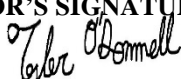




COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

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.

MINE NAME: Thornburg Pit	MINE/PROSPECTING ID#: M-1983-060	MINERAL: Sand and gravel	COUNTY: Adams
INSPECTION TYPE: Monitoring	INSPECTOR(S): Tyler V. O'Donnell	INSP. DATE: December 7, 2015	INSP. TIME: 09:00
OPERATOR: Thornburg Family Limited Partnership	OPERATOR REPRESENTATIVE: Stanley Thornburg	TYPE OF OPERATION: 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$14,500.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: February 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>N</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>N</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SW) STORM WATER MGT PLAN---- <u>N</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>N</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). Thornburg Family Limited Partnership, the Operator, was represented by Stanley Thornburg during the inspection.

The Thornburg Pit is located in Adams County approximately 2 miles northeast of Bennett, Colorado. The Thornburg Pit is a 77.94-acre 112c Construction Materials Reclamation Permit with a maximum allowed disturbance of 53 acres. The primary commodity being mined at the site is sand and gravel. The original 110c permit was issued in September of 1983. The permit was converted to an 112C reclamation permit in April 1989. 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 clear and the ground was dry. The site was not active during the inspection; however, 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. At the present time it appears that the mining operation had affected approximately 4 to 5 acres. The Operator has been conducting adequate concurrent reclamation. The majority of the area previously affected by the mining operation, has been graded to 3H:1V or flatter. 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 has graded portions of the pit to 3H:1V or flatter. There were several stockpiles of product scattered throughout the affected area and around the processing plants. There was a highwall around the processing plant. The highwall had an average height of approximately 6 feet. The highwall had an approximated slope of 1.5H:1V to just flatter than 2H: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 \$14,500, the required financial warranty is 10,700.00. 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:

Portions of the site daylight to the West into the floodplain of Kiowa Creek. The bottom of the pit was dry. There was no evidence of excessive erosion. There appeared to be no significant impacts to the prevailing hydrologic balance. All stockpiles appear to be out of the 100-year floodplain as required in the approved permit.

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 graded portions of the pit walls to 3H:1V or 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 repair all minor erosion features and spread topsoil prior to final seeding.

Revegetation:

There was some plant growth on the stockpiles and throughout the rest of the disturbed area. The growth in the disturbed area appeared to be volunteer vegetation, comprised of grasses and a few annual weeds. Noxious weeds observed within the disturbed area 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. The Operator's representative stated that they would continue to monitor and treat noxious weeds within the permit boundary. The Operator is advised to continue to monitor and treat noxious weeds as they appear within the disturbed area.

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 was a well-vegetated topsoil stockpile located in the northern portion of the permitted site. It appears the topsoil stockpile has been idle for a while, no recent heavy equipment marks were observed in the stockpile. There appeared to be an adequate amount of topsoil to reclaim the site.

Inspection Contact Address

Stanley Thornburg
Thornburg Family Limited Partnership
50747 E. 38 Avenue
Bennett, CO 80102

CC: Wally Erickson, DRMS

PHOTOGRAPHS



Photo 1: Active highwall. Mining is progressing to the north and east.



Photo 2: Active highwall left hand side of the photo. Partially reclaimed slope in the background.



Photo 3: Active pit in the foreground. Partially reclaimed slope in the background. Minor rills will need to be repaired.



Photo 4: Adequate vegetative cover on the topsoil stockpile.