



**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY**  
**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.

<b>MINE NAME:</b> Douglas County Sand & Gravel	<b>MINE/PROSPECTING ID#:</b> M-1983-089	<b>MINERAL:</b> Sand and gravel and	<b>COUNTY:</b> Douglas
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Tyler V. O'Donnell	<b>INSP. DATE:</b> January 14, 2016	<b>INSP. TIME:</b> 11:15
<b>OPERATOR:</b> Douglas County Sand & Gravel, LLC	<b>OPERATOR REPRESENTATIVE:</b> John Miner	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	

<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> Complete Bond	<b>BOND AMOUNT:</b> \$98,189.00
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> <i>Tyler O'Donnell</i>	<b>SIGNATURE DATE:</b> March 10, 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----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SW) STORM WATER MGT PLAN---- <u>Y</u>	(CI) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	(ST) STIPULATIONS----- <u>N</u>

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

## **OBSERVATIONS**

This normal routine monitoring inspection was conducted by Tyler O'Donnell of the Division of Reclamation, Mining and Safety (Division). Douglas County Sand & Gravel, LLC, the Operator, was represented by John Miner during the inspection.

The Douglas County Sand and Gravel Pit is located in Douglas County approximately 5 miles south of Castle Rock, Colorado. The Douglas County Sand and Gravel Pit is a 66.50-acre 112c Construction Materials Reclamation Permit with a maximum allowed disturbance of 57.8 acres. The primary commodity being mined at the site is sand and gravel. The 112c Construction Materials Reclamation Permit was issued in November of 1983. The approved post-mining land use is rangeland. The mine site was surrounded by the following land uses: residential, agricultural, and rangeland.

No problems or possible violations were observed during the inspection. During the inspection, the sky was slightly overcast. There was partial snow cover, covering approximately 50% of the ground. The site was active during the inspection, it appears that the site sees frequent mining activities. There were several pieces of mining equipment and a processing plant located within the central portion of the permitted site. The Operator had several other pieces of equipment and parts for mining equipment and processing equipment scattered through the southern portion of the site. At the present time it appears that the mining operation had affected approximately 48 acres. The Operator has been conducting partial concurrent reclamation. The majority of the area previously affected by the mining operation, has been graded to approximately 2H:1V or flatter. Portions of the deep pits have been backfilled. The graded areas have not had topsoil spread over them, the graded areas have had volunteer vegetation establish on the slopes.

### **Backfilling and Grading:**

The Operator is in the process of backfilling the deep excavation in the northern portion of the site (see photo 1). The Operator's representative stated they hoped to backfill the deep excavations by the end of this year. The Operator has graded portions of the pit to 2H:1V or flatter. There were several stockpiles of product scattered throughout the affected area and around the processing plant. There was a highwall along the eastern permit boundary. The highwall had an average height of approximately 20 feet. The highwall had an approximant slope of 1H:1V to just flatter than 1.5H:1V. When completing final reclamation, the Operator will need to grade all slopes to 3H:1V or flatter to comply with the approved reclamation plan.

### **Financial Warranty:**

The current amount of financial warranty the Operator has on deposit with the State is \$98,189. 00. The reclamation cost estimate for this site was updated during the file review for this inspection. It was determined that the current required financial warranty amount is adequate.

### **Hydrologic Balance:**

The bottom of the pit was mostly dry. There were a few low laying areas that had damp soil and/or a little standing captured stormwater. When conducting final grading for reclamation the Operator will need to try to control surface drainage to create as much positive drainage as possible. There was no evidence of excessive erosion. There appeared to be no significant impacts to the prevailing hydrologic balance.

### **Gen. Compliance With Mine Plan:**

The operation appeared to be following the approved mine plan. All mining activity appeared to be within the approved permit boundary.

Roads:

The access road was stable and well maintained.

Reclamation Success:

The Operator has successfully backfilled and partially graded portions of the pit walls to 2H:1V or just a little flatter. Portions of the disturbed land have begun to fill in with volunteer vegetation. This site has not yet undergone final reclamation. The Operator will need to backfill the deep excavations and grade all slopes to 3H:1V or flatter prior to spreading topsoil and conducting final seeding. The Operator should grade the pit floor in a manner that promotes positive drainage and prevents excessive stormwater capture in the low laying areas.

Revegetation:

There was plant growth on the stockpiles and throughout the rest of the affected area. The growth in the affected area appeared to be volunteer vegetation, comprised of grasses and a few annual weeds. A few noxious weeds were observed within the affected area, weeds observed are; thistle, knapweed, and mullein, the thistle and knapweed were dormant during the inspection and could not be properly identified. At the present time the presence of noxious weeds will not be cited as a problem due to the limited number observed weeds. It appears that the weeds had been sprayed late in the summer. The Operator's representative stated that they would continue to monitor and treat noxious weeds within the affected land boundary. The Operator is advised to continue to monitor and treat noxious weeds as they appear within the affected land boundary.

Erosion/Sedimentation:

There was no evidence of excessive erosion (rills, gullies, or sediment fans). Some of the graded slopes have small rills beginning to form on the slopes. The Operator will need to repair and stabilize the erosion damage.

Signs and Markers:

A mine I.D. sign was located at the entrance to the mine site. The permit boundary was marked by t-posts and a barbwire fence.

Topsoil:

There were well-vegetated topsoil berms around portions of the perimeter of the affected lands. It appears the topsoil berms have been idle for a long period of time, no recent heavy equipment marks were observed in the stockpiles/berms. The Operator is also mixing organic material with the topsoil as approved under Technical Revisions no. 1. There appeared to be an adequate amount of topsoil stockpiled in the berms to reclaim the site. Once final backfilling and grading of overburden has been completed, the perimeter topsoil berms will need to be spread throughout the site. The berms that will remain after mining described in reclamation permit amendment No.1 will need to be graded to 3H:1V or flatter, be covered with adequate topsoil, and be adequately revegetated.

**Inspection Contact Address**

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CC: Wally Erickson, DMRS

## **PHOTOGRAPHS**



**Photo 1:** Northern pit being backfilled.



**Photo 2:** Topsoil Berm along the western affected land boundary.



**Photo 3:** Overview of the active mining area.



**Photo 4:** processing plant.