

INSPECTION REPORT: GREENS CREEK MINE

Tongass National Forest Minerals Group
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Date of Inspection: Wednesday, February 1, 2023
Date of Report: Monday, February 27, 2023
USDA Forest Service Inspector: Casey Loofbourrow

Ranger District: Admiralty National Monument, Juneau Ranger District
Weather Conditions: Overcast, snowy. Temperature: Mid 30's (°F).

Exploration in accordance with operating plan	Not Applicable
Timber removal following timber sale contract	Not Applicable
BMP for erosion control	Satisfactory
Water Quality BMP	REQUIRES ACTION
Public safety & fire prevention	Satisfactory
Reclamation work adequate and timely	Satisfactory
Road maintenance adequate and current	Satisfactory
Tails placement in accordance with plan	Satisfactory
Waste Rock placement in compliance	Satisfactory
Company supervision of 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 the site was provided by Alaska Seaplanes and return was via the HGCMC crew boat.

Mitch Brooks (Environmental Technician, HGCMC) and Paula Lillesve (Permitting and Compliance Coordinator, HGCMC) accompanied Casey Loofbourrow (Geologist, USFS), Pat Dryer (Hydrologist, USFS), and Matt Reece (Geologist, USFS).

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).

STATUS OF ACTION ITEMS FROM PREVIOUS INSPECTIONS:

Date/Item No.	Item Description	Status
423-1; 7/28/2022	Increased turbidity of surface water runoff was observed at the 3.0 mile B-Road Zinc Creek Bridge uphill side stormwater BMPs. HGCMC requested permission to use anionic polymer flocculant to reduce turbidity.	RESOLVED. Use of the polymer was approved. HGCMC will report on the results of this testing, and this BMP will continue to be monitored in further inspections.

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.	PENDING. Freezing temperatures and winter conditions have decrease surface water runoff.
424-3: 8/31/2022	Sumps that precede the "Gnome Pond" along the B-Road are filled with sediment that should be removed to improve BMP efficiency.	RESOLVED. Sumps appeared in good condition and will be monitored under melting conditions in later inspections.
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 turbidity of runoff prior to discharge into Falls Creek.	PENDING. Freezing temperatures and winter conditions have decrease surface water runoff.

NEW ACTION ITEMS

No new action items were observed during this inspection.

ACCESS ROADS

The A and B access roads appeared in good condition.

920 AREA

The Greens Creek discharge was 19.5 cfs (Photos 1-2) and 1.3 cfs was being withdrawn for operational use.

The Greens Creek bridge appeared in good condition, with sediment deflection concrete barriers preventing sediment from reaching bridge abutments, and metal splash guards preventing sediment from being transported over the bridge edge due to traffic (Photo 3).

Pond A was in good condition with substantial surge capacity (Photo 4).

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

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

The Killer Creek Bridge appeared in good condition, with sediment deflection concrete barriers preventing sediment from reaching bridge abutments, and the abutments appeared stable with functioning sediment BMPs (Photo 6).

5.6 MILE B-ROAD LANDSLIDE

Snow covered the slope during this inspection (Photo 7), future inspections will document the completed repairs.

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

The bridge surface appeared in good condition with functioning sediment deflection barriers and no ponding water (Photo 8).

PENDING ACTION ITEM 424-2: Stormwater sediment BMPs on the downhill side bridge abutment are in disrepair (Photo 9). These BMPs require improvement to effectively contain sediment or prevent sediment from accumulating on the abutment.

PENDING ACTION ITEM 426-1: Stormwater sediment BMPs on the uphill side of the Falls Creek Bridge abutment are not functioning as designed. BMPs require improvement to reduce turbidity of runoff prior to discharge into Falls Creek. No turbid discharge was observed during this inspection but freezing temperatures have reduced surface water runoff (Photo 9).

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

The Zinc Creek bridge appeared in good condition, with sediment deflection concrete barriers preventing sediment from reaching bridge abutments (Photo 10).

Turbid water was previously observed discharging from the stormwater BMP colloquially known as the “Gnome Pond” (Report 423). The “Gnome Pond” was observed covered in snow and ice with reduced inflow from runoff. This location will be closely monitored in future inspections.

RESOLVED ACTION ITEM 423-1: HGCMC’s request to test anionic polymers or “floc logs” to reduce turbidity in roadside BMP’s was approved. Due to limited available space to increase the size of settling ponds the anionic polymers will be tested to determine if appropriate for use in the BMP’s. Hecla will conduct laboratory and field testing in the upcoming field season to determine the effectiveness of the polymers and provide a report to the Forest Service on effectiveness and how the polymers could be used on the mine site.

RESOLVED ACTION ITEM 424-3: Sumps that precede the “Gnome Pond” along the B-Road were previously filled with sediment that required removal. Sumps appeared to have adequate capacity (Photo 11) and will be monitored through the melt season for effectiveness.

TAILINGS DISPOSAL FACILITY (TDF) AREA

The current active tailings deposition location is the northern S3P1 expansion area, approximately adjacent to 1.0 mile of the B-Road.

At the time of the inspection, Pond 7 (Photo 12) was collecting contact and process water, and Pond 10 (Photo 13) was not receiving water.

The water treatment plant was discharging approximately 1291 gpm to Outfall 002. The interior of the plant was orderly (Photo 14).

PHOTOS (Image files available upon request)



Photo 1. Greens Creek looking upstream from the 920 weir.



Photo 2. Greens Creek looking downstream from the 920 weir.



Photo 3. Greens Creek bridge and 920 portal.



Photo 4. Pond A, below the 920 area.



Photo 5. Chemicals stored in appropriate secondary containment at the 920 warehouse area.



Photo 6. Killer Creek Bridge abutment.



Photo 7. 5.6 mile B-Road landslide repair.



Photo 8. Falls Creek Bridge surface.



Photo 9. Falls Creek Bridge abutment BMP's.



Photo 10. Zinc Creek Bridge.



Photo 11. Sediment sumps preceding the “Gnome Pond” stormwater pond.



Photo 12. Pond 7.



Photo 13. Pond 10.



Photo 14. TDF Water Treatment Plant interior.

Thanks to HGCMC for a safe visit.

/s/ Casey Loofbourrow