




## 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> Schwartzwalder Mine	<b>MINE/PROSPECTING ID#:</b> M-1977-300	<b>MINERAL:</b> Uranium	<b>COUNTY:</b> Jefferson
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Amy Eschberger	<b>INSP. DATE:</b> March 22, 2022	<b>INSP. TIME:</b> 09:00
<b>OPERATOR:</b> Colorado Legacy Land, LLC	<b>OPERATOR REPRESENTATIVE:</b> Elizabeth Busby	<b>TYPE OF OPERATION:</b> 112d-2 - Designated Mining Operation	
<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$7,674,022.00	
<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> 	<b>SIGNATURE DATE:</b> April 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>Y</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>N</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>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 was a normal monitoring inspection of the Schwartzwalder Mine (Permit No. M-1977-300) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). The operator was represented by Elizabeth Busby during the inspection. 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. This inspection serves as the 1<sup>st</sup> quarter inspection for 2022. **Photos 1-7** taken during the inspection are included with this report.

At the time of the inspection, the weather was cold and windy and the ground was covered with snow. The mine pool was reported at 224 feet below Steve Level, which is 74 feet below the required 150 foot depth. The water treatment plant was shut down for the winter in September of 2021. An in-situ treatment (the 5<sup>th</sup> treatment conducted since 2013) was conducted during the last week of September 2021. Phosphoric acid was injected into the mine pool on September 24, 2021 and ethanol was injected into the mine pool on September 29, 2021. After the last in-situ treatment was conducted in January of 2020, the operator did not observe a significant decrease in uranium concentrations in the mine pool as was observed after previous in-situ treatments. The operator does not expect the 2021 treatment to produce similar results as the 2020 treatment because different chemicals were used and the in-situ injection will have a longer treatment period this time. The operator plans to bring the water treatment plant back online in early May of 2022.

The valley excavation project in which radionuclide-impacted alluvial valley soils are excavated and disposed of underground (on site) was still suspended for the winter. During the construction season last year, excavation activities were focused at the northwestern edge of the project area (near the South Waste Rock Pile) and at the southeastern edge of the project area (near the site access). These areas appeared to be unchanged since the Division's last inspection in November of 2021. As previously discussed, the operator will need to abandon the alluvial groundwater monitoring wells MW-6 and MW-7 (located in the southeastern portion of the project area), in order to ensure the surrounding contaminated soils are appropriately excavated. This proposed change to the approved groundwater monitoring plan must be submitted in a Technical Revision.

It should be noted, the two approved underground disposal locations (Black Forest Mine and CV Glory Hole in the Minnesota Mine) have reached capacity. Since the excavation project is not yet complete, an additional disposal location will be needed. As mentioned in the last inspection report (signed on November 19, 2021), the operator is considering placing the additional excavated material on the southeastern edge of the existing South Waste Rock Pile, and possibly tying it into the adjacent Black Forest Mine backfill area (once completed). This new disturbance would be "capped" with a minimum of one foot of growth medium and revegetated. The existing waste rock piles were reclaimed in this manner and now have an established vegetative cover. The Division informed the operator during its last inspection the alternative disposal plan for excavated alluvial valley soils will need to be submitted in a Technical Revision for Division review and approval. One revision may be submitted to propose this change along with the updated groundwater monitoring plan (for the abandoned alluvial wells). During the current inspection, the operator indicated plans to submit this Technical Revision in the near future, preferably after a decision has been made on the Amendment No. 6 (AM-6) application currently under review. In its review of AM-6, the Division has requested additional details on the proposed final grading plan for the valley, as well as clarification on where clean fill material and growth medium will be derived for reclamation of the valley disturbance.

During the inspection, creek flows were being captured above the upgradient cutoff wall and routed around the mine site via the bypass pipeline. While the upgradient cutoff wall was not observed during the inspection, the Division did observe the permitted outfall location downstream of the mine site (SW-BPL) at which water routed around the mine via the bypass pipeline and treated water from the plant are discharged into the creek.

During the inspection, only the bypass pipeline was discharging water into the creek (since the plant was offline).

Due to the weather conditions and limited access through the site, much of the inspection consisted of discussing the AM-6 application (inside the office trailer). The Division issued its 2<sup>nd</sup> adequacy review letter on April 1, 2022, and is currently waiting on a response from the operator. The decision date for AM-6 is currently set for May 25, 2022. Timely objections were submitted for AM-6 by the City of Arvada and Denver Water. Accordingly, per Rule 1.4.9(2)(a), the Division will schedule the application for a hearing before the Mined Land Reclamation Board (Board). By the decision date, the Division will issue a recommendation to the Board for approval, approval with conditions, or denial of the application. During the formal public hearing, the Board will make a final decision on the application. On April 13, 2022, Denver Water submitted additional comments on AM-6 after reviewing the operator's first adequacy response (submitted on January 12, 2022). The Division will consider these additional comments in its continued review of AM-6.

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](mailto:amy.eschberger@state.co.us).*

## PHOTOGRAPHS



**Photo 1.** View looking northwest across excavation area located in southeastern portion of project area. Note alluvial groundwater monitoring well MW-7 (circled) which will need to be abandoned for the excavation project. Also note Master Sump #1 (at left), the last functional sump on site which may also become redundant.



**Photo 2.** View looking southeast across excavation area located in southeastern portion of project area. Note Glencoe Valley Road (at left) located adjacent to excavation area.





**Photo 3.** View looking southeast across excavation area located in central portion of project area at base of mesa with water treatment plant (visible in background).



**Photo 4.** View looking northwest across excavation area located in northern portion of project area.





**Photo 5.** Closer view of excavation area located in northern portion of project area. Ralston Creek is located at eastern edge of valley (at right; not visible in this photo).



**Photo 6.** View looking north/northwest at water treatment plant which was offline for the winter.



**Photo 7.** View looking north at permitted outfall in Ralston Creek (SW-BPL) at which, creek flows captured upstream of mine were discharging into creek via bypass pipeline. No discharge was occurring from the water treatment plant since it was still offline for the winter.

**Inspection Contact Address**

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