COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Allison Gravel Pit	**MINE/PROSPECTING ID#:** M-2001-010	**MINERAL:** Gravel	**COUNTY:** Elbert
INSPECTION TYPE: Monitoring	**INSPECTOR(S):** Amy Eschberger	**INSP. DATE:** February 17, 2016	**INSP. TIME:** 12:30
OPERATOR: Elbert County	**OPERATOR REPRESENTATIVE:** Ted Dole	**TYPE OF OPERATION:** 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** None	**BOND AMOUNT:** $0.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:** Amy Eschberger	**SIGNATURE DATE:** December 30, 2016

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS---------- Y	(FN) FINANCIAL WARRANTY-------- NA	(RD) ROADS---------- Y
(HB) HYDROLOGIC BALANCE---------- Y	(BG) BACKFILL & GRADING---------- Y	(EX) EXPLOSIVES--------- NA
(PW) PROCESSING WASTE/TAILING---- Y	(SF) PROCESSING FACILITIES------- N	(TS) TOPSOIL---------- Y
(MP) GENL MINE PLAN COMPLIANCE- Y	(FW) FISH & WILDLIFE---------- N	(RV) REVEGETATION---- Y
(SM) SIGNS AND MARKERS---------- Y	(SP) STORM WATER MGT PLAN---- Y	(CI) COMPLETE INSP---- Y
(ES) OVERBURDEN/DEV. WASTE--------- Y	(SC) EROSION/SEDIMENTATION--- Y	(RS) RECL PLAN/COMP-- Y
(AT) ACID OR TOXIC MATERIALS------- NA	(OD) OFF-SITE DAMAGE---------- Y	(ST) STIPULATIONS------- NA

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

This was a normal monitoring inspection of the Allison Gravel Pit (Permit No. M-2001-010) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). Mr. Ted Dole represented the operator, Elbert County during the inspection. The site is located approximately 3 miles south of Matheson, Colorado. The site can be accessed from the west off of Co Rd 149. The affected land is owned by Bill Allison. The approved post-mining land use is rangeland.

This is a 112c operation permitted for 80 acres (**see enclosed Google Earth image of site**) to mine sand and gravel for use in county road construction and maintenance. This is an intermittent operation that is active less than 180 days per year. The approved mining plan includes a series of six mining phases (A-F), in which the operation moves west to east through the side of a gently sloping gravel terrace. Concurrent reclamation is to occur during operations. Salvaged topsoil will be stored along the perimeter of the disturbed area. The maximum disturbed area at any time is 40 acres, after approval of Technical Revision No. 2. No processing of mined material will occur on site. The operation will maintain a 50 foot setback from the property fence that runs adjacent to the eastern permit boundary.

Two small drainages are present within the permit area. These drainages only carry water during big storm events, during which they flow southward toward Big Sandy Creek. The operation will mine through the upgradient portion of both drainages. The Division's approval of Technical Revision No. 4 (TR-4) allowed the operation to construct a simple pit drainage structure in the northeast corner of the current pit. The drainage design includes removal of two feet of dirt to keep a 10-to-1 drop, and installation of a concrete block with a layer of 5-12 inches of rip rap on the outflow side. A berm will be installed along both sides of the drainage to help retain sediment-laden water on the pit side of the concrete block. Any sediment retained in the impoundment will be monitored and cleaned out on a regular basis. The Division informed the operator in its TR-4 approval letter that if stormwater is retained on site for longer than 72 hours, a Substitute Water Supply Plan must be obtained from the Office of the State Engineer.

The approved reclamation plan calls for grading all mined slopes to 2H:1V or flatter, replacing any remaining overburden, replacing topsoil at an average depth of four inches, and revegetating the site to rangeland with a native grass seed mixture recommended by the local Natural Resources Conservation Service. No stormwater control structures will remain after reclamation.

At the time of the inspection, it was partly cloudy and windy with some snow cover remaining. A proper permit sign was posted at the main entrance to the site off of Co Rd 149 (**Photo 1**). The affected land boundary was delineated with wooden stakes. The site was not active during the inspection, and no equipment was present on site. However, according to Mr. Dole (and as reported in annual reports), mining activity occurs at the site every year (e.g., extraction, hauling off from stockpiled material), which is compliant with its intermittent status. Approximately 6.4 acres of disturbed land (mining phase A), located south of the haul road and west of the active pit, has been reclaimed (**Photos 2 and 3**). All disturbed slopes in the reclaimed area were graded to 3H:1V or flatter, and the land was retopsoiled and revegetated with native grasses. The Division observed mainly blue grama and sideoats grama, with some switchgrass growing in the reclaimed area.

