



# Mount Polley Mining Corporation

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Ministry of Environment  
Mining Operations Environmental Protection  
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## WEEKLY POST-TSF BREACH REPORT – WEEK OF MARCH 18 – 24, 2015

### Water Management

<b>Polley Lake Dewatering</b>	Polley Lake water elevation = 922.42 m (March 24 <sup>th</sup> ) Water levels are currently below the elevation of the Polley Lake outlet structure that is being constructed.
<b>TSF Water Management</b>	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 system.

### Government, First Nations and Stakeholder Engagement

<b>Publication of Monitoring Results and Rehabilitation Updates</b>	Mount Polley will continue to present interpreted environmental monitoring results and updates on remediation work on the <a href="#">Mount Polley Updates</a> page of the Imperial Metals website (www.imperialmetals.com). The following were posted this week: <ul style="list-style-type: none"><li>• <a href="#">Rehabilitation Strategy Update</a> (March 18<sup>th</sup>)</li><li>• <a href="#">Water Management Planning information notice</a> (March 18<sup>th</sup>).</li></ul>
<b>Engagement Activities and Communications with Regulators</b>	Activities relating to government, First Nations, and stakeholder communication and engagement this week included the weekly Ministry of Environment (MoE) update meeting March 18 <sup>th</sup> . A Community Open House is scheduled at the Likely Hall for 7:00 – 9:00pm on April 1 <sup>st</sup> .

## Sediment and Erosion Control Measures

<b>Silt Curtain</b>	<p>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</p> <p>.</p>
<b>General</b>	<p>Environmental monitors are monitoring creek sediment and erosion control and rehabilitation work in Upper, Middle, and Lower Hazeltine Creek.</p> <p>23,240 tonnes of rock were hauled to the Hazeltine Creek area this week for use in rehabilitation work. Screening of material for creation of fish habitat features at an on-site gravel pit continued this week.</p> <p>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.</p>
<b>Upper Hazeltine Creek</b>	<p>Construction of the Polley Lake outlet structure continued with ongoing lock block placement and backfilling.</p> <p>Construction of the flood plain and rocking in of the channel has been completed in Reach 1 and Reach 2 to within 100 metres of the Gavin Lake Road bridge.</p>
<b>Middle Hazeltine Creek</b>	<p>In Reach 3, rocking in of the channel has been completed to approximately 1000m downstream of the Gavin Lake Road bridge. Grading out of the flood plain and filling in of the glacial till cuts is ongoing, but is dependent on conditions being dry enough to allow equipment access.</p>
<b>Lower Hazeltine Creek</b>	<p>In Reach 5, construction and rocking in of the channel in the 50 metres upstream of the Ditch Road bridge was completed.</p> <p>Recontouring and application of wood chip mulch and coarse woody debris for reclamation purposes is ongoing. Capping of exposed glacial till deposits to reduce erosion is ongoing.</p>

## 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:

- Foundation preparation and material placement for Perimeter Embankment buttressing is ongoing.
- Upstream Fill material placement for the cut-off wall is ongoing.
- CSM (cutter soil mixing) Wall construction is ongoing.
- Foundation preparation and placement immediately downstream of the cut-off wall (Phase 2 footprint) 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.
- Mobilization of CSM Contractor infrastructure and equipment.
- North Abutment tie-in material placement to the 950m elevation.
- North Abutment accelerated construction fill placement in the Phase 1 footprint to the 950m elevation to facilitate commencement of the CSM Wall construction.
- Cut-off Wall Aggregate material placement for the cut-off wall.
- Transition material placement for the cut-off wall.
- Buttress placement immediately downstream of the cut-off wall (Phase 1 footprint).
- Compacted Rockfill material placement for the cut-off wall.

