection had been sprayed during Native Habitat's fall 2017 visit. 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."

Justin, Bobby, and I discussed the placement and timeline for several small reclamation test plots, which will be placed on the west side of the mill bench.

Stormwater Management

A stormwater retention pond was located on the southwestern side of the mill bench. The retention pond contained snow and water during my visit. RMR had also cleaned and/or improved three other sediment control structures related to the operation. A stormwater detention and spillway structure halfway along the lower road had been improved. A spillway at the gate had been improved. Additionally, the stormwater detention and spillway structure at the intersection of the unnamed drainage and Transfer Trail switchbacks had been cleaned and improved. These structures are important aspects of the operation; however, they are only 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) 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 sold 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."

A comprehensive water management plan will be required in any future Plan of Operations modification (43 CFR 3809.401((b)(2)(iii)). 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 BPMs 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."

Recommended Changes to Operations or Corrective Actions Needed

- While all secondary containment of petroleum-based and hazardous material issues were resolved during my site visit, RMR must remain vigilant in secondary containment requirements.
- Redesign the quarry highwall and mine benches to conform with the 1982 Plan of Operations and 1989 Plan of Operations modification or include 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.
- RMR must submit a surface drainage plan (or stormwater management plan) with any proposed Plan of Operations modification.

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.

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

Photo 4. Looking eastward at the upper (left), middle (center), and lower (right) small landings on the east side of the production bench.

Photo 5. Inadequate secondary containment inside small storage shed on the lower small landing.

Photo 6. Looking west on production bench to dozer, excavator, and crusher.

Photo 7. Looking north to drill hole #6. Clipboard for scale.

Photo 8. Looking west to drill hole #5. Clipboard for scale.

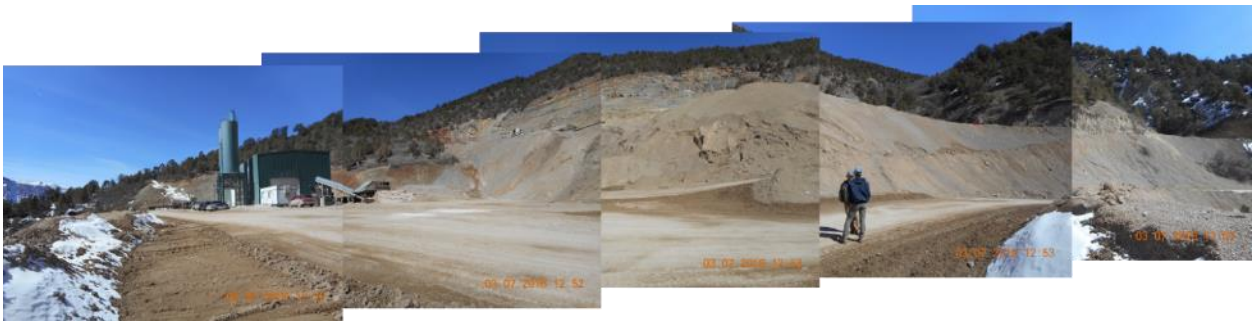


Photo 9. Looking north from central mill bench photo point

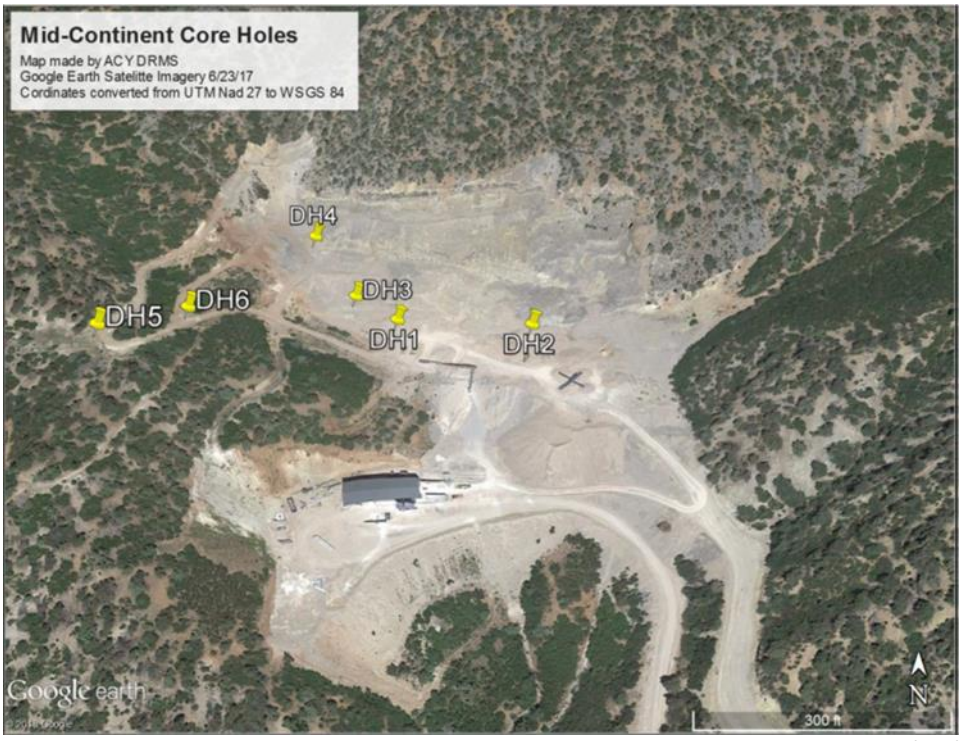
Photo 10a. Before: 55-gallon barrel of hydraulic oil without secondary containment inside the mill building.

Photo 10b. After: 55-gallon drum of hydraulic oil on spill pallet inside the mill building.

Photo 11. Looking west to boneyard and topsoil stockpile on the mill bench.

Photo 12. Looking south from mill bench at sediment control structure.

Photo 13. Looking east from the southwest corner of the mill bench.



Map 1. Dec 2016 exploratory drill holes (map created by A. Yeldell, DRMS, 1/14/2018).