

STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF WATER

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FIELD INSPECTION REPORT HECLA GREENS CREEK MINING COMPANY

Inspection Date: October 12, 2011, 9:30 AM - 2 PM
Report Date: October 13, 2011

Weather: Overcast, temperatures ~ 50F, light rain when leaving

HGCMC Personnel: Jennifer Saran, Environmental Affairs Manager
Chris Wallace, Mitch Brooks, Environmental

Agency Personnel: Kenwyn George, ADEC; Brock Tabor, ADEC / WQSAR (Non-point source program)

Purpose of visit: Brock Tabor is responding to a request from SEACC to place Tributary Creek, Althea Creek and Hawk Inlet on the 303(d) Impaired waters list. The purpose of this site visit was to see the monitoring locations where data is collected on Althea and Tributary Creeks.

Althea Creek: Brock Tabor, myself, Chris Wallace and Mitch Brooks hiked to Site 60 (~0.8mi from access point at Pond 7) on Althea Creek and then to the location where the creek entered Hawk Inlet. It was noted by Greens Creek staff that the flow in Althea Creek at the monitoring location was about average (the flow at this intermittent site ranges from 0 gpm to 30 gpm, averaging 7 gpm). Althea Creek was given its name by sampling personnel at Greens Creek. A little way below this location additional water entered from a side stream; this side creek did not appear to capture water from the Pond 7 area. There is an unlined drainage collection system at the down-slope side of Pond 7. Chris Wallace deduces from ground and ditch elevations and from water quality analysis in the ditch that drains to the sump that some of the water collected in the ditch comes from the surrounding muskeg. Water also reaches the sump from reclamation materials adjacent to Pond 7, placed there during the construction of Pond 7. During a dry summer the pump-back is around 3000 gpd, and after a 1" storm event approximately 100,000 gallons are pumped back to Pond 7.



Althea Creek (Site 60. 1st instance of concentrated flow)



Althea Creek entering Hawk Inlet

Tributary Creek: We next hiked in to Site 9 on Tributary Creek (~ 100yds from access road), past a pond upstream of the monitoring point where conductivity, stage and sometimes turbidity are measured. Tributary Creek also had an average flow, estimated by eye at around 1-2 cfs. Fry were observed at this site. After viewing this site we returned to the Environmental building and were then given a tour of the 1350 site and a stop at Site E by Jennifer Saran.



Tributary Creek at Site 9

Site 1350: Approximately 20,000 cy of material were removed from this site in 2011. There is another approximately 20,000 cy of material to be removed. This is scheduled to occur in 2012.

Much of the top area will then drain to the mine portal and will eventually go to treatment and discharge to Hawk Inlet.



1350 down-slope area from which material was removed in 2011. This area was hydro seeded, with rapid growth occurring.

Site E: Greens Creek had planned on moving approximately 40,000 cy a year from this site. However, more resources were dedicated to removing material from the 1350 site in 2011, so only approximately 7000-8000 cy of material have been removed so far from Site E in 2011.



Site E pond. This water is pumped to the main waste water transmission line for treatment and discharge to Hawk Inlet.

Tailings facility: The liner has been completed for the East expansion and sand placed on the shallower slopes. Water was seen to be ponding at the north end, and a pump was there to remove the water. Water in this area should drain by gravity to Pond 9, where it then travels by gravity to the west side of the tailings facility to a ditch and to Pond 7 for treatment before discharge to Hawk Inlet. It is thought that fine material from the service sand layer has washed down to the low spot and clogged the drain. The HGCMC Surface Operations and Technical Services groups are working on a solution to this issue. Greens Creek intends to remove material from the top of the main tailings pile and place it in the bottom portion of the east expansion area in order to make a larger, well drained working surface for future tailings placement.



Tailings showing east expansion in the distance.



Water collecting on the sand liner in the NE far corner of the East expansion area.