



# Mount Polley Mining Corporation

an Imperial Metals company

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**October 22<sup>nd</sup>, 2015**

Ministry of Environment  
Mining Operations Environmental Protection  
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Nanaimo, BC  
V9T 6J9

## **WEEKLY UPDATE REPORT – OCTOBER 14<sup>TH</sup> – 20<sup>TH</sup>, 2015**

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

<b>Publications and Website 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 ( <a href="http://www.imperialmetals.com">www.imperialmetals.com</a> ). Last week's update report to the BC Ministry of Environment (MoE) was posted this week.  A reminder that the Likely-Horsefly Forest Service Road (Ditch Road) will be closed from October 31 <sup>st</sup> – November 14 <sup>th</sup> . This information was previously sent out to Mount Polley's email list of community contacts and to the MoE Environmental Working Group.
<b>Engagement Activities and Communications with Regulators</b>	Activities relating to government, First Nations, and stakeholder communication and engagement this week included: <ul style="list-style-type: none"><li>• A call on October 14<sup>th</sup> with MoE, First Nations and their consultants, and Mount Polley representatives to discuss sediment toxicity results in the <a href="#">Post-Event Environmental Impact Assessment Report</a> (PEEIAR) and ongoing monitoring.</li><li>• A MoE Environmental Working Group meeting on October 17<sup>th</sup>, which was held face-to-face to discuss MoE, public and First Nations comments the PEEIAR.</li><li>• A Mine Development Review Committee Meeting on October 17<sup>th</sup>.</li></ul>

## Rehabilitation Work

Silt Curtain	The turbidity barrier (silt curtain) installed in Quesnel Lake near the outlet of the constructed Edney Creek channel is in good condition. MPMC has made arrangements with a contractor to have the turbidity barrier removed for winter, following cleaning out of the Hazeltine Creek sedimentation ponds and installation of the water discharge infrastructure (which requires diversion of Hazeltine Creek into Edney Creek).
Monitoring	MPMC staff members conduct environmental monitoring when work in the Hazeltine Creek riparian zone is occurring.
Hazeltine Creek Rehabilitation	Hazeltine Creek rehabilitation work carried out this week included: <ul style="list-style-type: none"><li>• Removal of tailings adjacent to Hazeltine Creek and re-sloping on the east side of the creek floodplain in Reach 1 (the depositional area downstream of Polley Lake) continued.</li><li>• The first phase of dead tree removal in areas adjacent to Hazeltine Creek continued. Logging in Reach 2 between the Polley Lake depositional area and the Gavin Lake Road bridge was completed on both sides of the creek, along with selective logging of the large tree island.</li><li>• Surveying of the Horsefly-Likely Forest Service Road (Ditch Road) new bridge alignment in preparation for bridge replacement.</li><li>• Hazeltine Creek continued to be diverted into Edney Creek and the sedimentation ponds were pumped down to allow for cleaning out of the sedimentation ponds and installation of discharge infrastructure.</li><li>• Cleaning out of settled material in the upper sedimentation pond continued.</li><li>• A fish salvage program on site is continuing along the length of Hazeltine Creek to remove any fish that have evaded the fish barriers, with plans to salvage the lower sedimentation pond in place.</li><li>• A crew from a local reforestation contractor and a Xatsūll (Soda Creek Indian Band) crew continued the fall revegetation program. The crews are planting live willow wattles and native deciduous trees and shrubs on the Hazeltine Creek floodplain. Approximately 24,500 seedlings have been planted and approximately 1,000 metres of willow wattles have been installed to date.</li><li>• Routine grading and road maintenance of the Horsefly-Likely Forest Service Road (Ditch Road) was carried out.</li></ul>