## Water Quality Monitoring Program

<p><b>Water Quality Monitoring Sites</b></p>	<p>The water quality monitoring program currently consists of weekly samples at:</p> <ul style="list-style-type: none"> <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-02 (Edney Creek downstream of the new confluence with Hazeltine Creek, just upstream of Quesnel Lake).</li> </ul> <p>Sampling at these locations was completed this week, as well as supplemental sampling at EDC-01 (Edney Creek just upstream from the confluence with Hazeltine). Weekly sampling at site HAC-05 (Hazeltine Creek at the Gavin Lake Road) has been temporarily discontinued because active reclamation and erosion control works are ongoing in this section of the creek.</p> <p>Monitoring of Quesnel Lake this week included:</p> <ul style="list-style-type: none"> <li>• Profiles at sites: QUL-2a, QUL-18, QUL-54, QUL-55, QUL-56, QUL-40a</li> <li>• Samples at sites: QUL-2a, QUL-18, QUL-55, QUL-40a</li> </ul> <p>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).</p>
<p><b>Continuous Monitoring</b></p>	<p>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.</p>
<p><b>Results</b></p>	<p>Figure 1 shows a turbidity time series graph for Lower Hazeltine Creek since commissioning of the sedimentation ponds on December 12<sup>th</sup>, 2014. From February 15<sup>th</sup> onward (after Edney Creek was diverted from the sedimentation ponds into its new channel, which converges with Hazeltine Creek downstream of the sedimentation ponds), data are shown for Hazeltine and Edney Creeks upstream and downstream of their confluence. Mount Polley is working with its hydrology consultant to provide flow data to accompany turbidity data upcoming weekly reports.</p> <p>Figure 2 shows a time series graph of turbidity at site QUR-1. Turbidity data are from laboratory analysis completed by ALS Environmental.</p> <p>Figure 3 shows a turbidity and temperature profile from March 24<sup>th</sup> at site QUL-18 in Quesnel Lake (at the deepest point of the West Basin, downstream of the Hazeltine Creek mouth).</p>

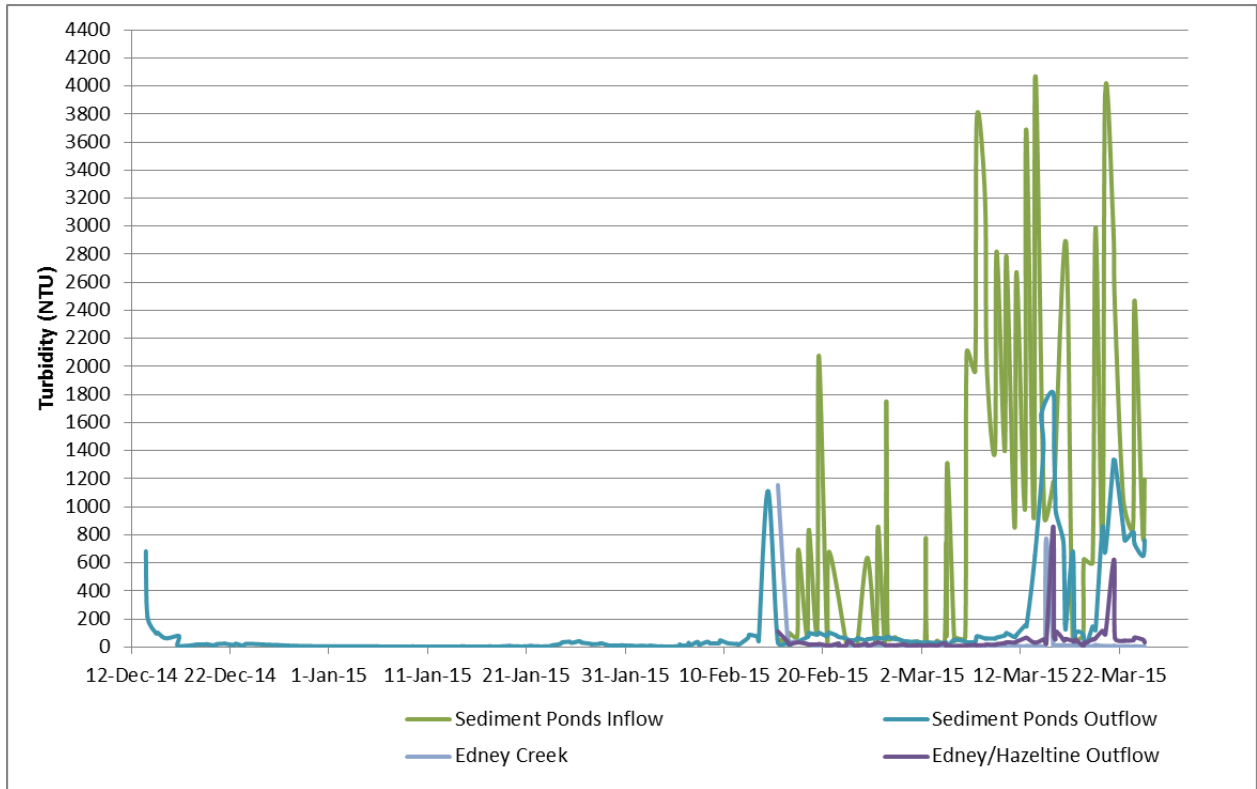


Figure 1. Turbidity time series graph for Hazeltine Creek upstream of the sedimentation ponds (February 15<sup>th</sup> – March 24<sup>th</sup>), downstream of the sedimentation ponds (December 12<sup>th</sup> – March 24<sup>th</sup>), for Edney Creek in its new channel (February 15<sup>th</sup> – March 24<sup>th</sup>), and the combined Edney/Hazeltine Creek outflow into Quesnel Lake (February 15<sup>th</sup> – March 24<sup>th</sup>)

