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October 8th, 2015

Ministry of Environment
Mining Operations Environmental Protection
2080 Labieux Rd.
Nanaimo, BC
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WEEKLY UPDATE REPORT – SEPTEMBER 39TH – OCTOBER 6TH, 2015

Government, First Nations and Stakeholder Engagement

Publications and Website Updates	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). Last week's update report to the BC Ministry of Environment (MoE) was posted this week. An email notice that the Likely-Horsefly Forest Service Road (Ditch Road) will be closed from October 31st – November 14th was sent out to Mount Polley's email list of community contacts and to the MoE Environmental Working Group.
Engagement Activities and Communications with Regulators	Activities relating to government, First Nations, and stakeholder communication and engagement this week included: • The weekly MoE update call on September 30th. • Attending the Quesnel River Research Centre open house on October 3rd. • A site tour with Fisheries and Oceans Canada (DFO) representatives on October 1st. • A site tour with MoE representatives and their consultants from Lorax Environmental Services on October 1st. • A site tour with representatives from the American Mining Association pm October 1st. • A site tour with MoE and the MEM Assistant Deputy Ministers on October 2nd.

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 will require 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: • Removal of tailings adjacent to Hazeltine Creek and re-sloping on the east side of the floodplain in Reaches 1 and 2 (between Polley Lake and the Gavin Lake Forest Service Road bridge) continued. Some re-sloping is also ongoing on the west side of Hazeltine Creek, near the proposed water discharge pipeline outlet. • The first phase of dead tree removal in areas adjacent to Hazeltine Creek commenced, with work starting in Reach 1. • Stripping of areas adjacent to the Horsefly-Likely Forest Service Road (Ditch Road) bridge in preparation for bridge replacement took place. • Hazeltine Creek was diverted into Edney Creek on October 5th, which will allow for cleaning out of the sedimentation ponds and installation of discharge infrastructure. A fish salvage commenced on October 5th, with representatives from DFO and the Conservation Service on site, to remove fish that had evaded the fish exclusion barriers and travelled into the sedimentation ponds. • Materials for upgraded fish exclusion barriers were ordered and mobilized to site. On-site fabrication commenced. Planning carried out this week included: • Preparations for the fall re-vegetation program in Hazeltine Creek reclamation areas.
Edney Creek	The fish exclusion barriers in Edney Creek were removed this week, now that rehabilitation of fish habitat features has been carried out.

Water Management

Polley Lake	Polley Lake water elevation = 922.17m (October 5th) The Polley Lake weir valve remained open this week to allow approximately 0.01 m^3/s of outflow from Polley Lake into Hazeltine Creek until October 5th, when it was closed to accommodate diversion of Hazeltine Creek into Edney Creek, as described in the Rehabilitation Work section.
Water Management	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 May 28th, 2015 weekly report for an overview map of the TSF water management system.
Springer Pit	The total volume of tailings deposited in the Springer Pit as of October 6th is 695,724 tonnes (504,148 m^3 including water retained in tailings). Water Elevations (October 6th): • Springer Pit = 1020.31m (+0.12m from last week) • Groundwater well GW12-2a = 1013.65m (+0.13m from last week) • Groundwater well GW12-2b = 1013.80m (+0.13m from last week) • Groundwater well GW15-1a = 1020.28m (+0.41m from last week) • Groundwater well GW15-1b = 1020.22m (+0.42m from last week) • Groundwater well GW15-2a = 1022.31m (+0.16m from last week) • Groundwater well GW15-2b = 1022.72m (+0.19m from last week) A map of the groundwater well locations is included as Figure 1 of the July 23rd weekly report. 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. Results for key parameters from a sample taken of the Springer Pit supernatant on September 15th are provided in Table 1, along with recent results to provide context. September purging and sampling of the groundwater wells was completed this week.
Discharge System	Work related to installation of infrastructure for the proposed short-term water discharge plan was carried out this week including: • Armouring of the West Ditch to reduce entrainment of suspended solids in water that will be routed to the water treatment plant (WTP) continued. • Work installing components of the WTP that have arrived on site continued. • Construction of the slurry pipe grade from the WTP, which will carry the high suspended solids reject water to an adjacent till borrow pit to settle. • Delivery of materials to the Quesnel Lake in preparation of installation of the discharge pipelines and diffusers. • A pre-dive was conducted by the contractor retained to install the discharge pipelines and diffusers to inspect the subsurface portion of the pipeline right-of-way. • Preparation of the discharge pipe grade from the WTP to Hazeltine Creek.