The operation also reclaimed approximately 1.2 acres located north of the haul road, and west of the active pit (**Photo 4**). A portion of this disturbed area had included a stormwater structure that was constructed in the drainage located west of the current active pit. The Division cited a problem in the inspection report for 09/27/2010, because the drainage structure was improperly impounding surface runoff. The problem was considered abated on 12/8/2010 when the Division received a response from the operator indicating the impoundment had been drained in a controlled manner, and the berm was modified to allow surface water to

pass. Since that time, active mining has proceeded eastward, thus the drainage structure has been removed and the area reclaimed.

The active pit is located primarily in mining phases B and C. The operation has excavated approximately 40-50 feet deep into the hillside. The highwalls are being maintained at slope gradients of approximately 3H:1V (**Photos 5-8**). The southern pit wall has been reclaimed, and appears to be stable with native grasses and some annual weeds established across the slope (**Photos 9 and 10**). However, the active pit walls showed signs of erosional damage with abundant rilling and some minor gullies beginning to form (see Photos 5-8). Pursuant to Rule 3.1.6(3), all surfaces of the affected land, including spoil piles, shall be stabilized and protected so as to effectively control erosion. Therefore, the Division recommends the operator repair the erosion damage and work to protect the stability of mined slopes throughout the operation. Any slopes that will not be redisturbed by the operation should be retopsoiled and revegetated as soon as possible.

The operation stores mined material and recycled asphalt on the pit floor (**Photo 11**). Salvaged topsoil is stockpiled along the northern and southern edges of the active pit. These stockpiles appeared to be stable with good grass cover (**Photo 12**). A fresh topsoil stockpile stored north of the active pit was recently created from stripping the northeast area for construction of the drainage structure. Mr. Dole indicated this stockpile would be seeded for stabilization as soon as practical.

The drainage structure approved in TR-4 has been constructed to the northeast of the active pit (**Photos 13 and 14**). The structure appears to have been constructed in accordance with the approved design. The Division observed a minor amount of snowmelt water being retained in the impoundment. As the edge of the structure comes very close to the northern permit boundary, the operator should be sure that sediment does not leave the permit area. The operator should be advised the Division would consider such occurrence to be offsite damage, which would require enforcement action.

The Division estimates the operation has disturbed a total of 22.62 acres, including the active pit area and associated drainage structure (15 acres) and the reclaimed areas located west of the active pit (7.62 acres). This amount of disturbance is compliant with the approved maximum disturbance at any time of 40 acres. The operator appears to be following the approved mining plan, including reclaiming disturbed land as the operation moves eastward.

This concluded the inspection.

PHOTOGRAPHS

Photo 1. View of permit sign posted at main site entrance off of Co Rd 149.

Photo 2. View of western portion of reclaimed area located south of main haul road and west of active pit. Note slopes graded 3H:1V or flatter, and native grasses established across area.

Photo 3. View of eastern portion of reclaimed area located south of main haul road and west of active pit. Note slopes graded 3H:1V or flatter, and native grasses established across area.

Photo 4. View of portion of reclaimed area (indicated) located north of main haul road and west of active pit. Note topsoil stockpile at right.

Photo 5. View of western portion of northern pit wall, showing slope gradients of approximately 3H:1V. Note presence of erosional rilling along slope.

Photo 6. View of eastern portion of northern pit wall, showing slope gradients of approximately 3H:1V. Note presence of erosional rilling along top of slope.

Photo 7. View of northern portion of eastern pit wall, showing slope gradients of approximately 3H:1V. Note presence of erosional rilling and some small gullies forming along top of slope.

Photo 8. View of southern portion of eastern pit wall, showing slope gradients of approximately 3H:1V. Note presence of erosional rilling along slope. Portion of reclaimed southern wall shown in foreground.

Photo 9. View of eastern portion of reclaimed southern pit wall, showing 3H:1V or flatter slope gradient and established native grasses with some annual weeds.

Photo 10. View of western portion of reclaimed southern pit wall, showing 3H:1V or flatter slope gradient and established native grasses with some annual weeds.

Photo 11. View looking northwest across pit from southern pit wall, showing stockpiles of mined material and recycled asphalt stored on pit floor.

Photo 12. View of topsoil stockpile stored at northern edge of pit. Note stockpile is stable with vegetative cover.

Photo 13. View looking southwest, showing drainage structure constructed at northeastern edge of pit, as approved in TR-4.

Photo 14. View looking west, showing rip rap portion of drainage structure constructed at northeastern edge of pit, as approved in TR-4.

Inspection Contact Address

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Simla, CO 80835

Enclosure: Google Earth image of site

CC: Wally Erickson, DRMS
Peter Hays, DRMS

M2001-010 / Allison Gravel Pit / Elbert County

Red Outline = 80 acres = Approved permit area
Purple Outline = 7.62 acres = Reclaimed areas (1.22 acres N of haul road + 6.4 acres S of haul road)
Blue Outline = 15 acres = Disturbed area used in active operation (area for NE stormwater drainage approximated)
(Imagery data from 09/17/2014)