INSPECTION REPORT: GREENS CREEK MINE

Tongass National Forest Minerals Group 8510 Mendenhall Loop Rd Juneau, AK 99801 (907) 789-6275 – office (907) 586-8808 – fax Date of Inspection: Wednesday December 11, 2019 Date of Report: Friday December 20, 2019 USDA Forest Service Inspector: Richard Dudek

Ranger District: Admiralty National Monument, Juneau Ranger District Weather Conditions: Cloudy with some rain. Temperature: low 40'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	Satisfactory
Public safety & fire prevention	Satisfactory
Reclamation work adequate and timely	Satisfactory
Roads 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.**

NEW REMARKS

Ward Air provided a Cessna 206 floatplane to and from site.

David Landes (Environmental Engineer, (HGCMC)) accompanied Richard Dudek (Geologist, United States Forest Service (USFS), Monika Adam (Special Uses (USFS)).

The site inspection included: The B road, 920 area, Site 23, 7.4 mile B-road Bridge (Killer Creek Bridge), Site E (4.7 mile B road), 3.4 mile B-road Bridge (Falls Creek Bridge), 3.0 mile B-road Bridge (Zinc Creek Bridge), the Tailings Disposal Facility (TDF).

ACTION ITEMS

No actions items were observed during this inspection.

NOTEWORTHY ITEMS

Contractors were on site for geotechnical drilling activities along the B-road, Site D, and Site
23.

B-ROAD

On 12/11/2019, the B-road was in adequate condition during this inspection. During the winter months, Surface Operations apply pea gravel to access roads to increase traction for vehicles (Appendix 08 Road Operations and Maintenance; 3-2).

920 AREA

The recorded flow rate for Greens Creek (Photo 1) on 12/11/2019 was 34.5 cubic feet per second (cfs). The 920-area water withdrawal rate from Greens Creek was approximately 0.75-cfs.

The 920 Bridge's splash guards are preventing sediment splash over from vehicular traffic (Photo 2).

Good housekeeping practices were observed at The 920 warehouse (Appendix 5 BMP Plan page 39). All petroleum/chemicals were properly stored within appropriate secondary containment (Photo 3).

SITE 23

HGCMC continues to store waste rock at this location (Photo 4). Class 1 waste rock is separately staged from Class 2/3 waste rock due to the rock's classification for acid neutralization or acid generation potential (Appendix 01 Integrated Monitoring Plan; § 3.1).

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

The bridge's splashguards are effectively preventing sediment splashover from vehicular traffic (Photo 5). Surface Operations recently made improvements to the downhill side abutment by installing a steel wall to help prevent soil creeping and future erosion (Photo 6). Geotechnical drilling (Photo 7) will take place once the drilling activities are completed near the 5.4 mile maker B-road. The purpose for the drilling at this location will be to install instrumentation to help study and monitor slope stability.

SITE E (4.7 MILE B-ROAD)

In 2019, approximatley 22,300 cubic yards of waste rock was removed from this location (Photo 8) and disposed of within the TDF.

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

The bridge's splashguards are working as intended by preventing sediment splashover from traffic (Photo 9).

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

The bridge's splashguards are preventing sediment splashover from vehicular traffic (Photo 10), and the structural BMPs located on the uphill side abutment are functioning as intended. Surface Operations recently made improvements to the standpipe (Photo 11) by drilling small holes to allow the final settling pond to slowly drain down when there is no precipitation. This will also increase the surge capacity of the settling pond during high precipitation events.

TAILINGS DISPOSAL FACILITY (TDF) AREA

Surface Operations continue to deposit tailings along the eastern ridge of the S3P1 expansion area (Photos 12-13).

On 12/11/2019, the water treatment plant was treating 1509-gpm. Good housekeeping practices were observed inside the water treatment plant (Photo 14) (Appendix 5 BMP Plan; page 39).

At the time of the inspection, Pond 7 (Photo15) was collecting mine site water. Pond 10 (Photo 16) was collecting direct precipitation.

FOLLOW UP ITEMS

Inspect the 920 area.

Inspect the B-road Bridges and their associated BMPs.

Conduct a site inspection of the TDF area.

PHOTOS (Images available upon request)



Photo 1. A view of Greens Creek from the weir.



Photo 2. The 920 bridge.



Photo 3. Petroleum products stored with appropriate secondary containment.



Photo 4. Site 23, where class 1 and class2/3 waste rock is to be stored.



Photo 5. The 7.4-mile B-Road bridge (Killer Creek Bridge).



Photo 6. The location where geotechnical drilling will take place near the 7.4 B-road Bridge.



Photo 7. A steel wall was installed along the abutment to prevent erosion.



Photo 8. Site E.



Photo 9. The 3.4 Mile B-road Bridge (Falls Creek Bridge).



Photo 10. The 3.0 Mile B-road Bridge (Zinc Creek Bridge).



Photo 11. The series of BMPs for stormwater management near the 3.0-mile maker B road.



Photo 12. A bulldozer compacting tailings and contouring recently deposited tailings.



Photo 13. A view of the S3P1 area.



Photo 14. The TDF water treatment plant.



Photo 15. Pond 10.

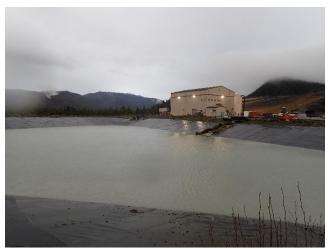


Photo 16. Pond 7 was receiving direct precipitation and influent mine water.

Thanks to HGCMC for a safe visit. U.S. Forest Service Officer: /s/ Richard Dudek