




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: May 27, 2022	INSP. TIME: 09:00
OPERATOR: Colorado Legacy Land, LLC	OPERATOR REPRESENTATIVE: Elizabeth Busby, Jim Harrington	TYPE OF OPERATION: 112d-2 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$7,674,022.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 14, 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>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>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>Y</u>	(SP) STORM WATER MGT PLAN---- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</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 and Michael Cunningham of the Division of Reclamation, Mining and Safety (Division). The operator was represented by Elizabeth Busby and Jim Harrington 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 2nd quarter inspection for 2022. **Photos 1-14** taken during the inspection are included with this report.

At the time of the inspection, the weather was warm and sunny. The mine pool was reported at 230 feet below Steve Level, which is 80 feet below the required 150 foot depth. The water treatment plant was brought back online on May 2, 2022 (after being shut down for the winter in September of 2021). The most recent in-situ treatment of the mine pool (the 5th treatment since 2013) occurred during the last week of September of 2021.

The valley excavation project in which radionuclide-impacted alluvial valley soils are excavated and disposed of underground (on site) had not recommenced. During the 2021 construction season, excavation activities were focused at the northwestern edge of the project area (near the South Waste Rock Pile; SWRP) 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 on March 22, 2022. The operator plans to recommence with the excavation project this construction season. However, no additional excavated material can be placed into the two approved underground disposal locations (Black Forest Mine and CV Glory Hole in the Minnesota Mine), as they have both reached capacity. Therefore, any additional excavated material will be temporarily stored on the valley floor (and segregated from "clean" soils) per the approved plan, until the Division has approved an alternative disposal location through a Technical Revision. The operator is currently considering placing any additional excavated material onto the lower southeastern edge of the existing SWRP, 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. It should be noted, the main portal of the Black Forest Mine was partially backfilled in December of 2021, in accordance with AM-5 (approved on January 13, 2021). The operator anticipates that both Black Forest mine openings will be completely backfilled per the approved plan during this construction season, as the valley excavation project is completed.

During the inspection, creek flows were being captured above the upgradient cutoff wall and routed around the mine site via the bypass pipeline. These flows are discharged into the creek downstream of the mine site at the operator's permitted outfall (SW-BPL). The Division also observed the downgradient portion of the stormwater diversion channel which was installed along the northern edge of the NWRP in 2020 (under TR-28; approved on March 27, 2020). No water was present in the channel. The channel appeared to be maintained and functional. The Division did not observe any seeps near the toe of the NWRP where seeps had been observed prior to installation of the diversion channel. It appears the diversion channel is functioning as intended to prevent water in the drainage above the NWRP from infiltrating the pile. While the top of the NWRP was not observed during this inspection, the operator sent a photo taken later that day of the area on top of this pile that was reseeded in late 2020 (after the channel installation project was completed). Based on the photo provided, it appears the revegetation in this area is off to a good start.

AM-6, filed with our office on July 29, 2021, is still under review. On May 11, 2022, the Division received the operator's response to its 2nd adequacy review letter (issued on April 1, 2022). The Division has not yet completed its review of the operator's response. The current decision date for AM-6 is set for July 15, 2022. Because timely objections have been submitted on the application (by City of Arvada and Denver Water), the

Division will issue a recommendation for approval or denial of the application by the decision date, and the matter will be scheduled for consideration by the Mined Land Reclamation Board (Board). At the hearing, the Board will issue the final decision on the application for approval, approval with conditions, or denial.

During the inspection, the following items associated with AM-6 were discussed:

