



# Mount Polley Mining Corporation

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**June 11, 2015**

Ministry of Environment  
Mining Operations Environmental Protection  
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## **WEEKLY POST-TSF BREACH REPORT – MAY 27 – JUNE 9, 2015**

Notice to reader: As approved by Ministry of Environment (MoE) representatives, no weekly report was submitted on June 4<sup>th</sup> (for the week of May 27<sup>th</sup> to June 2<sup>nd</sup>). Instead, this report is for the period of May 27<sup>th</sup> to June 9<sup>th</sup>.

### **Government, First Nations and Stakeholder Engagement**

<b>Publications</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 ( <a href="http://www.imperialmetals.com">www.imperialmetals.com</a> ). Information about the Mount Polley tour being held for Likely residents on June 12 <sup>th</sup> was posted this week.
<b>Engagement Activities and Communications with Regulators</b>	Activities relating to government, First Nations, and stakeholder communication and engagement during this period included: <ul style="list-style-type: none"><li>• The weekly MoE update call on May 27<sup>th</sup> and June 3<sup>rd</sup>.</li><li>• An Implementation Committee meeting and tour with the Soda Creek and Williams Lake Indian Bands on May 28<sup>th</sup>.</li><li>• A Mount Polley update presentation at the Minerals North conference in Mackenzie, BC on May 28<sup>th</sup>.</li><li>• A Mine Development Review Committee meeting on June 5<sup>th</sup>.</li><li>• Submission of the Post-Event Environmental Impact Assessment Report for the tailings dam failure to MoE on June 5<sup>th</sup> for preliminary review prior to releasing the report to the public.</li><li>• Facilitation of Fisheries and Oceans Canada instrumentation installation in Hazeltine Creek on June 9<sup>th</sup>.</li><li>• Receipt of comments from First Nations on the Habitat Objectives Working Group Terms of Reference.</li></ul>

## Water Management

<b>Polley Lake Dewatering</b>	Polley Lake water elevation = 922.57 m (June 9 <sup>th</sup> ) The Polley Lake weir valve remained open to allow ~0.3 m <sup>3</sup> /s of outflow from Polley Lake into Hazeltine Creek.
<b>TSF Water Management</b>	All water from the Tailings Storage Facility (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 during this period. Please refer to the May 28 <sup>th</sup> weekly report for an overview map of the TSF water management system.

## Sediment and Erosion Control Measures

<b>Silt Curtain</b>	The turbidity barrier (silt curtain) installed in Quesnel Lake near the outlet of the constructed Edney (Hazeltine) Creek channel, downstream from the Lower Hazeltine Creek sedimentation ponds, is in good condition.
<b>Monitoring</b>	Environmental monitors are monitoring ongoing sediment and erosion control and rehabilitation work. This monitoring is being conducted by MPMC staff.
<b>Hazeltine Creek Reconstruction</b>	<p>Construction of the mean annual flood channel and floodplain grading are complete and the creek is flowing in the armoured channel for the full length of Hazeltine Creek, with the exception of the canyon sections, which primarily have a bedrock substrate.</p> <p>Ongoing work associated with the creek rehabilitation project completed during these two weeks included:</p> <ul style="list-style-type: none"> <li>• Placement of additional boulders as creek habitat features.</li> <li>• Regular cleaning of the fish fences.</li> <li>• Repairs to address safety concerns caused by vandalism to gates and signage.</li> <li>• Installation of gates and general cleanup of work areas in preparation for opening of the Ditch Road to the public.</li> <li>• Geotechnical inspections of the bridges on the Gavin Lake and Ditch Roads.</li> </ul>
<b>Hazeltine Creek Reclamation</b>	<p>Re-contouring, surface roughening, and application of organic material and coarse woody debris was carried out on the disturbed areas to the south of the reconstructed Lower Edney Creek channel.</p> <p>Application of woodchips and coarse woody debris to areas adjacent to Hazeltine Creek downstream of the Ditch Road bridge was completed. Clean up of roadside areas along the Ditch Road north and south of the bridge was conducted, including re-contouring and spreading of woodchips and woody debris.</p> <p>Felling of danger trees in Reach 3 work areas was carried out to allow rehabilitation work to continue. Re-contouring of areas on the west side of Hazeltine Creek for erosion control is ongoing between the 4,000m and 5,000m marks of the channel (Polley Lake = 0m).</p>

