



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 APRIL 22 – 28, 2015

Water Management

Polley Lake Dewatering	Polley Lake water elevation = 922.71 m (April 27 th) In order to maintain the Polley Lake water level, water from Polley Lake continued to discharge through the completed outlet structure into Hazeltine Creek at a rate of approximately 0.30 to 0.35 m ³ /s until April 25 th , when the weir valve was closed to accommodate removal of sediment from the Lower Hazeltine Creek sedimentation ponds.
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. Please refer to previous weekly reports, such as the December 31 st , 2014 report, for an overview map of the water management system.

Government, First Nations and Stakeholder Engagement

Publications	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). No updates were posted this week.
Engagement Activities and Communications with Regulators	Activities relating to government, First Nations, and stakeholder communication and engagement this week included: <ul style="list-style-type: none"> • Sampling with a representative from the Quesnel River Research Centre on April 22nd to learn the DFO zooplankton sampling procedure. • A Community Open House in Williams Lake on April 22nd. • A Community Meeting is at Sugar Cane First Nations Reserve on April 23rd. • An Implementation Committee meeting and site tour with representatives from the Soda Creek and Williams Lake Indian Bands on April 23rd. • Participation in the Quesnel Gold Show in Quesnel on April 25th. • A Hazeltine Creek tour for an MOE representative on April 27th. • A Hazeltine Creek tour for DFO representatives on April 28th. • A Mine Development Review Committee Meeting on April 28th.

Sediment and Erosion Control Measures

Silt Curtain	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.
General	<p>Environmental monitors are monitoring sediment and erosion control and rehabilitation work in Upper, Middle, and Lower Hazeltine Creek. This monitoring is being conducted by MPMC staff.</p> <p>10,160 tonnes of angular rock were hauled to the Hazeltine Creek area this week for use in rehabilitation work. 2,268 tonnes of till were excavated from the creek channel area and stockpiled, and 10,452 tonnes of rock were excavated and moved within Hazeltine Creek during the channel re-shaping process. 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>
Upper Hazeltine Creek	In Reaches 1 and 2, sediment and erosion control work adjacent to the floodplains is ongoing, and includes pulling back of the tailings adjacent to the creek area.
Middle Hazeltine Creek	<p>In Reach 3 (downstream of the Gavin Lake Road bridge), 2,400m of channel has been constructed and armoured, and preliminary grading of the adjacent floodplain is complete. Hazeltine Creek is flowing in the reconstructed channel all the way from Polley Lake to this point (5,100m total). The floodplain has been constructed for another 600m downstream of this point.</p> <p>It is anticipated that channel construction and armoured, and floodplain construction to the 5,800m mark of Hazeltine Creek (to the section of canyon from 5,800m to 6,100m) will be completed next week.</p> <p>Upgrade work on a logging road to access the ~6100m mark of Hazeltine Creek was completed this week. This is anticipated to be the last access road required for this phase of rehabilitation, and this road will allow work on the remaining section of channel (6,100m to 6,600m).</p>
Lower Hazeltine and Edney Creeks	<p>The upper sedimentation pond in Lower Hazeltine Creek has been dewatered. Outflow from Polley Lake has temporarily been stopped behind the weir, and a pump around system to the lower sedimentation pond is in place for the remaining flow. Removal of accumulated material from this pond is underway.</p> <p>A crew from the Soda Creek First Nation and a crew from a local silviculture contractor continued to plant live willow stakes and wattles and seed native red fescue species this week.</p>

