




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: Two Rivers Sand, Gravel and Reservoir Project	MINE/PROSPECTING ID#: M-2022-013	MINERAL: Sand and gravel	COUNTY: Weld
INSPECTION TYPE: Preoperation Inspection	INSPECTOR(S): Robert Zuber, P.E.	INSP. DATE: June 14, 2022	INSP. TIME: 07:45
OPERATOR: Raptor Materials LLC	OPERATOR REPRESENTATIVE: Garrett Varra, Bradford Janes, Brad Jones	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: No Bond Held	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: September 13, 2022	

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

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

OBSERVATIONS

APPLICATION BACKGROUND

The Construction Materials Regular (112) Operation Reclamation Permit application was received by the Division on April 5, 2022. The application was deemed complete on April 18, 2022. Several objections were received by the Division and forwarded to the applicant. Comment letters from History Colorado, the Division of Water Resources, and Colorado Parks and Wildlife were received and forwarded to the Applicant. The application has not been approved by the Division. An adequacy letter was sent on June 24, 2022, and the Division is awaiting responses.

The application proposes a 409-acre site, with all of that area designated as affected. The eastern portion of the site is located approximately one-half mile southwest of the confluence of the South Platte River (to the south and east) and the Big Thompson River (to the north). Some of the site is in the town limits of Evans, Colorado and lies directly south of 54th Street Road.

Between the proposed mine and the confluence is the site of a wetland mitigation bank, managed by Westervelt Ecological Services in conjunction with Weld County. The entire affected area of the proposed site is west of this project.

The majority of the site has been farmed for many years and remains agricultural land. Topsoil (aka, a "plow layer" per Exhibit D of the application) is estimated to vary from six to eight inches. The total soil depth varies, with an estimated maximum depth of four feet. Gravel is found between the soil and sandstone. The depth to the Fox Hills Sandstone is estimated to vary from 30 to 45 feet.

Groundwater elevations are approximately five to eight feet below the surface. Proposed pits will be excavated to a depth of approximately 40 feet. Regarding groundwater and the constructed reservoirs, the adequacy letter requested more detail in the mining and reclamation plans, including a discussion of the possible plan for clay lining the reservoirs and the possible need for approval from the Division of Water Resources.

If approved, the plan for this site includes perimeter slopes of pits mined at 1.25H:1V grade (or flatter) and reclaimed at a 3H:1V grade (or flatter).

Proposed processing onsite, at the northwest corner, will entail screening and crushing. The proposed processing area is approximately 16 acres, and the proposed wash pond (east of processing) is approximately six acres.

Regarding topsoil, the adequacy letter requested more detail in the reclamation plan for storage and application.

The proposed post-mining land use for much of the site is developed water resources. Other portions of the site will be revegetated.

OBSERVATIONS FROM THE INSPECTION

This was a pre-operational inspection of the proposed Two Rivers Sand, Gravel and Reservoir Project conducted by Michael Cunningham and Rob Zuber with the Division of Reclamation, Mining and Safety (Division/DRMS) on June 14, 2022. Garrett Varra, Bradford Janes, and Brad Jones with Raptor Materials LLC (formerly Varra Companies, Inc.) were present during the inspection. The weather was cool and cloudy. The ground was dry.

Several notice signs were posted at entrances around the site. All of the observed notices are along the 396 Road (which runs through the site) and 54th Street Road (which runs along the north side of the site).

Much of the site is currently irrigated farmland, including grass hay. Hay was being cut during the inspection. Dirt roads circle the main portion of the site (which is between the rivers) and a dirt road accesses the area north of the Big Thompson River (the area where the Wash Pond and Material Processing Area are proposed). These roads were in functional condition during the inspection.

Material from the wetland mitigation bank project has been placed on the site, in the southeast portion of parcel 095934300004 (shown in Exhibit C-1). It was covered with yellow sweet clover during the inspection.

Along the south side of the site, a berm was observed. This berm continues along the rivers on the north and south sides of the site. It varies in height from four feet to 10 feet.

Most permanent man-made structures within 200 feet of the proposed affected area appear to have been identified by the applicant on the Existing Conditions Map (Exhibit C-1). The one exception noted during the inspection is an irrigation ditch on the south side. Many of the structures are related to the extraction of natural gas.

Stand pipes for piezometers were seen. Brad Jones noted that there are 12 around the site, and they are monitored by Raptor Materials staff.

The irrigation pond on the south side of the site held a large amount of water. The proposal is to use this pond during operations, and the outlet of this structure will be the discharge point for a permit with the Water Quality Control Division.

No large wetland areas were observed within the proposed permit boundary. An adequacy item in the Division adequacy review includes a requirement that the application provide a discussion on the efforts to minimize impacts on wetlands.

The proposed location of the conveyor crossing was observed. Mr. Janes noted that the location was chosen to minimize the need for pillars impacting the floodplain. The Big Thompson River is narrow at this location, there is a high bank on the south side, and there would be minimal need for tree trimming or removal.

Observed weeds include: tamarisk and Russian olive by the Big Thompson River; smooth brome, field bindweed, and thistle near the northwest corner of the site; white top in the northern part of site; thistle plants in the area where the Wash Pond is proposed.

A prairie dog colony is at the proposed area for processing, near the existing silage bins. A large amount of trash is also in this area.

Photographs taken during the inspection are attached.

Please contact me, Rob Zuber, with comments or questions at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203; by telephone at 720-601-2276; or by email at rob.zuber@state.co.us.

PHOTOGRAPHS



Northeast boundary (looking north)

- Material from mitigation bank on the left side of photo



Irrigated field (taken from south side berm)



Irrigation pond on south side of site



Irrigated field and natural gas facilities, near southwest corner of site



Notice sign at gate at southwest corner



Bradford Janes indicating the proposed location for the conveyor crossing of the Big Thompson River



Well near northwest corner of site



Tires and other trash beside silage bins, near the 54th Street Road

Inspection Contact Address

Garrett Varra, Bradford Janes, Brad Jones
Raptor Materials LLC
8120 Gage Street
Frederick, CO 80516

CC: Michael Cunningham, DRMS