## Water Management

<b>Polley Lake</b>	Polley Lake water elevation = 922.19m (October 20 <sup>th</sup> ) The Polley Lake weir valve remained closed this week to accommodate downstream works, as described in the Rehabilitation Work section.
<b>Water Management</b>	No changes to the site water management system occurred this week. No releases of water to the environment occurred this week. Please refer to the <a href="#">May 28<sup>th</sup>, 2015 weekly report</a> for an overview map of the TSF water management system.
<b>Springer Pit</b>	The total volume of tailings deposited in the Springer Pit as of October 20 <sup>th</sup> is 842,104 tonnes (610,220 m <sup>3</sup> including water retained in tailings).  Water Elevations (October 20 <sup>th</sup> ): <ul style="list-style-type: none"><li>• Springer Pit = 1021.91m (+0.79m from last week)</li><li>• Groundwater well GW12-2a = 1013.59m (-0.13m from last week)</li><li>• Groundwater well GW12-2b = 1013.76m (-0.14m from last week)</li><li>• Groundwater well GW15-1a = 1020.10m (-0.46m from last week)</li><li>• Groundwater well GW15-1b = 1020.04m (-0.46m from last week)</li><li>• Groundwater well GW15-2a = 1022.23m (-0.19m from last week)</li><li>• Groundwater well GW15-2b = 1022.70m (-0.18m from last week)</li></ul> A map of the groundwater well locations is included as Figure 1 of the <a href="#">July 23<sup>rd</sup> weekly report</a> . Note that the suffix "a" indicates the deep well in the pair, and the suffix "b" indicates the shallow well in the pair.  Monthly water quality results for parameters of interest from the Springer Pit supernatant and adjacent groundwater wells will be included in this report as they become available. The Springer Pit wells were purged this week in preparation for October sampling; this may have affected the measured well water levels this week presented above.
<b>Discharge System</b>	Work related to installation of infrastructure for the proposed short-term water discharge plan was carried out this week including: <ul style="list-style-type: none"><li>• Armouring of the West Ditch to reduce entrainment of suspended solids in water that will be routed to the water treatment plant (WTP). This project is substantially complete, and an inspection was conducted by a third party engineer.</li><li>• Continued installation of the WTP.</li><li>• Burying of the discharge pipeline from the WTP to Hazeltine Creek.</li><li>• Pressure testing of the fused Quesnel Lake discharge pipelines.</li><li>• Installation of the intake structure for the Quesnel Lake pipelines in the upper sedimentation pond (head pond)</li><li>• Installation of the discharge pipelines in Quesnel Lake along the designed alignment by a retained contractor, which includes a team of divers. This work was supervised by a full time contracted environmental monitor, who also installed a temporary silt curtain around the work area in Quesnel Lake.</li></ul>

## Environmental Monitoring Program

<b>Water Quality Monitoring Program</b>	<p>The current water quality monitoring program is outlined in the table below. All sampling was completed as scheduled this week. Two changes to the monitoring program were made this week because Hazeltine Creek has temporarily been diverted into Edney Creek:</p> <ul style="list-style-type: none"> <li>• Weekly sampling at station HAC-01c (Hazeltine Creek outflow from the lower sedimentation pond into Quesnel Lake) was replaced with weekly sampling at station EDC-01 (Edney Creek before Quesnel Lake).</li> <li>• Weekly sampling at stations QUL-54a, 55a and 56a, near field stations in Quesnel Lake in front of the Hazeltine Creek outflow, was replaced with weekly sampling at stations QUL-54, 55 and 56 in front of the Edney Creek mouth.</li> </ul> <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>-</td><td>HAC-01c</td></tr> <tr> <td>Monthly</td><td>HAC-05, HAC-08, HAC-10</td></tr> <tr> <td>Edney Creek</td><td>Samples</td><td>Weekly</td><td>EDC-01</td></tr> <tr> <td rowspan="5">Quesnel Lake</td><td>Profiles</td><td>Weekly</td><td>QUL-54a, QUL-55a, QUL-56a</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 rowspan="2">Quesnel River</td><td>Samples</td><td>Bi-monthly</td><td>QUR-1</td></tr> <tr> <td>Field Parameters</td><td>Continuous</td><td>QUR-1</td></tr> </tbody> </table> <p>Please refer to previous weekly reports, such as the <a href="#">May 7<sup>th</sup>, 2015</a> 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	-	HAC-01c	Monthly	HAC-05, HAC-08, HAC-10	Edney Creek	Samples	Weekly	EDC-01	Quesnel Lake	Profiles	Weekly	QUL-54a, QUL-55a, QUL-56a	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	Field Parameters	Continuous	QUR-1
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<b>Water Quality Monitoring Results</b>	<p>Figure 1 is a time series graph of field turbidity readings in lower Hazeltine Creek upstream of the sedimentation ponds and downstream of the ponds, at the outflow into Quesnel Lake, as well as for Edney Creek for the period when Hazeltine Creek is diverted into Edney Creek. The graph shows data since construction and armouring of the new Hazeltine Creek channel was completed in mid-May.</p> <p>Figure 2 shows a turbidity and temperature profile from this week at site QUL-55, a near field site in front of the Hazeltine Creek outlet.</p> <p>Figure 3 shows a time series graph of turbidity readings at site QUR-1 in the upper Quesnel River. Turbidity data are from laboratory analysis completed by ALS Environmental. This chart will be updated every second week, as per the monitoring frequency of this station in the sampling program.</p>																																												
<b>Other Monitoring</b>	<p>Minnow Environmental was on site this week carrying out a benthic invertebrate sampling program in Edney Creek.</p>																																												

