



## INSPECTION REPORT: GREENS CREEK MINE

Tongass National Forest Minerals Group  
8510 Mendenhall Loop Rd  
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Date of Inspection: Friday October 6, 2017  
Date of Report: Wednesday, October 25, 2017  
USDA Forest Service Inspector: Richard Dudek

Ranger District: Admiralty National Monument, Juneau Ranger District  
Weather Conditions: Cloudy with some rain Temperature: mid 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

Hecla Greens Creek Mining Company (HGCMC) provided transportation (Crew ferry) to the site and Ward Air provided a Cessna 185 from site.

Mitch Brooks (Environmental Engineer, (HGCMC)) accompanied Richard Dudek (Geologist, US Forest Service (USFS)), and Curtis Caton (Geologist, USFS).

The site inspection included a section of A-road and the entire B-road, 920 area, Pond C, Site 23, Pond D, 7.4 mile B-road Bridge (Killer Creek Bridge), 3.4 mile B-road Bridge (Falls Creek Bridge), 3.2 mile B-road culvert, 3.0 mile B-road Bridge (Zinc Creek Bridge), the TDF area, and the sand pit (1.4 mile A-road).

### ACTION ITEMS

- The 3.0 mile B-road standpipe's outlet discharge point will need to be inspected for sediment accumulation. Sediments are to be removed if the accumulation exceeds one-half of the above ground capacity for fiber rolls (Appendix 5 BMP Plan; page BMP-17).

### NOTE WORTHY ITEMS

Contractors continue with the construction of the new wheel wash station for the TDF area (Photo 1). A temporary cement batch plant is staged at the Hawk Inlet facilities (Photo 2) and is currently being utilized to generate the concrete for the wheel wash station.





### **ACCESS ROADS A/B**

At the time of the inspection, sections along the B-road have developed erosional features (potholes and wash boarding), which will require maintenance. However, Surface operations are scheduled to conduct routine maintenance on the access roads later on in the day (Appendix 8 Road Operations and Maintenance; Table 8.1). During the inspection for the sites located along the A-road, contractors were installing guardrails (Photo 3) in the vicinity of the 2-mile marker (Photo 3). Therefore, the entire A-road system could not be driven during the inspection.

### **920 AREA**

The recorded flow rate for Greens Creek (Photo 4) on 10/06/2017 was 66.6 cubic feet per second (cfs), and the water withdrawal for the 920 water system remains at 1.5 cfs.

HGCMC Surface operations are properly maintaining the 920 Bridge, and sedimentation at the bridge ends was minimal (Photo 5).

The warehouse expansion is complete (Photo 6) and HGCMC has begun utilizing the additional 2,080 square feet for staging supplies. The parking area was enhanced for vehicle traffic, and new guardrails were installed (Photo 7).

An additional traffic mirror (Photo 8) was installed for inbound/outbound traffic along the access road for the ore pad/warehouse.

Good housekeeping practices were observed at the 920 warehouse storage area (Photo 9) (Appendix 5 BMP Plan; pages 39-40).

### **POND C (860 AREA)**

Both upper and lower ponds are functioning as intended (Photos 10-11). Both ponds receive surface water runoff from the 860 area, and APDES Outfall 007 is located at this site.

### **SITE 23**

This is the active site for waste rock storage (Appendix 1; Section 3.1), and the area was tidy and in order (Photos 12-13).

### **Pond D (SITE D)**

This site is properly working as intended (Photos 14-15). Surface water runoff from Site D reports to this location and APDES Outfall 006 is located at this site.

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

The bridge (Photos 16-19) and the abutments are being maintained by Surface operations, which comply with Appendix 5 BMP Plan; page 13.

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

The bridge is being properly maintained by Surface operations (Photo 20), and the splashguards are preventing sediment splash over from vehicle traffic.

Reported in previous inspection reports from 2016 through 2017, sand bags below the bridge were washed out, and remained downstream of the bridge. In late September 2017, HGCMC personnel were able to go downstream and remove the sand bags (Photos 21).