## TSF Construction

<b>Construction Update</b>	<p>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, 2014. An update on work being completed under this approval is as follows:</p> <ul style="list-style-type: none"> <li>• Demobilization of the CSM Wall Contractor is complete.</li> <li>• Foundation preparation and buttress placement along the North Abutment Haul Road Tie-in is complete.</li> <li>• Upstream stabilization around the South Abutment is complete.</li> <li>• Buttress placement for the Perimeter Embankment is ongoing.</li> </ul>
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## Water Quality Monitoring Program

<b>Water Quality Monitoring Program</b>	<p>The current water quality monitoring program is outlined in the table below. All monitoring was completed as scheduled in the month of May, with the exception of two Quesnel Lake profiles.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Area</th> <th style="text-align: left;">Monitoring Type</th> <th style="text-align: left;">Frequency</th> <th style="text-align: left;">Stations</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Polley Lake</td> <td>Samples</td> <td>Monthly</td> <td>P1, P2</td> </tr> <tr> <td>Profiles</td> <td>Bi-monthly</td> <td>P1, P2</td> </tr> <tr> <td rowspan="2">Hazeltine Creek</td> <td rowspan="2">Samples</td> <td>Weekly</td> <td>HAC-01b</td> </tr> <tr> <td>Monthly</td> <td>HAC-05, HAC-08, HAC-10</td> </tr> <tr> <td rowspan="2">Edney Creek</td> <td rowspan="2">Samples</td> <td>Weekly</td> <td>EDC-02</td> </tr> <tr> <td>Monthly</td> <td>EDC-01</td> </tr> <tr> <td rowspan="5">Quesnel Lake</td> <td>Profiles</td> <td>Weekly</td> <td>QUL-54, QUL-55, QUL-56</td> </tr> <tr> <td>Profiles</td> <td>Bi-monthly</td> <td>QUL-21a, QUL-18, QUL-66a, QUL-2a, QUL-79</td> </tr> <tr> <td>Profiles</td> <td>Monthly</td> <td>QUL-40a, QUL-120a</td> </tr> <tr> <td>Samples</td> <td>Weekly</td> <td>QUL-55</td> </tr> <tr> <td>Samples</td> <td>Monthly</td> <td>QUL-2a, QUL-18, QUL-40a, QUL-120a</td> </tr> <tr> <td>Quesnel River</td> <td>Samples</td> <td>Bi-monthly</td> <td>QUR-1</td> </tr> </tbody> </table> <p>Please refer to previous weekly reports, such as the May 7<sup>th</sup>, 2015 report, for a map of these sampling locations.</p>	Area	Monitoring Type	Frequency	Stations	Polley Lake	Samples	Monthly	P1, P2	Profiles	Bi-monthly	P1, P2	Hazeltine Creek	Samples	Weekly	HAC-01b	Monthly	HAC-05, HAC-08, HAC-10	Edney Creek	Samples	Weekly	EDC-02	Monthly	EDC-01	Quesnel Lake	Profiles	Weekly	QUL-54, QUL-55, QUL-56	Profiles	Bi-monthly	QUL-21a, QUL-18, QUL-66a, QUL-2a, QUL-79	Profiles	Monthly	QUL-40a, QUL-120a	Samples	Weekly	QUL-55	Samples	Monthly	QUL-2a, QUL-18, QUL-40a, QUL-120a	Quesnel River	Samples	Bi-monthly	QUR-1
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<b>Continuous Monitoring</b>	<p>The monitoring program also includes a sonde (datalogger) that is deployed in the Quesnel River at monitoring station 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>																																											
<b>Results</b>	<p>Figure 1 shows a time series graph for this period of daily field turbidity readings in Lower Hazeltine Creek upstream and downstream of the sedimentation ponds (stations HAC-09 and HAC-01b, respectively), and Edney Creek downstream of the confluence with Hazeltine Creek (station EDC-02). Figure 2 shows turbidity levels at these same sites over a longer time period to provide context for the data from the last two weeks.</p> <p>Figure 3 shows a turbidity and temperature profile from June 1<sup>st</sup> at site QUL-55, a near field site in Quesnel Lake at the mouth of Hazeltine Creek.</p> <p>Figure 4 shows a time series graph of turbidity at site QUR-1. Turbidity data are from laboratory analysis completed by ALS Environmental. This chart will be updated on a bi-monthly basis, as per the monitoring frequency of this site in the sampling program.</p>																																											