Water Quality Monitoring Program

Water Quality Monitoring Sites	The current water quality monitoring program is outlined in the table below. Quesnel Lake has now turned over, and profile frequency at stations QUL-21a, QUL-18, QUL-66a, QUL-2a, QUL-79, QUL-40a, QUL-120a has being reduced to two times per monthly, as per the monitoring program submitted to and approved by MoE. All monitoring was completed as scheduled this week.			
	Area	Monitoring Type	Frequency	Stations
	Polley Lake	Samples	Monthly	P1, P2
		Profiles	Bi-monthly	P1, P2
	Hazeltine Creek	Samples	Weekly	HAC-01b, HAC-08, HAC-05, HAC-10
	Edney Creek	Samples	Weekly	EDC-01, EDC-02
	Quesnel Lake	Profiles	Weekly	QUL-54, QUL-55, QUL-56
		Profiles	Bi-monthly	QUL-21a, QUL-18, QUL-66a, QUL-2a, QUL-79, QUL-40a, QUL-120a
		Samples	Weekly	QUL-55
		Samples	Monthly	QUL-2a, QUL-18, QUL-40a, QUL-120a
Quesnel River	Samples	Weekly	QUR-1	
Attachment 1 to this report provides a map of these sampling locations.				
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	<p>Figure 1 shows a time series graph for this week of daily field turbidity readings for Upper Hazeltine Creek (at the Gavin Lake bridge, HAC-05), Lower Hazeltine Creek (upstream and downstream of the sedimentation ponds), and Edney Creek (upstream and downstream of the confluence with Hazeltine Creek). Note that measurements upstream of the sedimentation ponds have been temporarily discontinued because the upper sedimentation pond has been dewatered and is being cleaned out. Figure 2 shows turbidity at these same sites over a longer period to provide context for this week's data.</p> <p>Figure 3 shows a turbidity and temperature profile from April 22nd at site QUL-18 in Quesnel Lake (at the deepest point of the West Basin, downstream of the Hazeltine Creek mouth).</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.</p> <p>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. Monitoring to refine the stations' rating curves is ongoing.</p>			

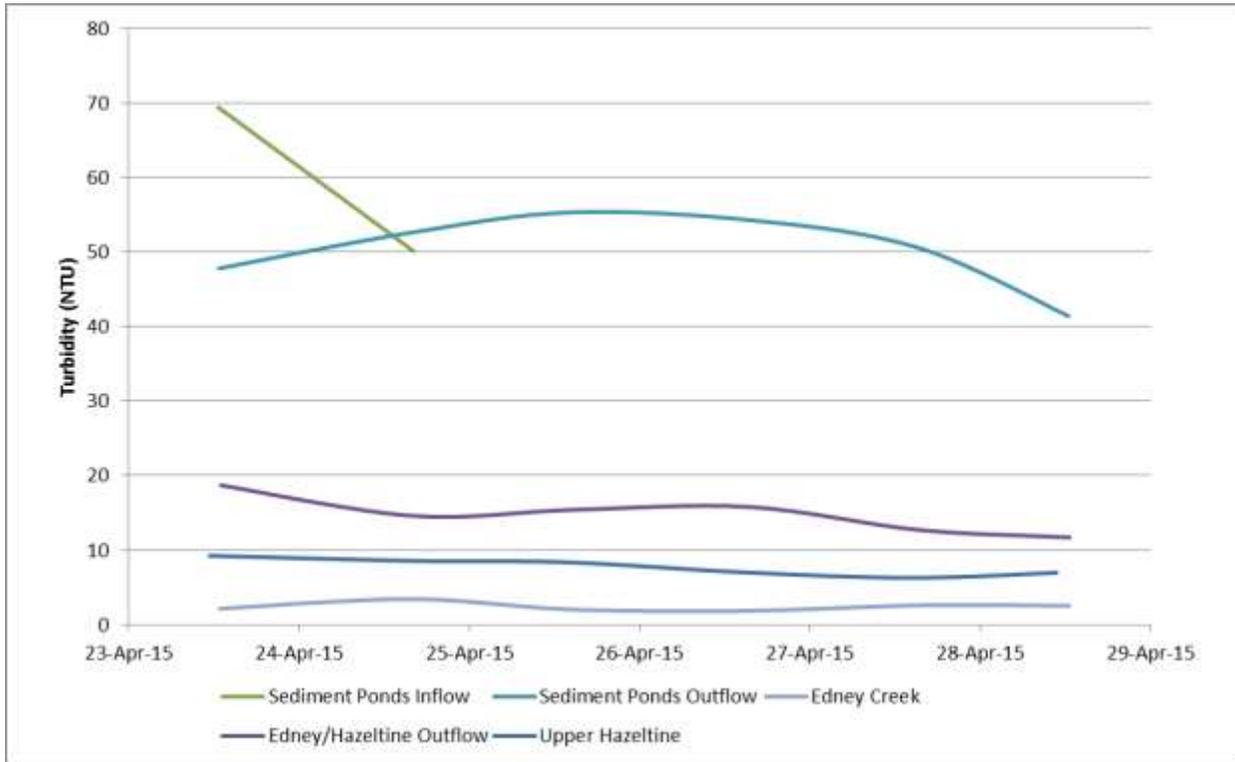


Figure 1. Time series graph for April 22nd to 28th showing turbidity levels at monitoring locations in Hazeltine and Edney Creeks