Sedimentation was observed underneath the bridge (Photo 22). The current criteria for sediment removal where no BMP structures are located, is to conduct a visual inspection and remove the sediments when deemed necessary. A practical alternative would be to install a BMP structure that will help mitigate sediment runoff near the bridge ends.

### **3.2-MILE B-ROAD CULVERT**

The sumps/rock check dams are properly working by allowing sediments to settle in the ponds, and check dams are slowing down the waters velocity, with clear water flowing into the vegetation (Photo 23).

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

The bridge is being properly maintained by Surface operations, and the splashguards are effectively working by preventing sediment splash over (Photo 24).

Turbid water was observed exiting the standpipe's outlet that is located at the uphill/downstream side abutment. After further observations, it was noted, that some turbid water was flowing beyond the discharge point (Photos 25-26) and into the forest. This area should be frequently monitored to ensure sediments are not impacting Zinc Creek.

HGCMC personnel cleaned out the abutment drain (Photo 27), and will continue to monitor for the white precipitate.

### **TDF AREA**

HGCMC continues to deposit tailings in the S3P1 area (Photo 28).

HGCMC personnel began depositing Class 1 waste rock along the southern outer slopes of the S3P1 area (Photo 29) as an armor to help prevent erosion.

HGCMC personnel continue to hydroseed the northwest slopes (Photo 30) of the TDF. The vegetation will help soil stability, and minimize erosion to the slopes (Appendix 5 BMP Plan; page 13).

At the time of this inspection, the water treatment plant was discharging 1,700 gallons of water per minute (gpm) through Outfall 002. All treated/discharged water through this Outfall is limited and monitored per APDES permit requirements.

### **SAND PIT (1.4 MILE A-ROAD)**

This site is currently inactive (Photo 31).

### **FOLLOW UP ITEMS**

Conduct a site inspection of the standpipe's outlet at the Zinc Creek Bridge abutment's.  
Inspect the BMP's around the B-road bridges for sediment accumulation.



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**PHOTOS** (Images available upon request)

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**Photo 1. The new wheel wash facility is currently under construction at the TDF area.**



**Photo 2. The temporary cement batch plant located at the Hawk Inlet facilities.**



**Photo 3. Contractors installing guardrails along the A-road.**



**Photo 4. Greens Creek weir.**



**Photo 5. 920 Bridge**



**Photo 6. 920 warehouse expansion.**



**Photo 7. New guardrails were installed at the 920 warehouse.**



**Photo 8. A new traffic mirror was installed near the 920 warehouse.**



**Photo 9. Petroleum products stored within secondary containment.**



**Photo 10. Upper Pond C.**



**Photo 11. Lower Pond C.**



Photo 12. Site 23 Class 1 waste rock stockpile.



Photo 13. Site 23 Class 2/3 waste rock stockpile.



Photo 14. Pond D with Site D in the background.



**Photo 15. Pond D.**



**Photo 16. 7.4 mile B-road Bridge (Killer Creek Bridge).**



**Photo 17. 7.4 mile B-road Bridge guardrail.**



**Photo 18. 7.4 mile B-road bridge uphill side abutment.**



**Photo 19. 7.4 mile B-road bridge downhill side abutment.**



**Photo 20. 3.4 mile B-road Bridge (Falls Creek Bridge).**



**Photo 21. Sand bags have been removed from Falls Creek.**



**Photo 22. Sediment accumulation continues below Falls Creek Bridge.**



**Photo 23. The final settling pond/rock check damn for the 3.2 mile B-road culvert.**



**Photo 24. 3.0-mile B-road Bridge (Zinc Creek Bridge).**



**Photo 25. The standpipe's outlet drain.**



**Photo 26. Turbid water observed flowing beyond the discharge point and into the forest.**



**Photo 27. The cleaned abutment drain.**



**Photo 28. The S3P1 TDF expansion area.**



**Photo 29. Class 1 waste rock was placed along sections of the outer slope.**



Photo 30. Hydroseeded northwest slopes in the TDF area.



Photo 31. The Sand Pit.

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

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