

# **Mount Polley Mining Corporation**

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Ministry of Environment Mining Operations Environmental Protection 2080 Labieux Rd. Nanaimo, BC V9T 6J9

## WEEKLY POST-TSF BREACH REPORT – WEEK OF APRIL 1 – 7, 2015

#### Water Management

Polley Lake Dewatering	Polley Lake water elevation = 922.67 m (April 7 <sup>th</sup> ) Water from Polley Lake started discharging through the completed outlet structure into Hazeltine Creek on April 3 <sup>rd</sup> at 10:00am to maintain the Polley Lake water level.
TSF Water Management	All water from the TSF water collection system continues to be transferred to the Springer Pit via the Central Collection Sump. No releases of water to the environment occurred this week. Refer to previous weekly reports, such as the December 31 <sup>st</sup> , 2014 report, for an overview map of the water management system.

#### Government, First Nations and Stakeholder Engagement

Publication of Monitoring Results and Rehabilitation Updates	Mount Polley will continue to present interpreted environmental monitoring results and updates on remediation work on the <u>Mount Polley Updates</u> page of the Imperial Metals website ( <u>www.imperialmetals.com</u> ). A <u>Community Update Bulletin</u> was published on April 2 <sup>nd</sup> .
Engagement Activities and Communications with Regulators	<ul> <li>Activities relating to government, First Nations, and stakeholder communication and engagement this week included:</li> <li>The weekly Ministry of Environment (MoE) update meeting on April 1<sup>st</sup>.</li> <li>A Community Open House at the Likely Hall on April 1<sup>st</sup>.</li> <li>Opening of the public consultation period for Mount Polley's Return to Restricted Operations permit amendment applications to MoE and Ministry of Energy and Mines. The application is available for review <u>online</u> and hard copies of the permit are available at the Likely, Big Lake, Williams Lake, Horsefly and Quesnel public libraries.</li> <li>Mount Polley consultant Mark Adams (Senior Project Manager/Biologist, Envirowest) reviewed the Hazeltine Creek habitat objectives with First Nations consultant Marc Gaboury (Fisheries Biologist, LGL Ltd.) and toured ongoing rehabilitation works. Suggestions from Marc Gaboury are being incorporated into designs.</li> </ul>

## Sediment and Erosion Control Measures

Silt Curtain	The turbidity barrier (silt curtain) installed in Quesnel Lake near the outlet of the new Edney (Hazeltine) Creek channel, downstream from the Lower Hazeltine Creek sedimentation ponds is in good condition.
General	Environmental monitors are monitoring sediment and erosion control and rehabilitation work in Upper, Middle, and Lower Hazeltine Creek.
	565 tonnes of tailings and 2,600 tonnes of rock from channel reshaping were removed from Hazeltine Creek this week. 20,960 tonnes of rock, including rip rap and angular rock, and 2,048 tonnes of till were hauled to the Hazeltine Creek area for use in rehabilitation work. Screening of material for creation of fish habitat features at an on-site gravel pit continued this week.
	Rock liner material being used 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.
Upper Hazeltine Creek	Construction of the Polley Lake outlet structure and the upstream channel and floodplain is complete. A fish exclusion barrier has been installed upstream of the outlet structure, and the outflow has been tied into the Reach 1 armoured channel.
	Construction of a channel that will allow Bootjack Creek to flow into Polley Lake commenced this week and is approximately 50% complete.
Middle Hazeltine Creek	In Reach 3, construction and armouring of the channel has been completed to approximately 1300m downstream of the Gavin Lake Road bridge. Grading of the floodplain continued to approximately 1700m downstream of the bridge. Excavation of the channel and floodplain is ongoing in the section 3500m to 3900m downstream of the bridge.
Lower Hazeltine and Edney Creeks	Tailings continued to be removed from the Quesnel Lake shoreline on the north side of the Edney (Hazeltine) Creek mouth.
	In the approximately 50m section of Hazeltine Creek upstream of the Ditch Road bridge, the creek is now flowing through the newly constructed channel and grading of the floodplain is ongoing. Re-contouring of eroded banks adjacent to this section of the creek commenced this week.
	Orientation of a willow planting crew from the Soda Creek First Nation took place on April 7 <sup>th</sup> .

# **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 17 <sup>th</sup> , 2014. An update on work being completed under this approval is as follows:
	<ul> <li>Foundation preparation and material placement for Perimeter Embankment buttressing is ongoing.</li> </ul>
	<ul> <li>Upstream Fill material placement for the cut-off wall is ongoing.</li> </ul>
	CSM (cutter soil mixing) Wall construction is ongoing.
	<ul> <li>Foundation preparation and placement immediately downstream of the cut-off wall (Phase 2 footprint) is ongoing.</li> </ul>
	Project components that have been completed to date under this approval are detailed in the March 26 <sup>th</sup> , 2015 report.