Table 1. Springer Pit supernatant water chemistry results (July – September, 2015)

Sample Location		Springer Pit Supernatant				
Date Sampled		09-Jul-15	29-Jul-15	12-Aug-15	27-Aug-15	15-Sep-15
Parameter	Units	Water				
Physical Tests						
Conductivity	uS/cm	1070	1090	1070	1110	1110
Hardness (as CaCO3)	mg/L	526	579	547	554	562
pH	pH	8.09	8.15	8.79	8.54	8.50
Total Suspended Solids	mg/L	<3.0	<3.0	20.40	14.30	6.20
Turbidity	NTU	0.60	1.47	10.30	11.20	2.04
Anions and Nutrients						
Nitrate (as N)	mg/L	7.46	7.58	7.45	7.98	8.31
Sulfate (SO4)	mg/L	457	472	459	483	502
Total Metals						
Aluminum (Al)-Total	mg/L	0.438	0.0791	0.195	0.183	0.0725
Arsenic (As)-Total	mg/L	0.00132	0.00138	0.00576	0.00952	0.00155
Cadmium (Cd)-Total	mg/L	0.0000358	<0.000060	0.0000565	<0.000020	0.0000075
Copper (Cu)-Total	mg/L	0.0211	0.0804	0.138	0.0542	0.0112
Iron (Fe)-Total	mg/L	0.039	0.124	0.235	0.188	0.047
Lead (Pb)-Total	mg/L	<0.000050	0.000185	0.000198	0.00015	0.000056
Molybdenum (Mo)-Total	mg/L	0.122	0.128	0.139	0.14	0.147
Selenium (Se)-Total	mg/L	0.0365	0.0383	0.0375	0.0335	0.0332
Dissolved Metals						
Aluminum (Al)-Dissolved	mg/L	0.0059	0.0048	0.0062	0.0106	0.0171
Arsenic (As)-Dissolved	mg/L	0.00117	0.00117	0.00112	0.00100	0.00084
Cadmium (Cd)-Dissolved	mg/L	0.000026	<0.000050	0.0000478	<0.000020	0.0000084
Copper (Cu)-Dissolved	mg/L	0.0166	0.0286	0.0240	0.0082	0.0052
Iron (Fe)-Dissolved	mg/L	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.122	0.124	0.127	0.144	0.147
Selenium (Se)-Dissolved	mg/L	0.0357	0.0389	0.0361	0.0338	0.0335

Environmental Monitoring Program

Water Quality Monitoring Program

The current water quality monitoring program is outlined in the table below. All scheduled sampling 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-01c
		Monthly	HAC-05, HAC-08, HAC-10
Edney Creek	Samples	Monthly	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

Please refer to previous weekly reports, such as the May 7th, 2015 report, for a map of these sampling locations.

Water Quality Monitoring Results

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. The graph shows data since construction and armouring of the new Hazeltine Creek channel was completed in mid-May.

Figure 2 shows a turbidity and temperature profile from this week at site QUL-55a, a shallow site near the mouth of the new outflow channel from the lower Hazeltine Creek sedimentation pond to Quesnel Lake.

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.

