



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: Schwartzwalder Mine	MINE/PROSPECTING ID#: M-1977-300	MINERAL: Uranium	COUNTY: Jefferson
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger, Michael Cunningham	INSP. DATE: June 11, 2021	INSP. TIME: 13:00
OPERATOR: Colorado Legacy Land, LLC	OPERATOR REPRESENTATIVE(S): Billy Ray, Elizabeth Busby, Paul Newman, Jim Harrington	TYPE OF OPERATION: 112d-2 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$8,900,000.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 25, 2021

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>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>Y</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</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>Y</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 site visit was conducted at the Schwartzwalder Mine (Permit No. M-1977-300) by Amy Eschberger and Michael Cunningham of the Division of Reclamation, Mining and Safety (Division). The purpose of this visit was to participate in a site tour provided for the City of Arvada. Several members of the City of Arvada were present for the tour. The operator, represented by Elizabeth Busby, Billy Ray, Paul Newman, and Jim Harrington, hosted the site tour.

The site is located approximately 6 miles northwest from Golden, CO in Jefferson County. Access to the site is off of Glencoe Valley Road. The affected lands are owned by the operator. This site is on a quarterly inspection frequency. The 2nd quarter inspection for 2021 was conducted on May 18, 2021. The 3rd quarter inspection will be scheduled over the next few months. **Photos 1-12** taken during the inspection are included with this report.

At the time of the site visit, the mine pool was at 228 feet below the Steve Level, which is 78 feet below the required 150 foot depth. As mentioned in the Division's last inspection report (signed on May 28, 2021), the water treatment plant was brought back online on May 10th of this year after being shut down for approximately 27 weeks over the winter/spring. During the last inspection, there was ponded water observed in low-lying areas throughout the site due to recent heavy rain storms that had occurred in the area. These areas were dry during the current site visit. During the last inspection, Ralston Creek was being allowed to flow across the site in its channel below the upgradient cutoff wall. However, during the current site visit, the creek flows were once again being captured above the upgradient cutoff wall and routed around the mine site via the bypass pipeline. According to the operator, this started back a week prior to the site visit. The valley excavation project was not active during this visit.

The site tour included the following:

- Observation of 4 of the 5 downstream surface water monitoring locations (SW-WEIR, SW-LLHG, SW-FBRG, and SW-BPL) along Ralston Creek. Water quality samples are obtained from these locations and the results submitted to the Division on a quarterly basis. Sampling occurs more frequently at the operator's permitted discharge point at SW-BPL, per CDPHE requirements.
- Observation of the North Waste Rock Pile (NWRP) diversion channel, which was completed in November of 2020. A trickle of water was discharging from the outlet pipe into the channel during the site visit.
- Overlook of the mine site from the top of the NWRP.
- Observation of the upgradient cutoff wall installed in Ralston Creek just downstream of the two waste rock piles and upstream of the mine site where radionuclide-impacted alluvial valley soils are being excavated and disposed of underground. Creek flows were being captured above the cutoff wall, routed around the mine site via the bypass pipeline, and discharged into the creek at the operator's permitted outfall located downstream of the mine site.
- Observation of the water treatment plant located on top of the mesa along the southern edge of the valley. The plant was online during the site visit. The operator collects daily average mine pool elevations and quarterly water quality samples from the mine pool and reports this data with other site sampling data in its quarterly monitoring reports submitted to the Division.
- Observation of the wetland and biochemical reactor (BCR) pilot-scale study area located on top of the

mesa, east of the water treatment plant. This study has concluded and the materials used in the study (e.g., tanks, hoses, small greenhouse) will be removed. According to the operator, the results of this study were promising with regard to the potential biological treatment of uranium on site. This passive treatment system may be proposed as part of the final reclamation plan for the site in a future permit revision.

- Overlook of the valley excavation project area from the top of the mesa. This project commenced in the summer of 2018 and is expected to be completed this year, with final surveys possibly extending into 2022. Some delays to this project occurred last year with the installation of the NWRP diversion channel. The project start-up this year was delayed by the frequent precipitation events occurring in the area this spring, recommencing in mid-May. The operation is approved to dispose of the excavated material in two on-site underground locations, including the CV Glory Hole of the Minnesota Mine and the Black Forest Mine.
- Discussion of mining activities that previously occurred at the site, reclamation work completed, the site water monitoring program, treatment and management of the mine pool, and the upcoming Amendment application submittal which will provide a conceptual site model and address the long-term treatment and management of the mine pool.

This concludes the report.

Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at amy.eschberger@state.co.us.

