

INSPECTION REPORT: GREENS CREEK MINE

Tongass National Forest Minerals Group
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Date of Inspection: Tuesday, April 26, 2023
Date of Report: Thursday, June 8, 2023
USDA Forest Service Inspector: Richard Dudek

Ranger District: Admiralty National Monument, Juneau Ranger District
Weather Conditions: Snow and rain mix. Temperature: Mid 30's (°F).

Exploration in accordance with the operating plan	Not Applicable
Timber removal following timber sale contract	Not Applicable
BMP for erosion control	Satisfactory
Water Quality BMP	Satisfactory
Public safety & fire prevention	Satisfactory
Reclamation work is adequate and timely.	Satisfactory
Road maintenance is adequate and current.	Satisfactory
Tails placement is in accordance with approved plan	Satisfactory
Waste Rock placement in compliance	Satisfactory
Company supervision of the operation	Satisfactory
Operating in a clean and orderly manner	Satisfactory

Any conditions noted as UNSATISFACTORY will require follow-up action by the Mine Inspector and a written memorandum to the operator outlining the necessary work.

Any conditions noted as Requires Action will require attention from the operator, and suggestions for necessary work are listed below

Transportation to and from the mine site was the HGCMC crew boat.

Mitch Brooks (Environmental Technician, HGCMC) accompanied Richard Dudek (Geologist, USFS) and Austin Kief (Geologic Technician, USFS). Paula Lillesve (Environmental Permitting and Compliance Coordinator, HGCMC) accompanied Robin Welling (Hydrologist, USFS) and Justin Anderson (Hydrologist, USFS) for a culvert survey near the A-Road's 4.7-mile marker.

The site inspection included: The A and B access roads, 920 area, Site 23, Pond A, 7.4-mile B-Road Bridge (Killer Creek Bridge), 5.6-mile B-Road landslide area, 3.4-mile B-Road bridge (Falls Creek Bridge), 3.0-mile B-Road bridge (Zinc Creek Bridge), and the Tailings Disposal Facility (TDF).

NEW ACTION ITEMS:

- **403-1: B-Road Bridge requires sediment removal from the deck and the associated BMPs.**
- **430-2: 3.0-mile B-Road Bridge abutment Gnome Pond's outlet. Turbid water was observed discharging and breaching the BMPs. Mitigations at this site are required to prevent the potential of turbid water from reaching surface waters.**

STATUS OF ACTION ITEMS FROM PREVIOUS INSPECTIONS:

Date/Item No.	Item Description	Status
424-2: 8/31/2022	Stormwater sediment BMPs on the downhill side of the Falls Creek Bridge abutment are in disrepair. BMPs require improvement to effectively contain sediment or prevent sediment from accumulating on the abutment.	Resolved. Surface maintenance was conducted to remove sediment accumulation from the winter months. Additional work may be required, and this location will continue to be closely monitored.
426-1 10/26/2022	Stormwater sediment BMPs on the uphill side of the Falls Creek Bridge abutment are not functioning as designed, and turbid water is reaching Falls Creek. BMPs require improvement to reduce the turbidity of runoff before discharging into Falls Creek.	Resolved. Sediments have been removed from the bridge area. Additional cleaning will take place during the Mine's annual spring cleaning.

ACCESS ROADS

The A and B access roads appeared to be in adequate condition during the inspections of mine site facilities located along these access roads. HGCMC Surface Operations have conducted road grading maintenance along the B-road (Photo). Additional work was completed for the B-road ditch maintenance and sediment removal up to the 3.6-mile marker.

920 AREA

The Greens Creek weir discharge was 28.65 cfs (Photo 1), and 1.34 cfs was being withdrawn for the 920 facilities.

The 920 bridge was in good condition. The bridge ends, and the sediment barrier requires sediment removal. During the annual spring cleaning and maintenance, HGCMC will use a vacuum truck and hand tools to remove sediments on and around this bridge and the other B-road bridges. The metal splash guards are working as intended by preventing sediment splash-over from mine vehicle traffic (Photo 2).