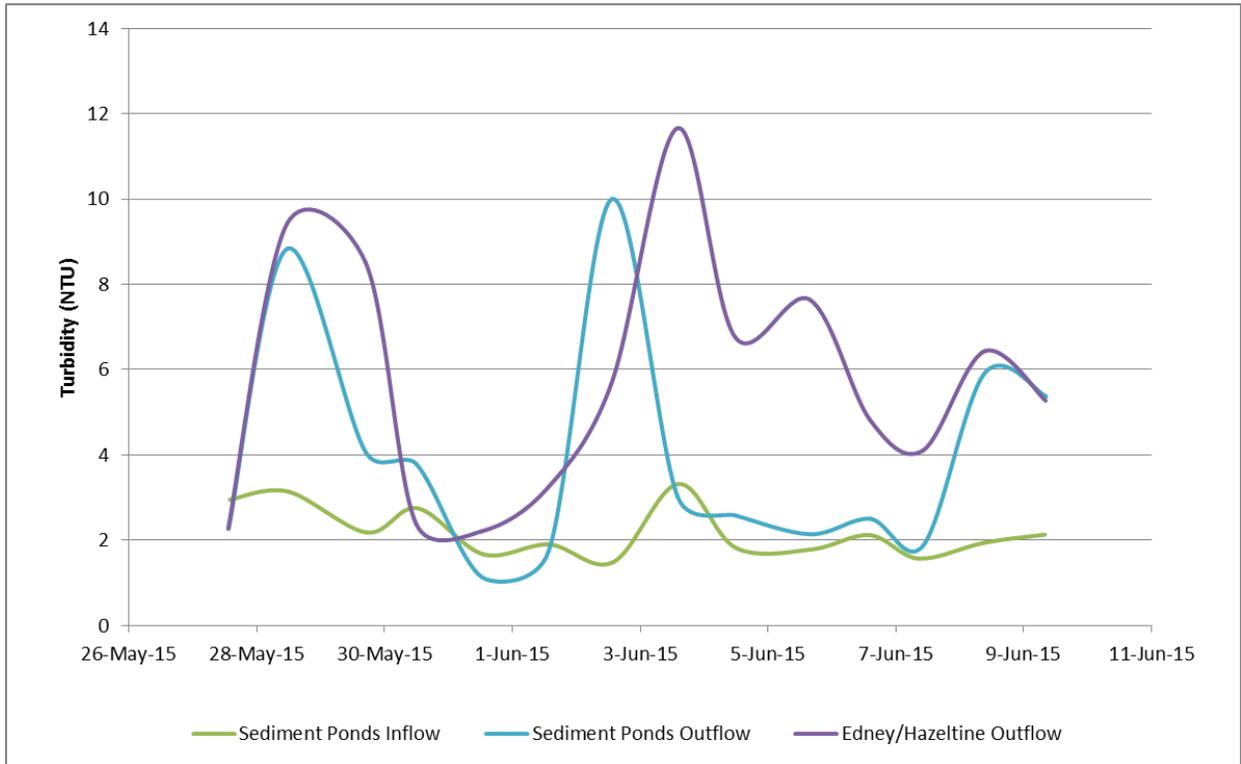


Figure 1. Time series graph for May 27<sup>th</sup> – June 9<sup>th</sup> showing turbidity levels at monitoring locations in Hazeltine Creek