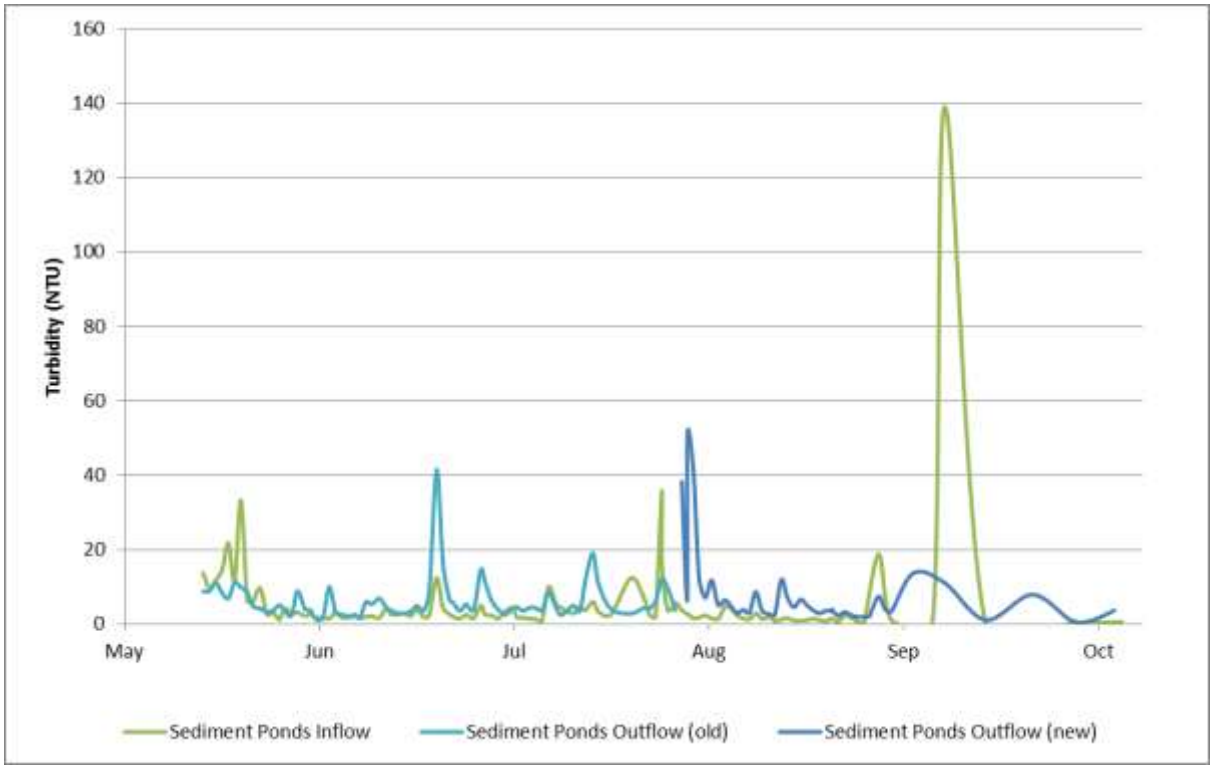

Figure 1. Time series graph for May 13th – October 6th showing turbidity levels at monitoring locations in lower Hazeltine Creek