Pond A was in good condition and was receiving mine site contact water (Photo 3).

DB-01 will be mucked out during the site's spring-cleaning project (Photo 4). These sediments will be disposed of underground.

Good housekeeping practices were observed at the 920 warehouse (Appendix 5 BMP Plan, page 39). All petroleum/chemicals were stored adequately within secondary containment (Photos 5).

860 AREA

Both upper and lower C ponds had snow and ice with still enough volume capacity to contain stormwater from a heavy spring rain event (Photos 6-7).

Site 23

HGCMC continues to stage Class 1, 2, and 3 waste rock at this location (Photos 8-9). Class 4 waste rock is kept underground and disposed of underground (Appendix 11 Waste Rock Management Plan, page 11).

Site 23 Pond was receiving mine site/contact water (Photo 10). This water will be routed to the TDF water treatment plant for treatment and discharge.

7.4-MILE B-ROAD BRIDGE (KILLER CREEK BRIDGE)

The Killer Creek Bridge had some ponding water (Photo 11-12), and sediment accumulation has reached the maximum capacity for the BMPs at this site. Sediments will be removed before BMP effectiveness has been compromised.

5.4 B Road.

The BMPs, and drainpipes installed during the access road shoulder reconstruction are working as designed to help minimize any erosion to the access road (Photo 13).

SITE E

HGCMC has plans this summer to remove more waste from this site and dispose of it in the TDF (Photo 14).

3.4-MILE B-ROAD BRIDGE (FALLS CREEK BRIDGE)

The bridge surface or wear layer was in good condition, and the sediment-deflection barriers functioned as intended (Photos 15-16). The bridge's deck, abutments, and the BMPs will be cleaned during the site spring-cleaning project.

3.0-MILE B-ROAD BRIDGE (ZINC CREEK BRIDGE)

The Zinc Creek bridge had water ponding, and the sediment-deflection barriers prevented sediments from reaching bridge abutments (Photos 17-18). Some sediments have accumulated at both bridge ends from snow melt which requires cleaning and removal.

Turbid water was discharging from the stormwater BMP Gnome Pond's outlet and pooling in low spots on the forest floor (Photos 19-20). The outlet requires cleaning and potentially installing additional BMPs or modifying the current BMPs to prevent turbid water from entering surface waters.

TAILINGS DISPOSAL FACILITY (TDF) AREA

The current active tailings placement location was in the eastern section of the TDF's S3P1 area.

During the site inspection of Pond 7, contact water was entering the pond (Photo 21). The treatment plant also was recirculating processed/treated water back into the pond. Pond 10 was not receiving mine site water (Photo 22).

The water treatment plant was discharging approximately 1,400 gpm to Outfall 002. The turbidity and pH were 0.71 ntu and 6.5, respectively.

PHOTOS (Image files available upon request)



Photo 1). The 920 Greens Creek Weir.



Photo 2). The 920 Bridge.



Photo 3). Pond A.



Photo 4). DB-01.



Photo 5). A storage container at the 920-warehouse facility.



Photo 6. Upper C Pond.



Photo 7. Lower C Pond.



Photo 8. Site 23. Class 1 waste rock is separately stored from Class 2/3 waste rock.



Photo 9. Class 2/3 waste rock.



Photo 10. Pond 23.



Photo 11. 7.4-mile B Road Bridge (Killer Creek Bridge).



Photo 12. The downhill side of the 7.4 Bridge end requires sediment removal.



Photo 13. Larger drainpipes were installed during the reconstruction to improve drainage.



Photo 14. Site E-waste rock storage.



Photo 15. 3.4 B Road Bridge (Falls Creek Bridge).



Photo 16. 3.4 B Road Bridge abutment.



Photo 17. 3.0-mile B Road Bridge (Zinc Creek Bridge).



Photo 18. Zinc Creek Bridge abutment.



Photo 19. Turbid water was observed breaching the BMP straw wattle.



Photo 20. Turbid water can be seen on the forest floor.



Photo 21. Pond 7



Photo 22. Pond 10

Thanks to HGCMC for a safe visit. /s/ Richard Dudek
