




**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> Thunderbird Sand and Gravel	<b>MINE/PROSPECTING ID#:</b> M-2023-032	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Pueblo
<b>INSPECTION TYPE:</b> Pre-operation Inspection	<b>WEATHER:</b> Cloudy	<b>INSP. DATE:</b> December 13, 2023	<b>INSP. TIME:</b> 11:00
<b>OPERATOR:</b> Martin Marietta Materials, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Phillip Courtney	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	
<b>REASON FOR INSPECTION:</b> Pre-operation Inspection	<b>BOND CALCULATION TYPE:</b>	<b>BOND AMOUNT:</b> No Bond Held	
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None	
<b>INSPECTOR(S):</b> Joel Renfro Robert Zuber, P.E.	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> February 20, 2024	

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

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

## **OBSERVATIONS**

This was a pre-operational inspection of the proposed Thunderbird Sand and Gravel mine conducted by Joel Renfro and Rob Zuber with the Division of Reclamation, Mining and Safety (Division/ DRMS). Phillip Courtney with Martin Marietta Materials, Inc. was present during the inspection. **Photos 1-40** taken during the inspection are included with this report.

The Construction Regular Operation Reclamation Permit Application (112c) was submitted to the Division on September 6, 2023. The application was deemed complete by the Division on October 3, 2023. The current decision date is set for April 2, 2024. The Applicant published public notices as required by rule 1.6.2(d) for four consecutive weeks. The last notice was published on November 3, 2023. The public comment for the application ended on November 23, 2023. Comments were received by the Division from History Colorado during the public comment period and by the Division of Water Resources after the public comment period. No objections were received by the Division.

The proposed 112c sand and gravel operation permit area will be 543.5 acres and is located approximately 0.6 miles from Pueblo, CO. The maximum area of disturbance proposed by the applicant is also 543.5 acres. The proposed activities include surface mining for the extraction of construction aggregates, as well as on-site crushing and screening operations. During the inspection, the required notice sign was observed as per Rule 1.6.2(b). The proposed site entrance is situated east of Baxter Road.

The Applicant is proposing a project that will be executed in three phases: Phase 1, Phase 2, and Phase 3. The first phase will be focused on development and will involve the establishment of an aggregate plant, siltation ponds, and a freshwater pond in the western area of the site. After setting up these structures, roads for customers will be built from the entrance to the plant area, and an employee parking lot will be constructed next to the plant area. The topsoil will be mined and used to create screening berms along the northern boundary of the site, separating it from neighboring properties. In Phase 2, the applicant will mine the eastern cell (East Pit) located east of the power lines. The mining process will involve going below the water table, but only after obtaining a Substitute Water Supply Plan. In Phase 3, the applicant will mine the western cell (West Pit) located west of the power lines. For this phase, the applicant plans to line the cell and dry-mine it.

There are four siltation ponds proposed to the west of the West Pit. Thunderbird Lake will remain as a freshwater pond. Within the southern portion of the proposed West Pit, there are two unnamed ponds that appear to be mined out during Phase 3. The Excelsior Ditch runs along the northern edge of the proposed permit boundary. The Applicant does not intend to modify the ditch but may need to cross it to establish the screening berm in the northwest. The Applicant proposes East and West Pits may reach 200 feet from the top of the Arkansas River bank while mining and will be backfilled to 400 feet from the top of the river bank.

During Phase 1, any topsoil that is extracted will be stored in a stockpile located northwest of the site, along Baxter Road. This pile will act as a visual screening berm to separate the mining operation from neighboring properties. The Applicant has proposed storing topsoil piles to the north of the proposed West and East Pits. These piles will also act as screening berms to separate the operation from the neighborhood situated north of the site. A fence, shown in **Photo 37**, marks the proposed permit boundary. Screening berms will be placed to the east and west of this fence, with a gap being left where the power lines run through.

The plan is to use the mined area for water resource development by creating a reservoir with a combination of clay lining and a slurry wall. The slope of the reservoir will be reclaimed to a final grade no steeper than 3H:1V. To achieve this, the slopes will be backfilled in lifts of 1 foot or less, with each lift compacted using a

sheepsfoot roller. The Applicant intends to use the material generated on site for backfilling, but if they plan to import inert fill, they will submit a notarized letter in accordance with Rule 3.1.5(9). Once the mining is completed, the processing plant, scale house, and shop/office will be removed. All the disturbed areas above the water line will be re-soiled and reseeded to restore them to their natural state.

