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Ministry of Environment
Mining Operations Environmental Protection
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WEEKLY POST-TSF BREACH REPORT – WEEK OF FEBRUARY 11 – 17, 2015

Water Management

Polley Lake Dewatering	Polley Lake ice elevation = 922.03 m (February 17th) Water levels are currently within the typical range. Polley Lake is frozen and all pumping infrastructure was removed in late November. Ice elevation surveys are being taken weekly.
TSF Water Management	No changes to the TSF water management system occurred this week and all water continues to be transferred to the Springer Pit via the Central Collection Sump. Refer to previous weekly reports for an overview map of the system.
Other Water Management (Outside of Breach Area)	Two incidents occurred this week related to unanticipated, unseasonal precipitation and snowmelt runoff on February 11th and 13th: • On February 12th Bootjack Creek water began to seep through the berm instead of passing through the designed creek culverts, overwhelming the downstream contact water collection sump. • On February 14th at 1:00am, the berm underneath the Central Collection Sump overflow culverts eroded. These incidents were reported to Emergency Management BC and follow up reports were provided to MOE and MEM. Work to mitigate the problems and prevent similar events from occurring in the future commenced without delay.

TSF Construction

TSF Construction	The amendment to permit M-200 approving repair of the TSF breach to manage 2015 freshet was received from the Ministry of Mines on December 17th. An update on work being completed under this approval is as follows: • Foundation preparation and material placement for Perimeter Embankment buttressing is ongoing. • Upstream Fill material placement for the cut-off wall is ongoing. • Cut-off Wall Aggregate material placement for the cut-off wall is ongoing. • Transition material placement for the cut-off wall is ongoing. • Compacted Rockfill material placement for the cut-off wall is ongoing. • Buttress placement immediately downstream of the cut-off wall (Phase 1 footprint) is ongoing. • Mobilization of CSM Contractor infrastructure and equipment is ongoing. Project components that have been completed under this approval are: • Bulk excavation of the North and South Abutments (the embankments to the north and south of the breach). • Construction of seepage collection drains in the cut-off wall foundation footprint. • Foundation preparation for the cut-off wall. • Foundation Filter blanket material placement for the cut-off wall. • Foundation Transition blanket material placement for the cut-off wall. • Extension of the seepage collection drains through the Phase 1 footprint. • Construction of a pad and laydown area for the CSM Contractor to erect infrastructure and mobilize equipment. • Foundation preparation immediately downstream of the cut-off wall (Phase 1 footprint). • SAA instrumentation installation

Sediment and Erosion Control Measures

Silt Curtain	Additional silt curtain has been mobilized to the site. Plans are in place to install the new section of silt curtain in Quesnel Lake near the discharge from the Lower Hazeltine Creek sedimentation ponds next week, depending on weather conditions. Installation will test if the silt curtain is effective in this situation and if it can withstand high creek flows, as this is not a typical application of silt curtains. Its purpose will be to provide a contingency during spring freshet when flows through the ponds are expected to increase, and in the event that the ponds are not adequate to remove sediments. The silt curtain at the mouth of the old Hazeltine Creek channel is no longer functioning, but all major flows are passing through the new Hazeltine (Edney) Creek channel.
General	Environmental monitors are monitoring creek restoration work in Edney Creek, as well as in Upper, Middle, and Lower Hazeltine Creek. This week 3,127 tonnes of tailings were excavated from Hazeltine Creek and returned to the TSF, and 5,340 tonnes of till was excavated from the Hazeltine Creek channel area and stockpiled for future reclamation use. 29,630 tonnes of construction rock material (including 1,240 tonnes excavated from within the channel area) were hauled to the Hazeltine and Edney Creek areas for use in restoration work. Rock liner material is low sulphur rock from the Cariboo Pit and a sampling program is in place to verify the chemistry of the rock. A sampling program to verify chemistry of creek subgrade material after tailings have been removed is also in place. A water licence application for Hazeltine Creek is required, and an application is being prepared.
Lower Edney Creek	Edney Creek was flowing through the Lower Hazeltine sedimentation ponds until February 14th when, due to high flow volumes associated with unseasonal weather and concern about the water level in the sedimentation ponds, the creek was diverted into its new channel, which joins Hazeltine Creek downstream of the sedimentation ponds. Work on this new channel was almost complete, and all possible resources were dedicated to finishing this work prior to allowing Edney Creek to flow through it. Some habitat features were not able to be incorporated during these emergency works, but consideration if being given to completing them during a low flow period. The Edney Creek fish barrier was compromised during the high flow event and is being repaired. A fish salvage will be conducted prior to removing the water from Edney Creek to do additional construction.
Upper Hazeltine Creek	A tender for construction of the Polley Lake outlet structure has been distributed and closes on February 18th. Channel excavation in Reach 1 is complete and rock liner material has been placed. The next step will be to place the bed material and construct the habitat design features. Channel excavation in Reach 2 is complete. Excavation of tailings adjacent to the channel and placement of the rock liner material is ongoing.
Middle Hazeltine Creek	In Reach 3, road access is being established to carry out the planned works, ditching for the pump around system is ongoing, and preparation/excavation of the creek channel is underway.