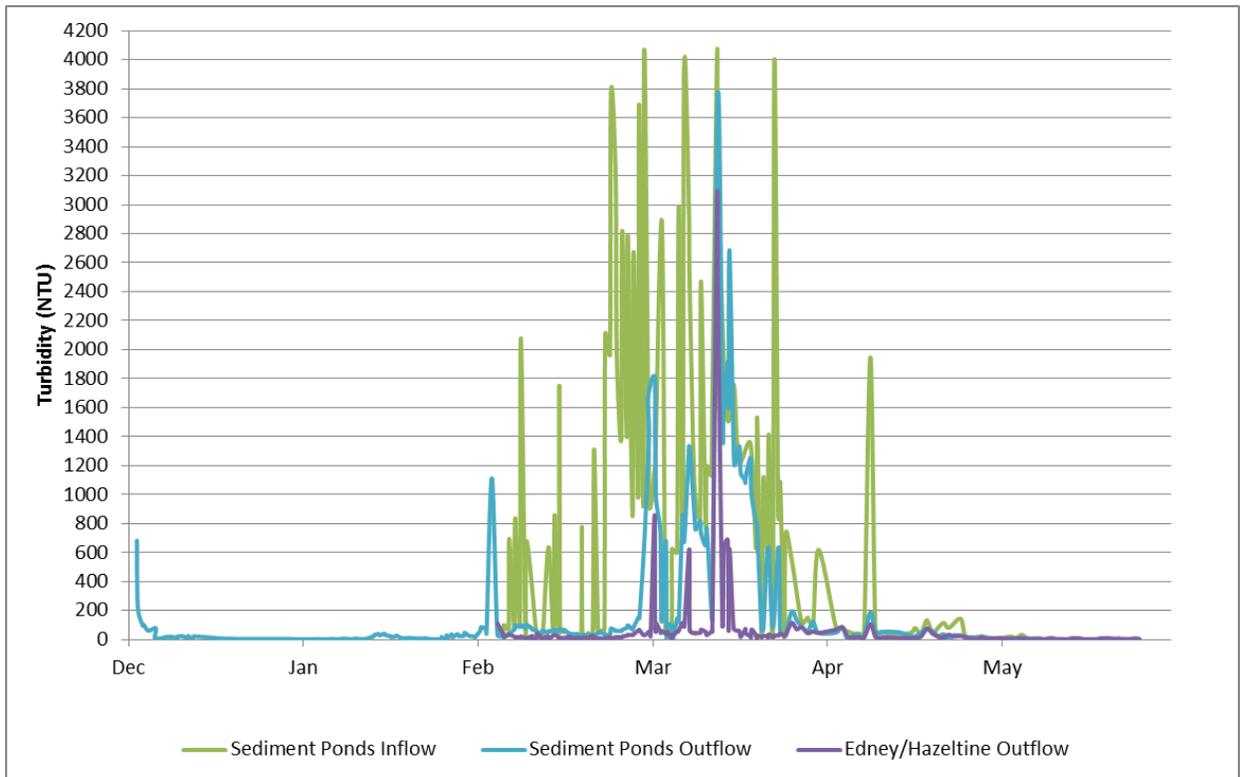


Figure 2. Time series graph for December 12<sup>th</sup>, 2014 to June 9<sup>th</sup>, 2015 showing turbidity levels at monitoring locations in Hazeltine Creek

