

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: Friday, February 3, 2017 Date of Report: Friday, February 17, 2017 USDA Forest Service Inspector: Richard Dudek

Ranger District: Admiralty National Monument

Weather Conditions: Windy and sunny. Temperature: Low to Mid 20'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 185 floatplane for transportation to and from the site.

Mitch Brooks (Environmental Engineer, Hecla Greens Creek Mining Company (HGCMC)) accompanied Richard Dudek (Geologist, US Forest Service).

The site inspection included A/B-access roads, 920 area, Site 23, 7.4-mile B-road Bridge Killer Creek, 3.4-mile B-road Falls Creek Bridge, 3.0-mile B-road Zinc Creek Bridge, TDF area, and the 1.4-mile A-road Sand Pit.

ACTION ITEMS

• Falls Creek Bridge (3.4-mile B-road): Temporary barrier for sedimentation control has reached its maximum sediment accumulation.

NOTEWORTHY ITEMS

Construction projects have stopped for the winter, HGCMC continues with mining operations.

Inspection Report 380 Page **1** of **10**





ACCESS ROADS A/B:

Access roads A and B are in adequate condition and comply with Hecla Greens Creek Mining Company (HGCMC) BMP plan Appendix 8 (Table 8.1).

920 AREA

The flow rate for Greens Creek (Photo 1) on 02/03/2017 was 10.2 cubic feet per second (cfs). HGCMC Surface Operations are properly maintaining the 920 Bridge, de-grit basin DB-01 (Photos 2-3), and DB-02 during the winter months. The 920 warehouse storage vans are tidy; all chemical and petroleum products were properly stored within secondary containment (Photo 4). At the 920 ore pad, two ore piles were observed (Photo 5). The purpose for the two piles is to allow for the blending of the ore to minimize inconsistency in the grade. On 1/10/2017, a diesel fuel spill occurred during the refueling of an underground lube truck (Photo 6). Approximately ten gallons of fuel spilled onto the concrete refueling pad. The fuel was immediately removed from the pad using sorbent pads, and contaminated snow and ice was removed and placed in large plastic totes to melt. Sorbent pads were placed inside the large plastic totes to capture any remaining fuel. The meltwater was disposed of in DB-04 which was pumped to Pond 7 for treatment. The sorbent pads used were properly disposed of in a hydrocarbon absorbent tote and shipped offsite.

SITE 23

Since the previous inspection on 12/16/2016, additional Class 2/3 waste rock has been stockpiled at Site 23 (Photos 7). Class 2/3 waste rock is stockpiled separately from Class 1 waste rock due to the neutralization/acid generating potential (Appendix 1 Integrated Monitoring Plan page 3-1).

7.4 MILE B-ROAD (KILLER CREEK BRIDGE)

Surface Operations personnel are properly maintaining the bridge decking (Photo 8). Below the bridge, Killer Creek was mostly covered in snow and ice. During the winter months, plowing of snow from the access roads and bridges increases the sediment load at the bridge ends. HGCMC has contracted an engineering firm for sediment mitigation controls for all the bridges.

3.4 MILE B-ROAD (FALLS CREEK BRIDGE)

Surface Operations personnel are properly maintaining the bridge decking (Photo 9). However, a temporary sediment barrier located on the downhill/downstream side requires maintenance (Photo 10). This temporary barrier meets the design criteria for silt fencing. When sediment accumulation reaches approximately one-third (1/3) of the fence or barrier height, new fencing is to be installed and or sediments are to be removed (Appendix 5 BMP plan page BMP-12).

3.0 MILE B-ROAD (ZINC CREEK BRIDGE)

Surface Operations are properly maintaining the bridge decking (Photo 11). The 3.1-mile B-road removable sediment screen and other structural BMPs for sediment mitigation control are frozen over

Inspection Report 380 Page **2** of **10**





or covered in snow (Photos 12-13). HGCMC has not received the results for the composition for the white precipitate found inside the abutment drain.

TDF EXPANSION PILE

HGCMC continues to place tailings in the eastern section of the S3P1 TDF expansion area (Photo 14). During this inspection, HGCMC was placing tailings along the east ridge of the TDF (Photo 15). The blasted bedrock from Pond 10 construction is being utilized as road fill material within the TDF (Photo 16). HGCMC continues using a number of dust mitigation controls such as water, minimizing active placement areas, and windscreens. Portable windscreens are staged at the crest and southern end of the TDF area (Photo 17-18). Fixed windscreens have been positioned along the southern TDF perimeter access road jersey barriers (Photo 19). The TDF treatment plant was treating 700 gallons of water per minute (gpm). The TDF water treatment facility was tidy and in order.

SAND PIT (1.4 MILE A-ROAD)

The Sand pit is inactive during the winter months (Photo 20).

FOLLOW UP ITEMS:

3.4 mile B-road (Falls Creek Bridge): Temporary barrier sediments have been removed.

PHOTOS (More images available upon request)

Inspection Report 380 Page **3** of **10**







Photo 1. An upstream image of Greens Creek.



Photo 2. 920 Bridge.



Photo 3. DB-01.

Inspection Report 380 Page **4** of **10**







Photo 4. Petroleum products stored within secondary containment.



Photo 5. 920 ore pad.



Photo 6. 920 refueling station.

Inspection Report 380 Page **5** of **10**







Photo 7. Class 2/3 waste rock stockpile.



Photo 8. 7.4-mile B-road Bridge (Killer Creek Bridge).



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

Inspection Report 380 Page **6** of **10**







Photo 10. A wooden temporary sediment barrier.



Photo 11. Zinc Creek Bridge (3.0 mile B-road Bridge).



Photo 12. Ice covering the 3.1 mile B-road removable sediment screen.

Inspection Report 380 Page **7** of **10**







Photo 13. Snow covered sediment mitigations (Zinc Creek Bridge).



Photo 14. S3P1 eastern section of the TDF expansion.



Photo 15. Tailings are placed along the eastern ridge of the TDF.

Inspection Report 380 Page **8** of **10**







Photo 16. Blasted bedrock is being utilized as road fill material at the TDF.



Photo 17. Portable windscreens are staged at the crest of the TDF.



Photo 18. Portable windscreens staged at the southern end of S3P1 TDF expansion area.

Inspection Report 380 Page **9** of **10**







Photo 19. Fixed windscreens and portable windscreens are staged at the southern end of the S3P1 TDF expansion area.



Photo 20. Sand Pit (1.4 mile A-road).

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



Inspection Report 380 Page **10** of **10**