Lower Hazeltine Creek	Restoration work and foreshore stabilization on the South Point (adjacent to the historic Hazeltine Creek mouth) is anticipated to be completed next week. A trained environmental monitor is supervising this lakeshore work. Burning of waste woody debris that is non-merchantable and not selected for use in reclamation is ongoing. Reconstruction work (channel excavation and placement of bed materials) is Lower Hazeltine Creek (Reach 4) is ongoing. Figure 1 shows a turbidity time series graph comparing the turbidity in Hazeltine Creek at the Ditch Road bridge and at the outflow of the Lower Hazeltine Creek sedimentation ponds.

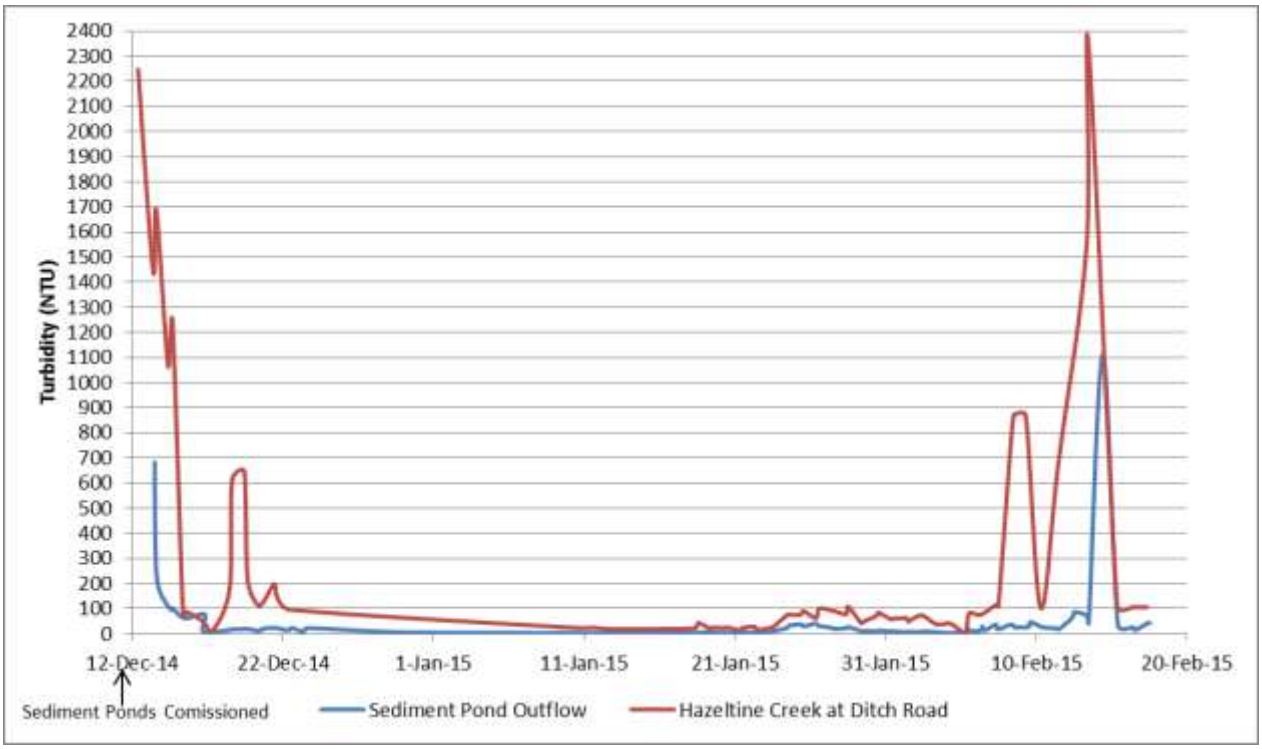

Figure 1. Turbidity time series graph for Hazeltine Creek at the Ditch Road and at the outflow of the Lower Hazeltine Creek sedimentation ponds (December 12th – February 17th)

Water Quality Monitoring Program

The water quality monitoring program currently consists of weekly samples at:

- QUR-1 (Quesnel River at the Quesnel River Research Centre).
- HAC-08 (Hazeltine Creek upstream of the sedimentation ponds and the confluence with Edney Creek).
- HAC-01b (Hazeltine Creek at the outlet of the sedimentation ponds, just upstream of Quesnel Lake).