PHOTOGRAPHS



Photo 1. View looking downstream on Ralston Creek at surface water monitoring location SW-WEIR, located furthest downstream of mine site (outside of permit area).



Photo 2. View looking across Ralston Creek at surface water monitoring location SW-LLHG, located downstream of mine site (outside of permit area), below SW-ARH (not observed during this site tour).



Photo 3. View looking upstream on Ralston Creek at surface water monitoring location SW-FBRG, located downstream of mine site (outside of permit area), below SW-BPL.



Photo 4. View looking across Ralston Creek at surface water monitoring location SW-BPL, located immediately downstream of mine site (outside of permit area). This location is also the operator's discharge point permitted under the CDPHE, at which, treated mine water and captured creek flows above the upgradient cutoff wall are discharged into the creek.



Photo 5. View looking upgradient at diversion channel installed along northern edge of North Waste Rock Pile (NWRP). Construction of this channel was completed in November of 2020.



Photo 6. View looking east/northeast across top of NWRP. Note portion of diversion channel visible in background (indicated).



Photo 7. View looking south across top of NWRP.

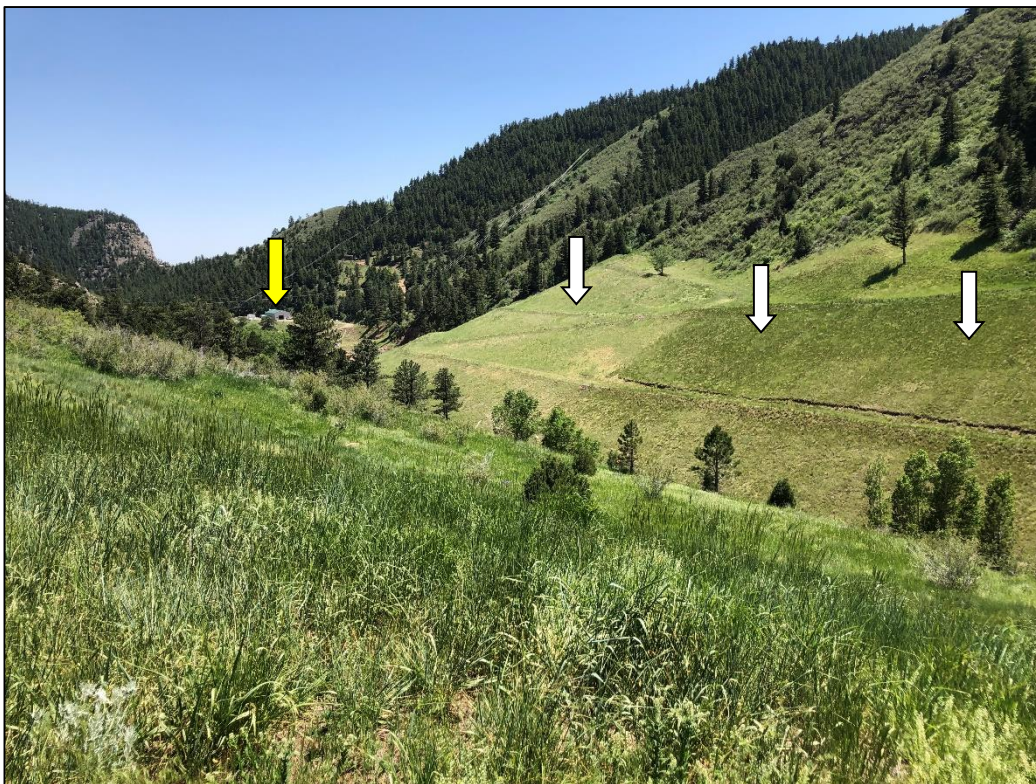


Photo 8. View looking southeast across mine site from top of NWRP. Note reclaimed South Waste Rock Pile at right (indicated with white arrows), and water treatment plant in far background (indicated with yellow arrow).



Photo 9. View looking at upgradient cutoff wall/headgate in Ralston Creek, showing creek flowing upstream of cutoff wall during site visit.



Photo 10. View looking downstream from upgradient cutoff wall in Ralston Creek, showing creek channel dry downstream of cutoff wall during site visit.



Photo 11. View looking inside water treatment plant located on top of mesa. This plant treats water pumped from the mine pool, any alluvial water collected in the downgradient sump, and any surface water that comes into contact with contaminated valley soils within the mine disturbance area. Treated water is discharged at operator's permitted outfall (SW-BPL) on Ralston Creek.



Photo 12. View looking north across top of mesa (where water treatment plant is located), showing tour group discussing the mine site.

Inspection Contact Address

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