Inspection Report: Hecla Greens Creek Mine

Tongass National Forest, Minerals Group
8510 Mendenhall Loop Road
Juneau, Alaska 99801
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Date of Inspection: Tuesday, November 12, 2013
Date of Report: Monday, November 25, 2013
USDA Forest Service Inspector: David Schmerge

Ranger District: Admiralty National Monument, Juneau Ranger District
Weather Conditions: Cloudy, temperature in the 30s.

<table>
<thead>
<tr>
<th>Exploration in accordance with operating plan</th>
<th>Not Checked</th>
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<tbody>
<tr>
<td>Timber removal following timber sale contract</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>BMPs for erosion control</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Water Quality BMPs</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Public safety and fire</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Reclamation work adequate and timely</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Roads maintenance adequate and current</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Tails placement in accordance with plan</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Waste Rock placement in compliance</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Company supervision of operation</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Operating in a clean and orderly manner</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

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

NEW REMARKS AND SUGGESTIONS

Mitch Brooks (Hecla Greens Creek Mining Company) accompanied David Schmerge (Hydrologist, U.S. Forest Service) and Curtis Caton (Geologist, U.S. Forest Service) on this inspection. On the A Road, we visited Young Bay, Pit 7, and the pit at mile 1.4. On the B road, we visited the tailings facility, Zinc Creek bridge, site 23, the 920 area, and the 1350 area.

PIT 7
Canada thistle is an invasive plant that was found at Pit 7 last year. Hecla has been attempting to eradicate it by pulling the plants by hand. Recently, the area was covered with tarps in an effort to prevent further growth (photo 01). Invasive plants are not discussed in the Plan of Operations, but the 2013 Greens Creek Mine Tailings Disposal Facility Expansion Final Environmental Impact Statement (section 3.10.3.1) requires the removal of existing invasive plant populations.

TAILINGS FACILITY
Tailings were being placed in the northwest expansion area (photo 02). Within the last month, tailings began being placed in the east ridge expansion area for the first time (photo 03). A snow fence is in place on the crest of the tailings pile to help abate dust loss (photo 04). Till was recently placed to seal the west buttress quarry site (photo 05) as required by the 2008 construction plan; the project will be completed next summer when it is hydroseded.
ZINC CREEK BRIDGE
Stormwater runoff on the south side of the bridge was much reduced since the last inspection in September (photo 06).

920 AREA
At the warehouse storage area at the mill, petroleum products are stored in several sea vans. A sea van without secondary containment is storing vehicle grease (photo 07). Another sea van with secondary containment is storing antifreeze, transmission fluid, diesel exhaust fluid, and drive train oil (photo 08). These sea vans are not on a concrete surface.

At the powerhouse, we found two 55 gallon drums stored outside of secondary containment (photos 09 and 10); one was antifreeze and the other was fuel/water. The drum of antifreeze did not have a lid. Both drums were immediately moved and placed in secondary containment.

At the Used Petrol Conex, we found several drums and a tote of used coolant and rock drill oil (photo 11). Several of the drums did not have lids, and the conex is not on a concrete surface. All of the containers were moved immediately (photo 12) to a sea van that is on a concrete surface that drains to Pond A (photo 13).

All chemicals and oil stored at the 920 Area must be in areas that drain across concrete surfaces to the lined containment ditch which flows to Pond A as required by the BMP Plan (Appendix 5 of the Plan of Operations) and the Spill Prevention Control and Countermeasure (SPCC) Plan (Appendix 6 of the Plan of Operations). Section 4.3.1 of the BMP Plan states that areas where chemicals are stored drain across concrete surfaces to the lined containment ditch which flows to Pond A, and section 4.1 (Hazardous Substance and Toxic Materials Inventory) of the BMP Plan states that oil is also subject to the requirements of the BMP program. Oil includes "oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil." The SPCC Plan indicates in table 1 that the oil storage locations at the 920 area are contained by the site runoff collection system (concrete surfaces that drain to Pond A). I spoke with Chris Wallace (Hecla, Environmental Manager) and he said that within a week he would submit an update to the BMP plan for the storage of reagents and hydrocarbons at the 920 area. The updated plan will have to be approved by the Forest Service.
Photo 01. The disturbed area at pit 7 where Canada Thistle has been recently found is being covered to prevent growth of the plants.

Photo 02. Tailings were being placed in the northwest expansion area on the day of our visit.
Photo 03. Tailings recently began being placed in the east ridge expansion area for the first time.

Photo 04. This snow fence is installed on the crest of the tailings pile during the winter months to reduce dust loss.
Photo 05. In October, till was placed to seal the west buttress quarry site at the tailings facility.

Photo 06. Stormwater runoff on the south side of Zinc Creek Bridge has been greatly reduced since our last visit in September.
Photo 07. This sea van at the warehouse storage area at the mill is storing petroleum products (grease) without secondary containment. Also, the sea van is not on a concrete surface that drains to Pond A.

Photo 08. This sea van at the warehouse storage area at the mill has built in secondary containment. It stores vehicle fluids including antifreeze, transmission fluid, diesel exhaust fluid, and drivetrain oil.
Photo 09. This drum of antifreeze at the powerhouse did not have a lid, and was stored outside of secondary containment.

Photo 10. This drum of fuel waste was stored at the powerhouse without secondary containment.
Photo 11. Several drums and a tote of used petroleum products were stored at the Used Petrol Conex. There is no secondary containment and the conex is not on concrete that drains to Pond A.

Photo 12. The drums and tote of used oil products were immediately moved.
Photo 13. The drums and tote of used oil products were temporarily placed in this sea van. The sea van is on a concrete surface that drains to Pond A.

U.S. Forest Service Officer: /s/  David Schmerge