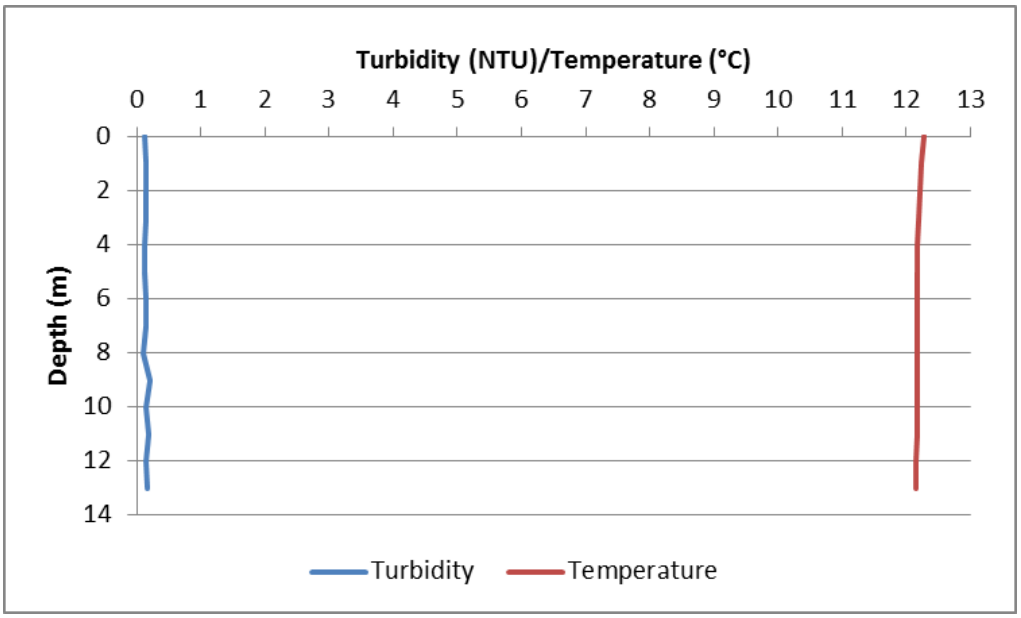

Figure 2. Turbidity and temperature profiles at station QUL-55a (shallow site at the mouth of the new outflow channel from the Hazeltine Creek lower sedimentation pond) on October 5th

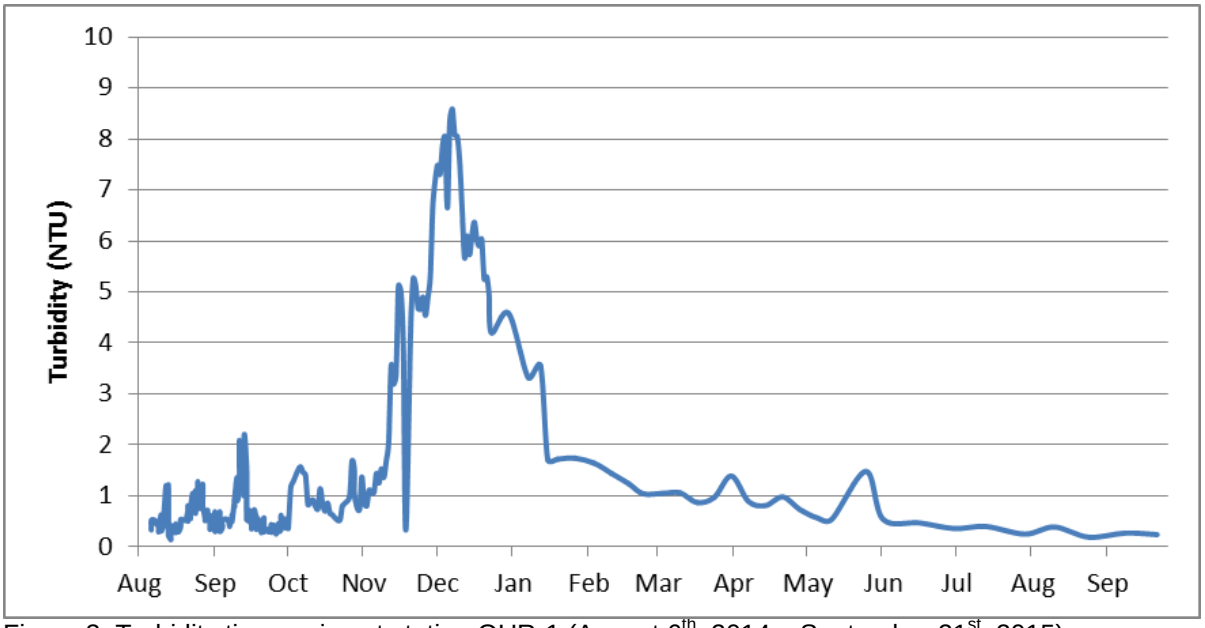

Figure 3. Turbidity time series at station QUR-1 (August 6th, 2014 – September 21st, 2015)