

STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISIONS OF WATER

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FIELD INSPECTION REPORT HECLA GREENS CREEK MINING COMPANY

Inspection Date: October 9, 2012, 5:00 AM – 2:00 PM

Report Date: October 17, 2012

Weather: Fair, low cloud, temperature 50-60F

HGCMC Personnel: Chris Wallace

Agency Personnel: ADEC: Kenwyn George
USFS: David Schmerge (Hydrologist), Mike Johnson (Minerals
Manager), Jessica Lopez Pearce (Minerals Manager)

Purpose and summary of the site visit

The main purpose of the site visit was to enable two new USFS personnel to see the mine; Mike Johnson who is temporarily in the Juneau office until the end of the year, and Jessica Lopez Pearce who is a new employee of the office and will be making regular inspections of the mines. Because of a failed attempt to reach the mine by plane one week earlier, it was decided to take the regular boat out and fly back. The inspection comprised a tour of the underground facilities, mill and surface facilities.

Underground tour

The tour comprised visits to active drilling and open stopes to show the drill patterns and rock bolting, and how stopes are backfilled with paste, comprised of tailings and cement, in order to mine out the ore next to the filled stope. Two sumps were also inspected, the 45 sump, which is comprised of four large compartments, and the sump near the portal. A change is being made such that drain water will be pumped, with sediment, up to a sediment separation unit at the surface near the mill. The excess water is directed to A pond the solids to the tailings thickener, after which they are pressed and sent to tailings. This change in operation will result in less frequent cleaning of the underground sumps. The mine workings presently go down to elevation -450ft and up to elevation 1350ft.

Surface tour

New concrete pads and retaining walls were nearing completion outside the 920 mine entrance. This will allow the storage of materials without the risk of the materials entering Greens Creek. New high wall panels had been installed on the bridge over Greens Creek. These high wall panels prevent material that has been picked up by the large wheels of the haul trucks from going into Greens Creek.

After going through the mill, the tour was to Site 1350, Site 23, Site D, Site E and tailings. At the mill retention of the contents of the largest thickener tank outside the mill was discussed. The road outside the mill has been concreted and a short wall constructed on the Greens Creek side of the road. It is possible that the wall will be extended a little further towards Site 23. It is thought that the contents of the tank would then be captured in this area; flow from the road is to pond A via a storm drain, so there would be no discharge to Greens Creek.

At the downhill end of Site D road drainage was seen to run from the B road and down an embankment to Greens Creek. Since there could be pollutants associated with this drainage, and since there is a new sampling point to be established in or near the area where this drainage enters Greens Creek, it was thought best to redirect this road drainage flow to Pond D such that it could be sent for treatment at the tailings treatment plant. At site E the generator for the pump at the storm water sump at the entrance to the site had been shut down. Operation of the generator at site E is dependent upon the precipitation and is only started as needed. Usually by October 1st the pump at site E is shut down for the season, because of soon to be freezing conditions at the site and they do not use the pump in the winter during freezing conditions. A water sample from the sump (site number 1055) had been taken on 19 September 2012.

A tour of the water treatment plant at the tailings facility was given by the operator, Cliff Umstead. This is a 2,500 gpm plant, although it is thought it could run at 3,300 gpm. It is typically operated at 1500 gpm; when inflow is less than this, effluent is recycled back to Pond 7 to allow them to maintain the 1500 gpm throughput. The maximum flow through the outfall pipe and diffuser is 2,250 gpm, however the maximum discharge rate in the proposed APDES permit is 3600 gpm. Hecla had been experimenting with pumping water out the outfall at a higher rate, and had been successful at this. The higher rate discharge would only be necessary during extreme storm events. Due to shortage of time a quick tour was made around the periphery of the tailings pile before taking the plane out from Hawk Inlet.

Action items:

1. Re-direct the road runoff water and sediments from the downhill end of Site D to Pond D. [Note – task completed: The auxiliary entrance road to D-pile was reshaped to redirect the water to Pond D on 15 October 2012.]



Rock bolting safety mesh.



4" diameter holes in the ore body/stope filled with explosive.



Drill and drill rig for 4" diameter downholes in the stope.

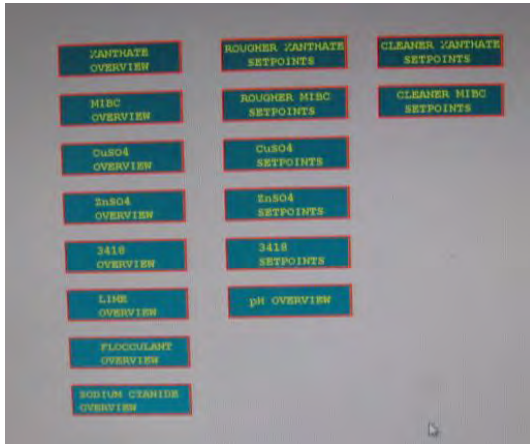


Mine drainage tank and drainage/sediment pump; surface degritting chamber.

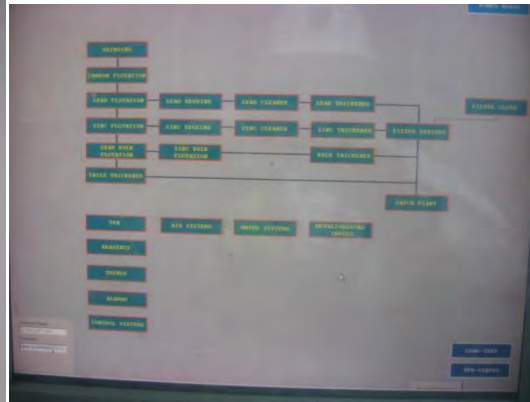


Tailings being transported underground for incorporation into paste tails backfill.

Mill process monitor



Mill reagents



Mill process streams



Thickener tank



Road / containment for thickener tank spill



Concrete pads and walls to each side of the 920 mine entrance.



High splash walls on the bridge over Greens Creek outside the 920 portal.



Road drainage adjacent to Site D



Sump at Site E



Location of outfall diffuser (in narrow channel).



Ditch work along the inside of the auxiliary access road on to the D Pile. This work was done on the 15 October 2012.