- The operator is proposing to leave the bypass pipeline and other structures associated with the creek (e.g., upgradient cutoff wall, riprap/grouted boulder areas) in place for final reclamation. In order for these structures to remain for reclamation, the operator must provide demonstration that leaving these structures would be in compliance with the applicable regulatory agencies (e.g., USACE, USFWS). The operator indicated during the inspection they may not be able to obtain the requested documentation until after the AM-6 decision date. The Division informed the operator the bond estimate must include costs for removing these structures until sufficient demonstration has been provided.
- The portion of the bypass pipeline immediately downstream of the upgradient cutoff wall (estimated by the Division to be approximately 330 feet in linear length) is buried. There was discussion during the inspection of possibly burying the rest of the bypass pipeline for final reclamation (estimated to be approximately 3,030 feet in linear length), primarily for aesthetic purposes. The pipeline could still be used to divert creek flows around the mine site, if needed. The Division informed the operator that details of this proposal would need to be included in AM-6.
- The operator has not adequately demonstrated that sufficient growth medium is available on site for reclamation. While the Division has not completed its review of the operator's May 11, 2022 adequacy response, the portions reviewed thus far do not include the information needed with respect to growth medium. During the inspection, there was some discussion regarding available growth medium on site. The operator believes more than enough "clean" soils will be encountered during the excavation project to use for final reclamation of the valley disturbance. However, the exact amount of available soils will not be known until the soils have been excavated and sorted. The Division informed the operator the bond estimate must include costs for importing growth medium if the operator is unable to demonstrate that sufficient growth medium is available on site for reclamation. The operator indicated they will conduct some additional studies on the materials present in the valley to obtain a better estimate of the volume of soils available for use as growth medium.
- There was some discussion regarding the operator's estimated disturbance of 12.5 acres that will require revegetation. It appears the operator's estimate may have included disturbed areas on the operator's property located outside of the mine permit area, which are covered under other agency permits. The disturbance within the mine permit area which will require revegetation may be closer to 7-8 acres total, based on the Division's estimate. The Division has asked the operator to specify the areas requiring revegetation on the reclamation plan map provided in AM-6.
- In its May 11, 2022 adequacy response, the operator did not provide all the details requested with regard to the proposed surface reclamation plan for the site. The operator indicated they could not provide some of the details requested (e.g., final grading plan for valley, estimated volume of available growth medium on site, specific seed mixes) until the excavation project is completed. The Division informed the operator these details are needed now for the AM-6 reclamation plan and bond estimate, and any changes to what is approved in AM-6 could be revised through a subsequent permit revision, if needed.

After the inspection, on June 7, 2022, the operator submitted additional information for AM-6, including the proposed tree and shrub mixtures for the revegetation plan, costs associated with the proposed revegetation plan, and a copy of the reclamation plan presented to the USACE on February 6, 2016 for File # NOW-2011-1353-DEN. After the Division has completed its review of this information as well as the information submitted on May 11, 2022, it will notify the operator of any remaining adequacy items in the application.

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 northwest at water treatment plant (on top of mesa), which was brought back online on May 2, 2022.



Photo 2. View looking northwest (from top of mesa with water treatment plant) across valley excavation project area. The excavation project has not recommenced since its suspension in December of 2021.



Photo 3. View looking southeast across valley excavation project area, near base of mesa with water treatment plant (visible in background).



Photo 4. View looking northwest across valley excavation project area.



Photo 5. View looking west/northwest across western edge of valley excavation project area. Note Black Forest Mine escape adit visible in background (circled), which will be backfilled for reclamation, per AM-5.



Photo 6. View looking southeast across valley excavation project area.



Photo 7. View looking west/northwest at main portal of Black Forest Mine which was partially backfilled in December of 2021, after the mine reached capacity for disposal of excavated materials.



Photo 8. View looking downstream from upgradient cutoff wall/headgate in Ralston Creek, showing creek channel dry downstream of cutoff wall.



Photo 9. View of upgradient cutoff wall/headgate in Ralston Creek, showing creek flowing upstream of cutoff wall. Upgradient flows were being routed around the mine site via the bypass pipeline.



Photo 10. View looking upgradient at diversion channel installed along northern edge of NWRP in 2020.



Photo 11. View looking west at riprap-lined energy dissipation basin constructed at downgradient end of NWRP diversion channel. This basin should be kept free of sediment and vegetation.



Photo 12. View looking north/northeast across top of NWRP, showing vegetation present in disturbed area that was seeded in fall of 2020 (photo provided by operator on May 27, 2022).



Photo 13. View looking northwest across upper section of bypass pipeline that is buried (indicated).



Photo 14. View looking northwest across bypass pipeline, the majority of which sits above ground (as shown).

Inspection Contact Address

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