STATE OF ALASKA

DEPARTMENT OF ENVIRONMENATAL CONSERVATION

DIVISION OF WATER

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FIELD INSPECTION REPORT
HECLA GREENS CREEK MINING COMPANY

Inspection Date: November 10, 10:30 AM – 2 PM.
Report Date: November 12, 2009

Weather: Fine, temperatures ~ 32 - 38F

HGCMC Personnel: Kerry Lear, Surface Operations

ADEC Personnel: Kenwyn George, Environmental Engineer

Purpose of visit: To see the fate of surface runoff water from the disturbed area at Site E, where waste rock had been removed and taken to the tailings facility. The surface of the pile had been rolled and compacted; the polyethylene cover had not been replaced and Hecla requested that the cover not be put over the disturbed area, as was originally envisioned in their plan of operations during removal operations. A pump had been used to conduct the contaminated surface water to the treatment plant for discharge at the NPDES outfall.

Site E drainage. (Photos #'s 1-6) There had not been a significant rainfall at the site, so there was very little water flowing into the pump caisson. What was flowing into it seeped away underneath into the sand and material below. At high flows the water leaves the caisson and is first trapped around the periphery of the caisson where it percolates into sand. If the flow is too great to all percolate into the ground, then it flows to a catch pit where fine sediment was seen to have settled out. From this catch pit it flows to another where very little sediment was observed. From there, if there were very high storm flows, it would depart via a bale filter into a depression in the woods where it would seep into the undergrowth. No sediments were visible in this depression area. It is most unlikely any water would be able to reach flowing surface water. Kerry Lear said since the completion of the rolling and compaction of the surface, the amount of fine sediment carried in the storm water has diminished considerably. The pump was removed when the sediment load was seen be minimal.

The pile was walked to observe the far side over the peak. Here there was a partial polyethylene cover where it had not blown off. The site for the proposed sediment basin could also be seen. Hecla intends to construct this basin in the spring of 2010 and direct all surface flows to it. I

suggested as a further BMP to capture any fine sediments from surface runoff that straw bales be installed in the storm water conveyance ditch on disturbed area that directed water to the caisson. Kerry Lear said he would install bales in this area. Pete Condon was encountered in the Hawk Inlet canteen. We discussed the water quality in the sump water, which had experienced WQ exceedences. Pete said the quality was the same as the other flows from the site pre-disturbance. He will send me copies of the test results that show this. Considering all the above I could see no reason not to approve allowing the rolled, compacted surface in lieu of a polyethylene cover.

Other

A tour was conducted which included Site 1350, Site D pond, Site 23 and the tailings facility. At the bridge at the 920 portal, two double-walled pipes had been installed; one for fresh water going underground and the other for mine drainage water coming out of the mine. Both pipes had heat trace. (Photo 7)

Pond D. (Photo 8) Re-construction of the outer berm, all pump and pipework were complete. A polyethylene liner was installed within the berm, bedded into native material with bentonite, to prevent leakage from the pond to Greens Creek. This liner is for the main pond; it terminates in the mid-part of the turn-around road.

Tailings facility (Photos 9 & 10)

The filter bags had been removed. Larger bags (60' long x 22' circumference) are to be placed adjacent to a pre-sedimentation pond to Pond 7. Tails are being placed in the NW expansion area.

Photographs

Photo 1. Pump sump at Site E and drainage ditch

Photo 2. Drainage ditch leads to a settling basin.

Photo 3. The settling basin leads to a second sediment catchment with a bale at the outlet.

Photo 4. The settling basin discharges to a wooded area and undergrowth – no sediments were visible in this vegetated area.

Photo 5. Bales will be placed in this drainage ditch to catch sediments.

Photo 6. Far (NW) side of Site E, proposed sedimentation basin location at the far end.

Photo 7. New double-walled pipes at the 920 bridge.

Photo 8. Pond D, pump sump and reconstructed berm.

Photo 9. Pond 7 pre-sedimentation basin and pad for filter bags.

Photo 10. Tailings placement in NW corner