

STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF WATER

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GOVERNOR**

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FIELD INSPECTION REPORT HECLA GREENS CREEK MINING COMPANY

Inspection Date: June 09, 2010, 7:30 AM to 5:00 PM.

Report Date: June 15, 2010

Weather: Sunny, temperatures in the upper 60's

HGCMC Personnel: Jennifer Saran, Environmental Affairs Manager
Pete Condon, Geochemist

Agency Personnel: Brian Doyle, ADEC / APDES permitting process; Kenwyn George, ADEC; Sharon Morgan, ADEC / Wastewater Discharge Authorization Prog. Manager; Allan Nakanishi, ADEC, Mining Program Technical manager; Dan Bussard, ADNR Water Rights; Ted Deats, ADNR Water Rights; Rick Fredericksen, ADNR Mining; Steve McGroarty, ADNR Mining; Terry Schwarz, ADNR Hydrology; Kate Kanouse, ADF&G Habitat; Sarah Samuelson, USFS; Chad Hood, USFS; David Shaeffer, USCOE; Teri Camery, CBJ; Richard Heffern, ADEC Quality Assurance, Cam Leonard, ADOL; Honor Carpenter, ADEC

Purpose of visit: Annual site visit for the state's Large Mine Permitting Team. After safety training the visit comprised tours of the underground, mill and site facilities. The mill was not operating at the time of the visit to enable routine maintenance to be done.

Underground tour: The group was split into two for the mill and underground tours. Two personnel carrier tractors took people underground to the 473 Level. The mine currently descends to -420'. Closure options were discussed; one option is to fill voids below the 920 level with waste rock and tailings. A hydrologic study is presently under way for the underground mine which will help aid final closure options and decisions. The intent is to flood the mine with water at closure to minimize acid generation and metals leaching in areas below the 920 level. Hecla is allowed to withdraw 700 gpm from Greens Creek; it has been estimated that it would take 2-3 years to fill the mine with water.

Site 23: An inclinometer at this site has indicated movement at the base of the pile of around 3mm per year. Pete Condon is of the opinion that this may be a natural movement and not one related to putting waste rock at this site. Hecla intends to install another inclinometer away from Site 23 in undisturbed ground to the southwest of the pile. The waste pile has an engineered cap at closure. A portion of the pile has been covered with the cap and a lysimeter and tray collection system determines the amount of rainfall that penetrates various layers within the pile. Dye tests indicate water takes approximately 6 hours to travel 50 feet in the upper capillary layer. Site D material is to eventually be removed and replaced with material from the Site 23 backslope or some other source.



Mine tour group at Site 23

Site E: A storm water pond has been constructed at the NW end of the site. Storm water from this pond will be pumped to the drainage collection pipe that reports to Pond 7 for treatment prior to discharge to Hawk Inlet. Material from the pond area that had been stockpiled on Site E during construction of this pond was being transported to the tailings facility for co-disposal with tailings. Material will be removed during the summer to the tailings facility; it will take 4-5 years to remove all the material from this site. Beneath the Site E waste rock is material suitable for reclamation.



Storm water pond



Pond materials going to the tailings site

Tailings site: Co-disposal at this site was under way; the ideal mix is 60% production rock to 40% tailings for stability, however they can go to 40% production rock to 60% tailings. The water treatment plant was toured; Hecla proposes increasing the discharge rate from 2500 gpm to 3200 gpm. Modifications have been made to half of the diffusers and Hecla will be seeing if they are able to discharge at the higher rates during extreme storm events. Prior to tailings drainage reaching pond 7 there is a sediment pond with a slurry pump. The solids were pumped into 8 cy bags. For 2010 the bag size has been increased to 35 cy. Proposals to double the area of the tailings facility to provide sufficient storage for the next 30 years was discussed and a ridge climbed to overlook the area. An EIS is to be conducted for this proposed expansion project. Hecla would like to begin site preparation activities in 2012 for use of the expansion area for tailings placement by 2015.



Tailings site and Pond 7 and the water treatment plant on the left