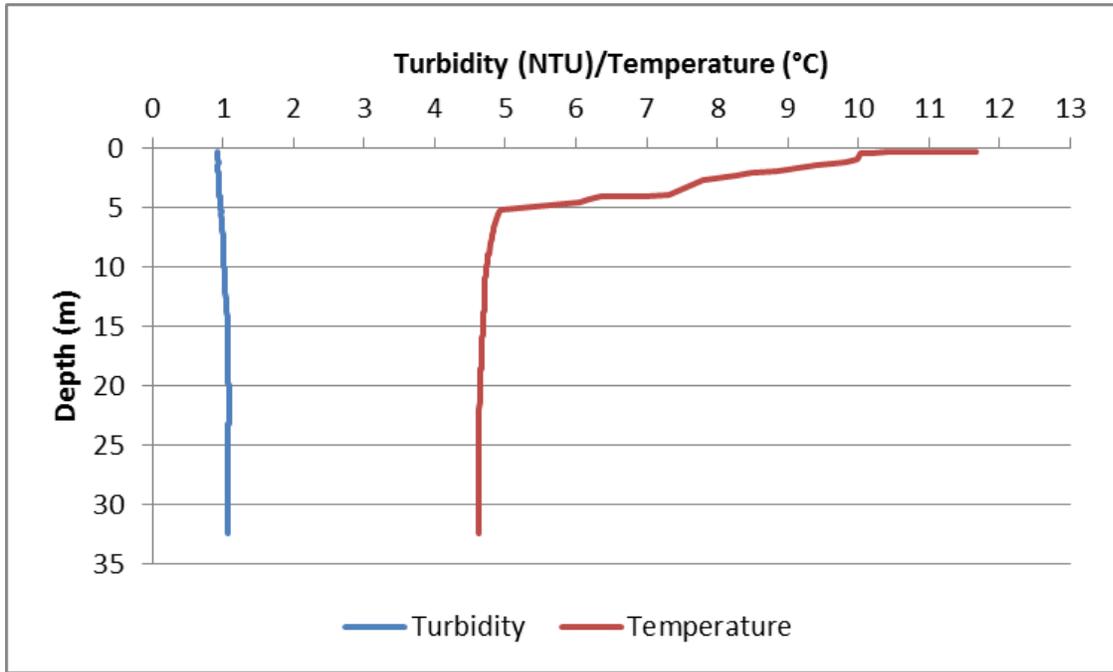


Figure 3. Turbidity and temperature profiles at station QUL-55 from June 1<sup>st</sup>

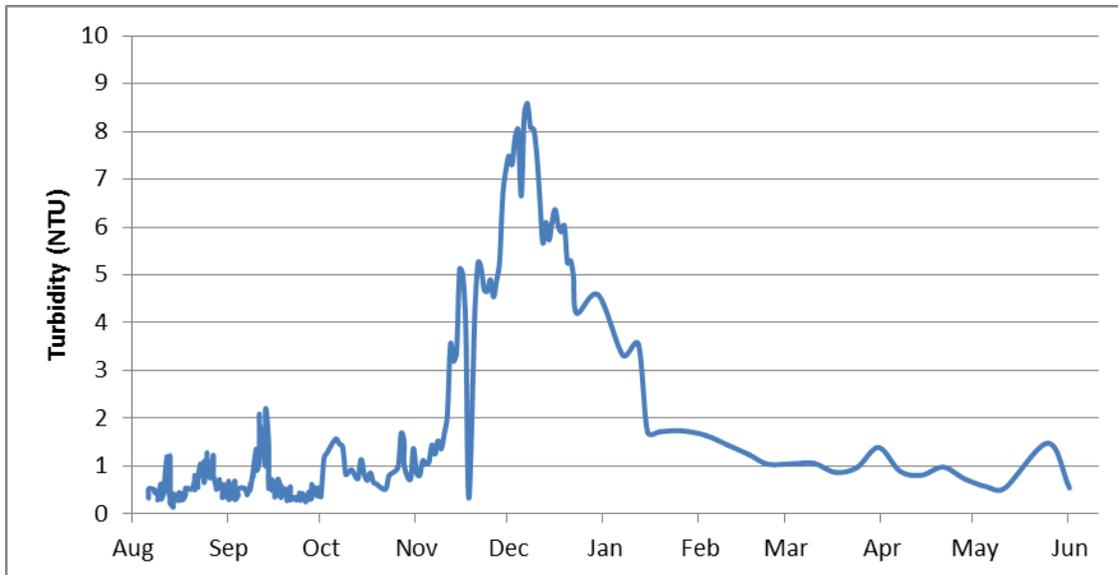


Figure 4. Turbidity time series at station QUR-1 (August 6<sup>th</sup>, 2014 – June 1<sup>st</sup>, 2015)