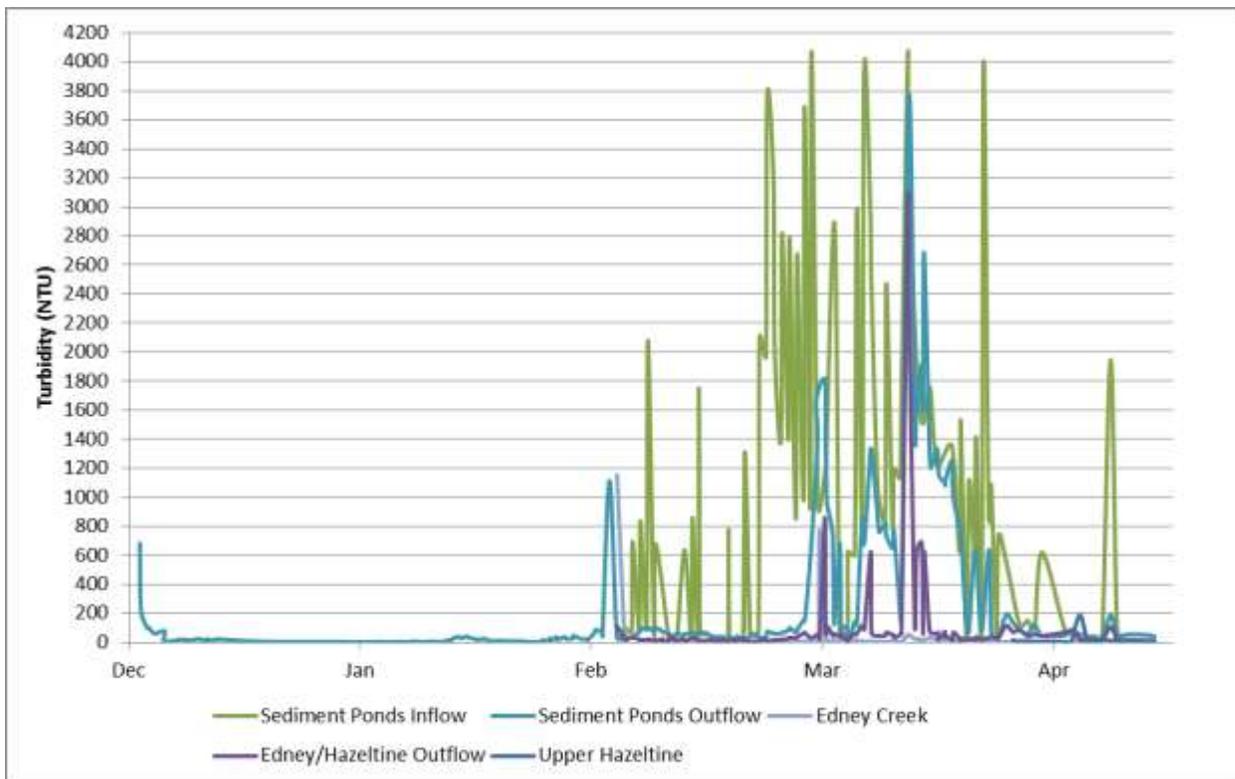


Figure 2. Time series graph for December 12th, 2014 to April 28th, 2015 showing turbidity levels at monitoring locations in Hazeltine and Edney Creeks