All scheduled sampling was completed this week. Weekly sampling at site HAC-05 (Hazeltine Creek at the Gavin Lake Road) has been temporarily discontinued because active restoration and erosion control works are ongoing in this section of the creek. Note that daily turbidity monitoring at this site is carried out by environmental monitors.

Weekly sampling at EDC-02 in Edney Creek downstream of the new confluence with Hazeltine Creek (downstream of the sedimentation ponds and just upstream of Quesnel Lake) is planned to commence next week. Supplemental sampling at EDC-01 (Edney Creek just upstream from the confluence with Hazeltine) was completed this week.

The monitoring program also includes a sonde (datalogger) that is deployed in the Quesnel River at monitoring site QUR-1. The sonde measures field parameters (turbidity, pH, specific conductance, dissolved oxygen, and temperature) every 15 minutes. A second sonde which measures the same parameters at the same frequency is deployed at the outlet of the Lower Hazeltine Creek sedimentation ponds.

Figure 2 shows a time series graph of turbidity at site QUR-1. Turbidity data up to December 23rd are from laboratory analysis completed by ALS Environmental. Data from December 24th onward are laboratory turbidity values from weekly samples supplemented by field data.

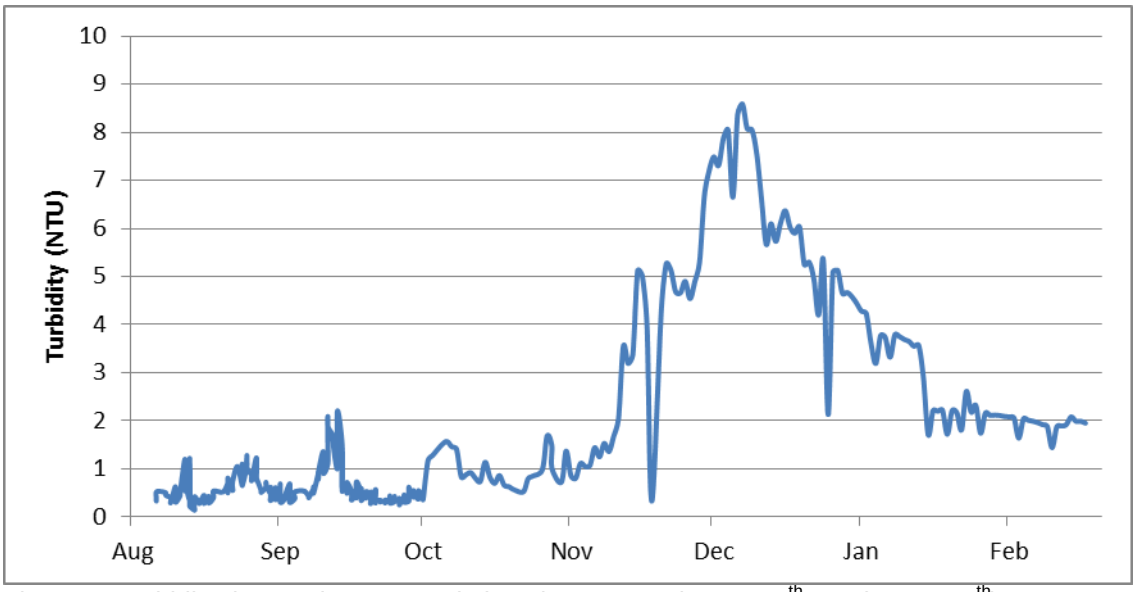

Figure 2. Turbidity time series at sample location QUR-1 (August 6th – February 17th)

Publication of Environmental Monitoring Results & Remediation Updates

Mount Polley will continue to present interpreted environmental monitoring results and updates on remediation work on the Mount Polley Updates page of the Imperial Metals website (www.imperialmetals.com). A drop-in information session is scheduled for Sunday February 22nd from 3:00pm to 5:00pm in Likely. A community open house is scheduled for 7:30pm to 9:00pm on February 23rd in Horsefly.