# Water Quality Monitoring Program

Water Quality Monitoring Sites	<ul> <li>This week, water chemistry samples were taken at the following locations, which are currently being monitored weekly:</li> <li>QUR-1 (Quesnel River at the Quesnel River Research Centre)</li> <li>HAC-08 (Hazeltine Creek upstream of the sedimentation ponds)</li> <li>HAC-01b (Hazeltine Creek at the outlet of the sedimentation ponds)</li> <li>EDC-01 (Edney Creek just upstream from the confluence with Hazeltine).</li> <li>EDC-02 (Edney Creek downstream of the new confluence with Hazeltine Creek, just upstream of Quesnel Lake).</li> </ul> Samples and profiles were taken this week at sites QUL-55, QUL-2a, QUL-18; however, profile data was not properly recorded due equipment issues. Additional scheduled profiles were not carried out due to boat mechanical issues. Steps are being taken to resolve these equipment issues. Please refer to past weekly reports for sample location maps (December 31 <sup>st</sup> , 2014 for an overview map, and March 19 <sup>th</sup> , 2015 for a map of sites QUL-54, QUL-55, and QUL-56).
Continuous Monitoring	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.
Results	<ul> <li>Figure 1 shows a time series graph for this week of precipitation (rainfall) and turbidity for Lower Hazeltine Creek upstream and downstream of the sedimentation ponds, and for Edney Creek upstream and downstream of the confluence with Hazeltine Creek.</li> <li>Figure 2 shows a time series graph for precipitation (rainfall) and turbidity for Edney Creek upstream and downstream of the confluence with Hazeltine Creek (to allow clearer display of data in lower turbidity ranges compared to Figure 1).</li> <li>Figure 3 shows a time series graph of turbidity at site QUR-1. Turbidity data are from laboratory analysis completed by ALS Environmental.</li> <li>Note: Mount Polley is currently working with their hydrology contractor to refine the Hazeltine Creek rating curves so that data can be presented in this weekly report.</li> </ul>

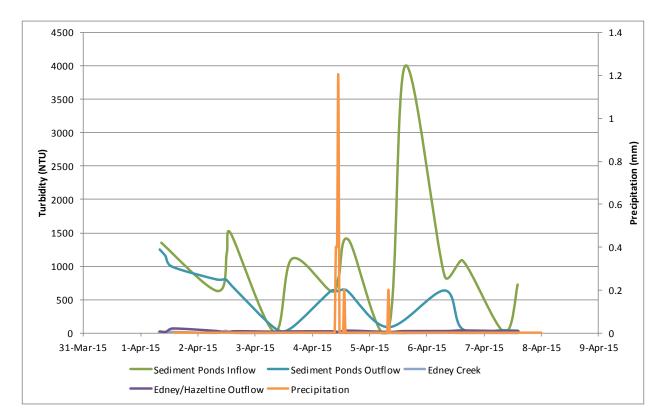
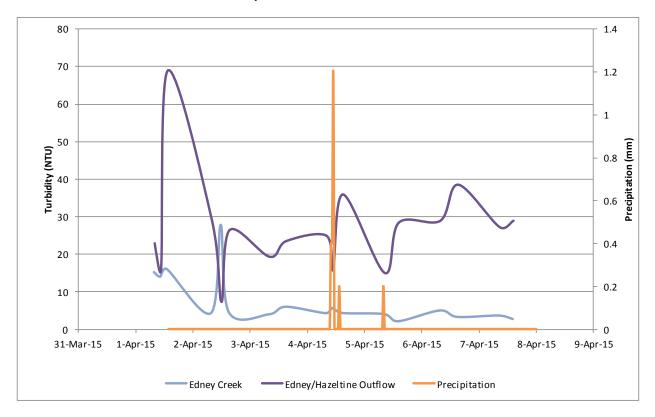


Figure 1. Time series graph for April 1<sup>st</sup> to 7<sup>th</sup> showing precipitation (rainfall) and turbidity for Hazeltine Creek upstream of the sedimentation ponds, downstream of the sedimentation ponds, for Edney Creek in its new channel, and the combined Edney/Hazeltine Creek outflow into Quesnel Lake



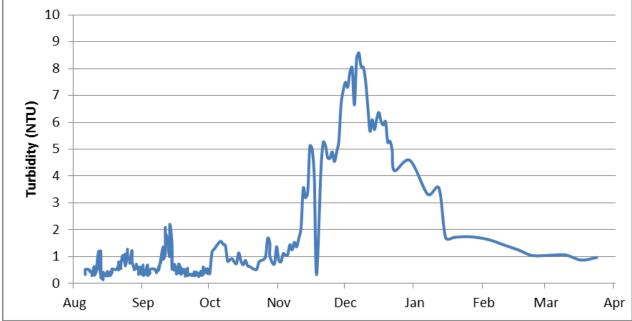


Figure 2. Time series graph for April 1<sup>st</sup> to 7<sup>th</sup> showing precipitation and turbidity for Edney Creek upstream and downstream of the confluence with Hazeltine Creek

Figure 3. Turbidity time series at sample location QUR-1 (August 6<sup>th</sup> – March 31<sup>st</sup>)