During the inspection, the entire area to the east of the proposed East Pit was inaccessible by vehicle and therefore was not observed. Although the Applicant does not propose any activity in this area, they wish to incorporate it into the permit area.

There is existing fencing on the site, but it does not officially mark the proposed permit boundary or affected area. It seems that some of the fencing, as seen in **Photo 37**, does align with the proposed permit boundary, but the Division will require accurate boundary markers to be installed as mandated by Rule 3.1.12(2) after the permit is approved.

Two small buildings located near the entrance were observed during the inspection . A pile of crushed concrete slabs was found in the eastern portion of the proposed East pit as well. Some existing wells were observed during the inspection as seen in **Photos 31, 38, and 39**. The Division was unable to locate every well shown in the Exhibit-G1 Map, just the three imaged in this report.

The site has a variety of vegetation including cottonwood trees, native grasses, and shrubs. Willow trees surround Excelsior ditch, Thunderbird Lake, and unnamed ponds. The area east of the Phase 2 pit is densely populated with trees, making it inaccessible by vehicle.

An adequacy review letter was issued by the Division on January 17, 2024. The Division is awaiting a response to the letter from the Applicant.

This concludes the report.

*Any questions or comments regarding this inspection report should be forwarded to Joel Renfro at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at (303) 866-3567 ext. 8147, or email at joel.renfro@state.co.us.*



## **PHOTOGRAPHS**



**Photo 1.** Thunderbird Sand and Gravel notice sign.



**Photo 2.** Proposed site entrance looking west.





**Photo 3.** Proposed site entrance looking east.



**Photo 4.** View of site from southwest corner of site looking northeast.





**Photo 5.** Existing fencing and electric lines from the southwestern edge of the site looking southeast.



**Photo 6.** Existing dirt road located west of the proposed west pit, looking east.





**Photo 7.** Structure located near site entrance looking south.



**Photo 8.** Structure located near site entrance looking south.





**Photo 9.** Existing fence and electric line along southern edge of site looking south.



**Photo 10.** Thunderbird Lake looking south.





**Photo 11.** Eastern edge of Thunderbird Lake looking south.



**Photo 12.** Existing dirt road north of Thunderbird Lake looking north.





**Photo 13.** Existing dirt road that follows the eastern edge of Thunderbird Lake looking south.



**Photo 14.** Excelsior Ditch looking northeast.





**Photo 15.** Excelsior Ditch looking southwest.



**Photo 16.** Proposed West Pit location looking east.





**Photo 17.** Existing dirt road located on proposed West Pit looking north.



**Photo 18.** Unnamed pond located within southern portion of the proposed West Pit looking south.





**Photo 19.** Existing dirt road located within proposed West Pit and electric lines along the east of the pit looking east.



**Photo 20.** Unnamed pond located within the proposed West Pit looking west.





**Photo 21.** Electric lines running in between the proposed East and West Pits looking southeast.



**Photo 22.** Existing dirt road running along the southern border of the proposed East Pit looking west.





**Photo 23.** Existing fence located along the southern border of the proposed permit area looking west.



**Photo 24.** Arkansas River located south of the proposed East Pit looking south.





**Photo 25.** Area to be within the proposed East Pit looking west.



**Photo 26.** Concrete slab pile located east within the proposed East Pit looking north.





**Photo 27.** Existing dirt road located east within the proposed East Pit looking west.



**Photo 28.** Concrete slab pile located east within the proposed East Pit looking northwest.





**Photo 29.** Existing fence located east of the proposed East Pit looking east.



**Photo 30.** Dense trees located east of the proposed East Pit looking east.





**Photo 31.** Well found within the northeastern portion of the proposed East Pit.



**Photo 32.** Existing fence running along the northern edge of the proposed East Pit, Excelsior ditch and structures beyond the fence looking north.





**Photo 33.** Existing fence running along the northern edge of the proposed East Pit, Excelsior ditch and structures beyond the fence looking north.



**Photo 34.** Existing dirt road within the northern portion of the proposed East Pit looking east.





**Photo 35.** Area within the proposed East Pit looking southwest.



**Photo 36.** Existing dirt road running west of the electric lines looking south.





**Photo 37.** Electric lines running through the site and an existing fence looking north.



**Photo 38.** A well found north of the proposed West Pit looking west.





**Photo 39.** A well found in the northwest corner of the proposed permit area looking east.



**Photo 40.** Northwest corner of the proposed permit area looking southeast.



**Inspection Contact Address**

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