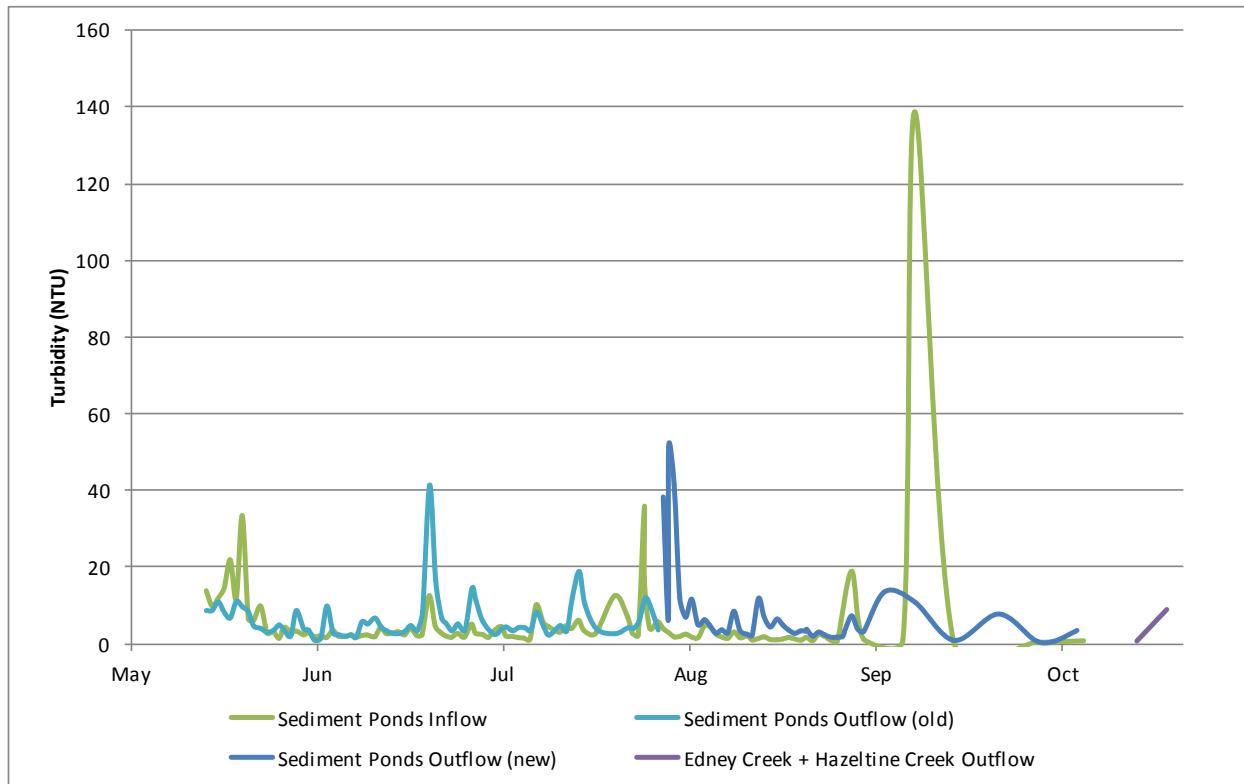


Figure 1. Time series graph for May 13<sup>th</sup> – October 20<sup>th</sup> showing turbidity levels at monitoring locations in lower Hazeltine Creek.

Note that a new time series has been added to show the turbidity of the combine Hazeltine Creek and Edney Creek outflow for the period when Hazeltine Creek is temporarily diverted into Edney Creek.