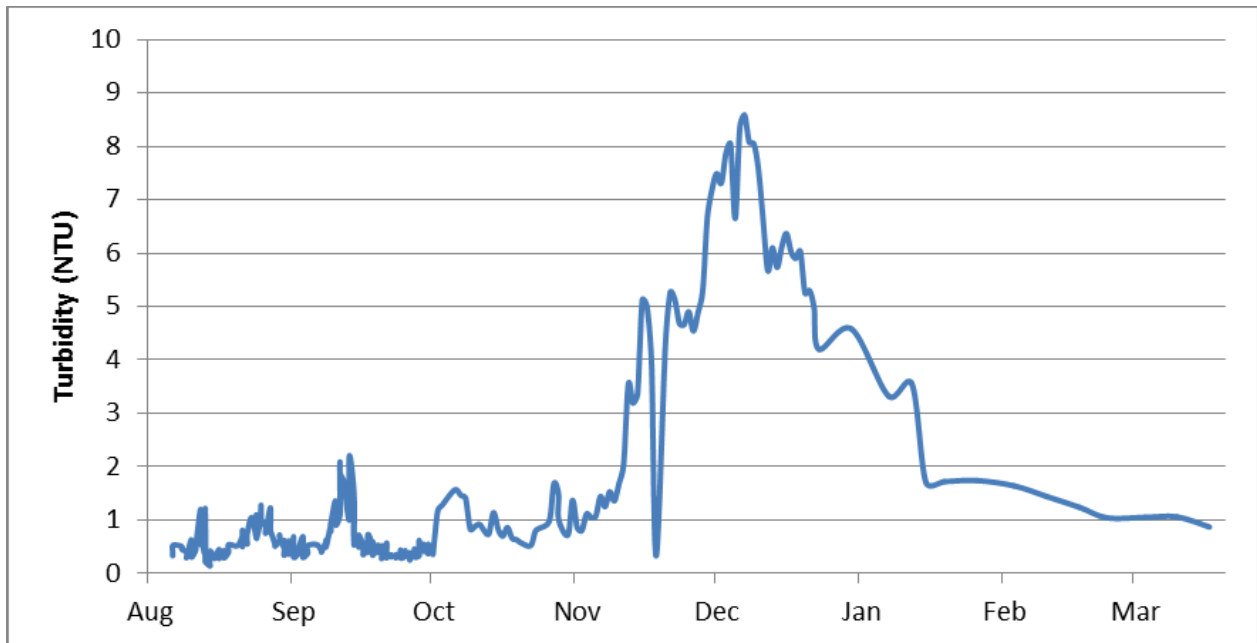


Figure 2. Turbidity time series at sample location QUR-1 (August 6<sup>th</sup> – March 17<sup>th</sup>)

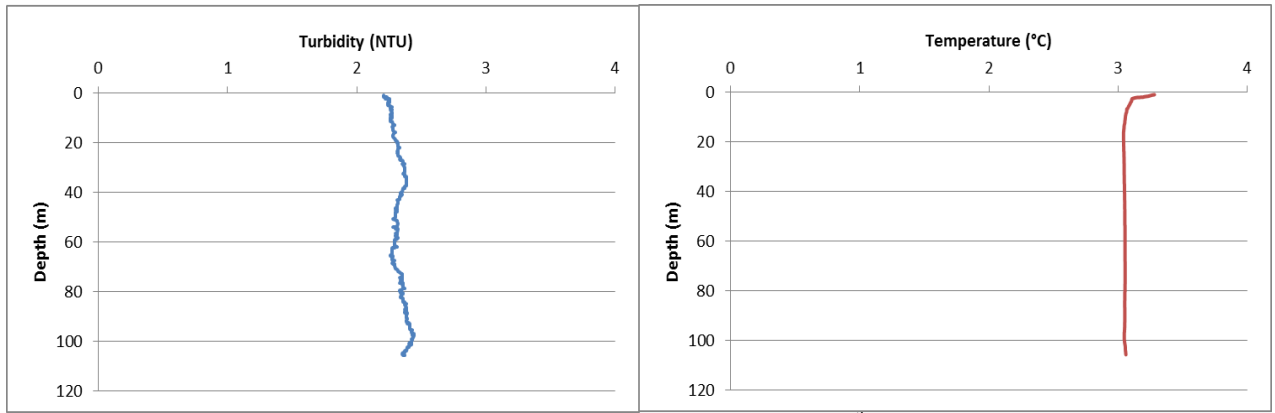


Figure 3. Turbidity and temperature profiles from site QUL-18 (March 24<sup>th</sup>)