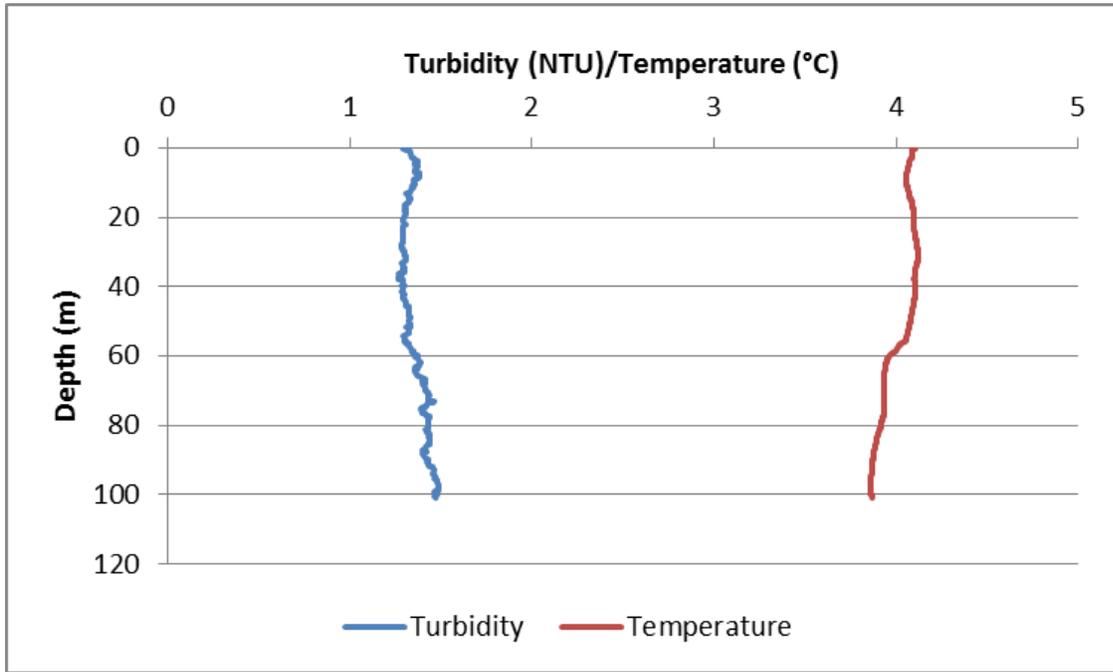


Figure 3. Turbidity and temperature profiles at station QUL-18 from April 22nd

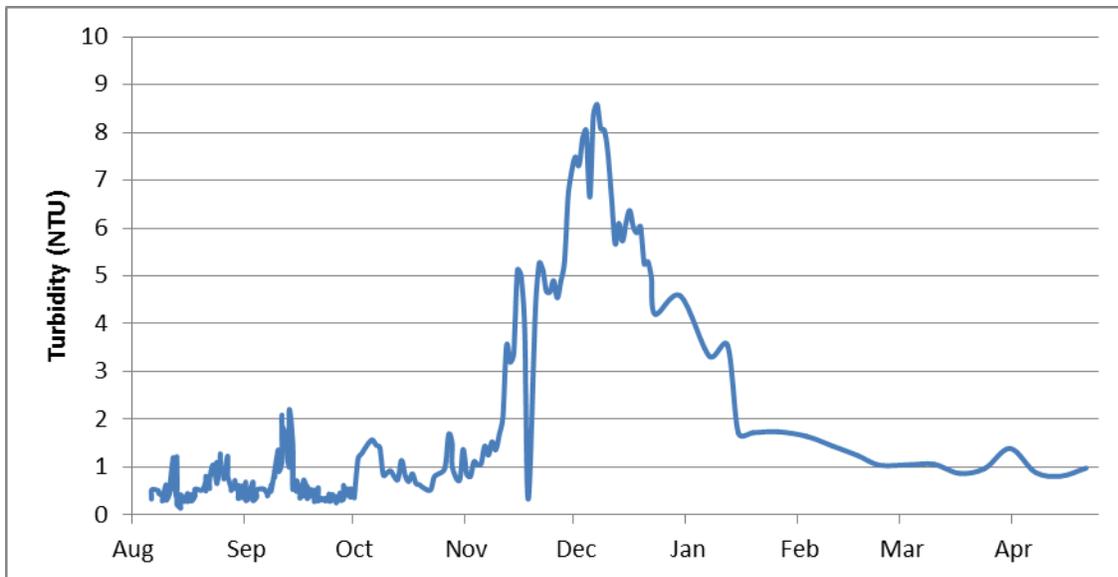


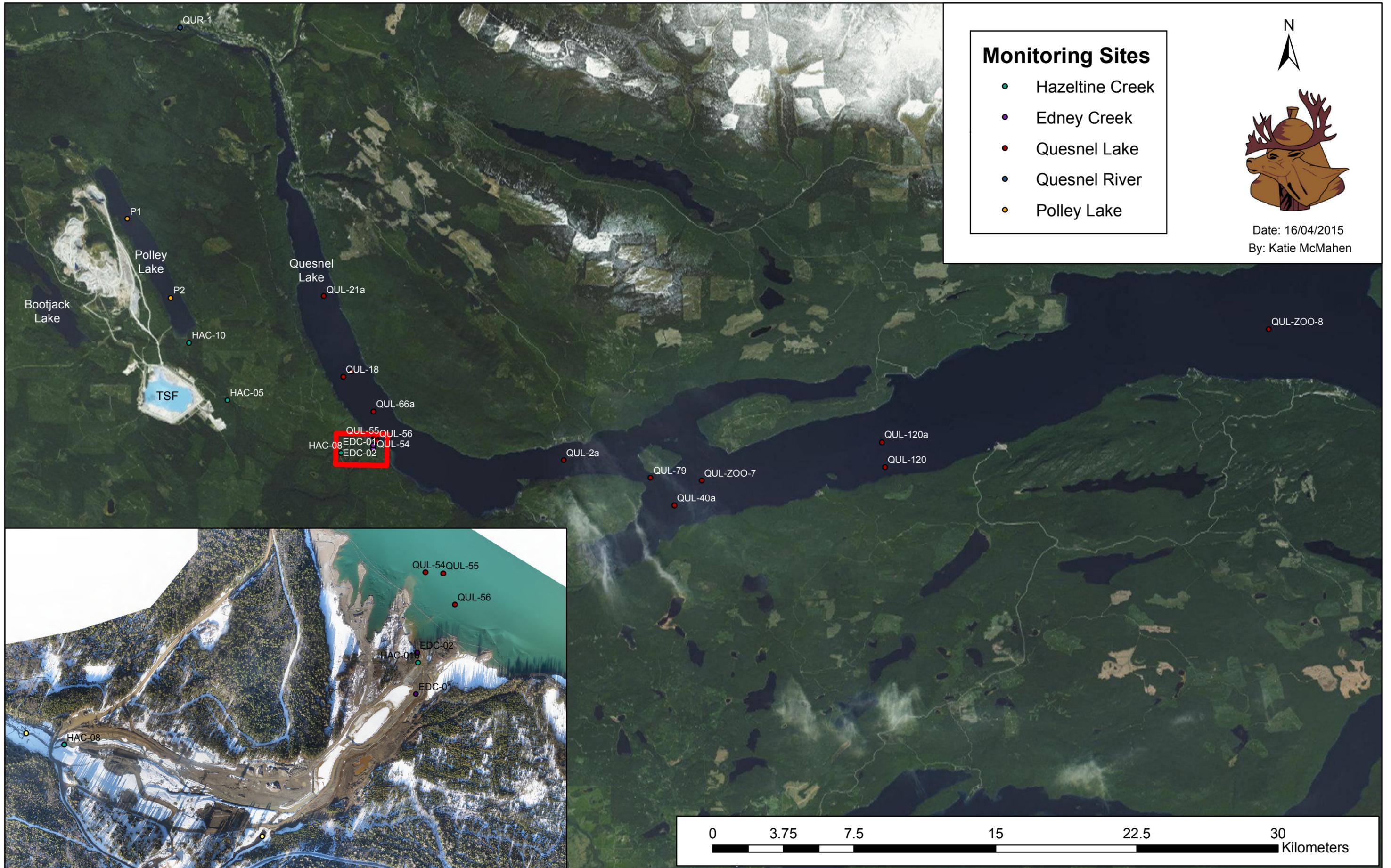
Figure 4. Turbidity time series at station QUR-1 (August 6th, 2014 – April 21st, 2015)

TSF Construction

TSF Construction	<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">• 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 placement immediately downstream of the cut-off wall (Phase 2 footprint) is ongoing. <p>Foundation preparation immediately downstream of the cut-off wall (Phase 2 footprint) was completed this week. Project components that have previously been completed under this approval are detailed in the March 26th, 2015 report.</p>
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Attachments

Attachment 1: Monitoring Locations Map



Monitoring Sites

- Hazeltine Creek
- Edney Creek
- Quesnel Lake
- Quesnel River
- Polley Lake



Date: 16/04/2015
By: Katie McMahan

QUL-55
EDC-01
EDC-02
HAC-08