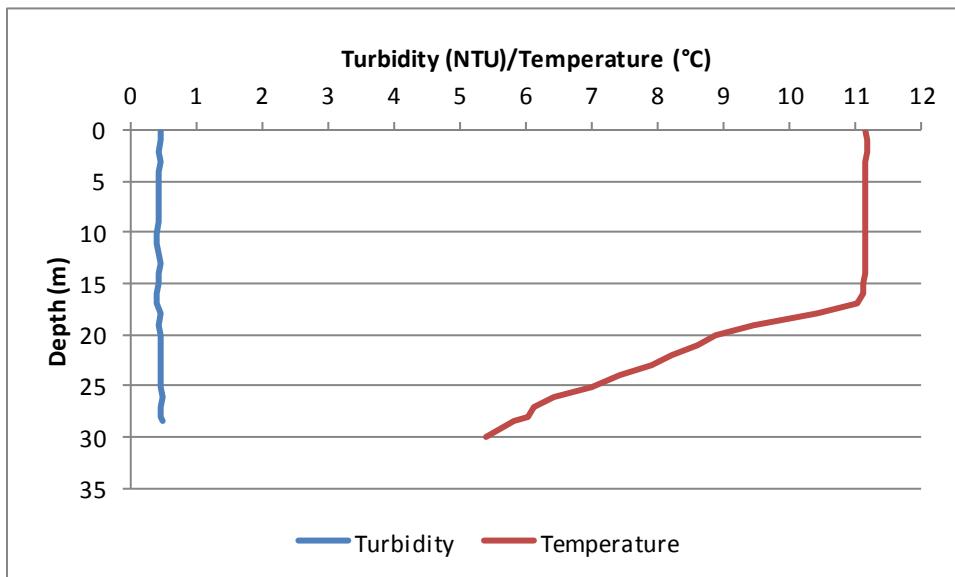


Figure 2. Turbidity and temperature profiles at station QUL-55 (near field site in front of the Edney Creek mouth; Hazeltine Creek is currently temporarily diverted into Edney Creek)

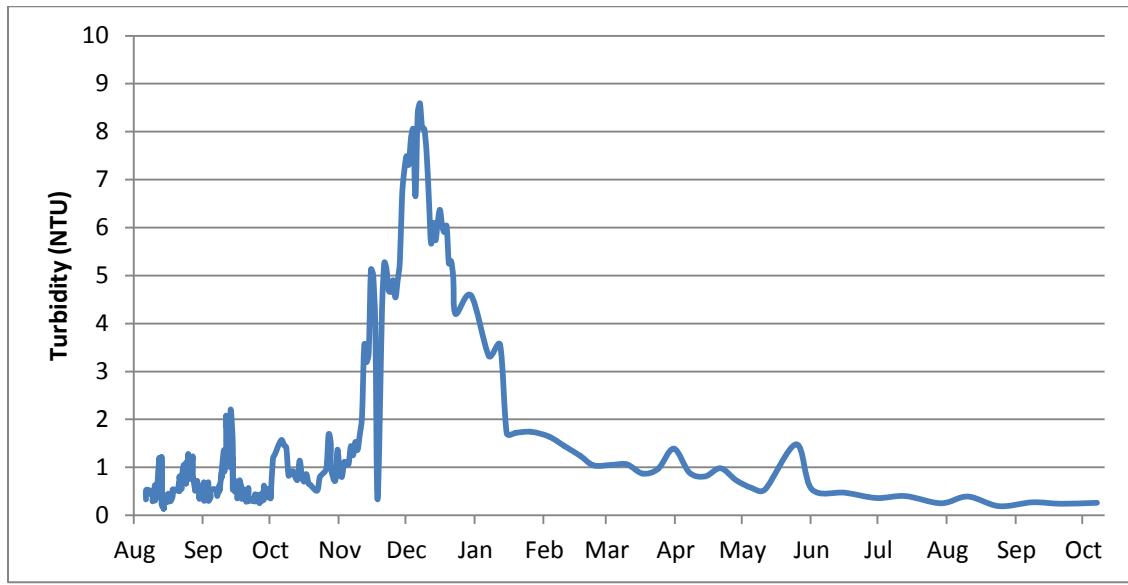


Figure 3. Turbidity time series at station QUR-1 (August 6<sup>th</sup>, 2014 – October 7<sup>th</sup>, 2015)