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Ministry of Environment
Mining Operations Environmental Protection
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WEEKLY UPDATE REPORT – OCTOBER 21ST – 27TH, 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. A reminder that the Likely-Horsefly Forest Service Road (Ditch Road) will be closed from October 31st – November 14th. This information was previously 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: • A Hazeltine Creek rehabilitation field tour for the BC Institute of Agrologists and the Williams Lake Field Naturalists on October 17th (not included in last week's report). • The MoE weekly update call on October 21st. • Submission of the final TSF area Particulate Monitoring Report and Summary to the MoE on October 22nd.

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: • Removal of tailings adjacent to Hazeltine Creek on the east side of the creek floodplain in Reach 1 (the depositional area downstream of Polley Lake) continued. • The first phase of dead tree removal in areas adjacent to Hazeltine Creek continued. Logging in Reach 1 on the west side of Hazeltine Creek (south of the plug area) and a strip to the north of the plug area (north of the Plug Access Road) was carried out this week. Equipment was mobilized to lower Hazeltine Creek. • Upgrades to (widening of) the new fish fences upstream of the Polley Lake weir are underway. • Preparations for lowering the Polley Lake weir inlet channel commenced, including creation of equipment access and installation of an upstream fish barrier and till plug. • Tree falling along the alignment for the new Horsefly-Likely Forest Service Road (Ditch Road) bridge was carried out. Stripping and sloping along the alignment commenced and the replacement bridge arrived on site. • Hazeltine Creek continued to be diverted into Edney Creek during the construction of the Quesnel Lake discharge outfall structure. • A fish salvage program along the length of Hazeltine Creek was carried out this week to remove any fish that have evaded the fish barriers. The lower sedimentation pond was also salvaged of fish and dewatered. • A crew from a local reforestation contractor and a Xatśūll (Soda Creek Indian Band) crew continued the fall revegetation program. The crews are planting live willow wattles and stakes, and native deciduous trees and shrubs. Approximately 70,000 seedlings have been planted on the Hazeltine Creek floodplain in Reach 3 (between the Gavin Lake Forest Service Road bridge and the canyon area), on the Edney Creek floodplain, and along the Quesnel Lake shoreline. Approximately 2,000 metres of willow wattles have been installed to date in Reach 3, in addition to staking and wattle installation at an erosional bank upstream of the Likely-Horsefly Forest Service Road (Ditch Road) bridge.

Water Management

Polley Lake	Polley Lake water elevation = 922.17m (October 27th) The Polley Lake weir valve remained closed this week to accommodate downstream works, as described in the Rehabilitation Work section.
Water Management	Removal and storage of the sprinklers, turbomisters, and snow makers (misters) for winter occurred this week. Installation of additional pumping capacity in the Springer Pit is underway to provide water to the treatment plant for the proposed short-term water discharge. 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 27th is 846,981 tonnes (613,754 m^3 including water retained in tailings). Water Elevations (October 27th): • Springer Pit = 1022.02m (+0.05m from last week) • Groundwater well GW12-2a = 1013.99m (+0.14m from last week) • Groundwater well GW12-2b = 1014.18m (+0.15m from last week) • Groundwater well GW15-1a = 1022.35m (+0.34m from last week) • Groundwater well GW15-1b = 1022.31m (+0.35m from last week) • Groundwater well GW15-2a = 1022.81m (+0.21m from last week) • Groundwater well GW15-2b = 1023.29m (+0.24m 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. Purging and sampling of the Springer Pit wells was carried out this week; this may have affected the measured well water levels presented above.

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) is complete. Areas requiring further armouring identified in the third party engineering inspection were addressed this week and upgrades to culverts at a road crossing were completed. • Armouring of the ditch from the Central Collection Sump to the Perimeter Embankment Till Borrow Pit (where the WTP is located) is complete. • Commissioning of the WTP is underway, and inflow and outflow samples were collected for verification and plant optimization purposes (note that water is being recirculated into the site water collection system and not discharged). • Work installing WTP supporting structures and equipment continued. • Installation of the discharge pipelines in Quesnel Lake along the designed alignment by a retained contractor, which includes a team of divers, was completed this week. 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, as required. • Backfilling of the on-land portion of the Quesnel Lake discharge pipelines commenced.

Environmental Monitoring Program

Water Quality Monitoring Program

The current water quality monitoring program is outlined in the table below. No Quesnel Lake monitoring was completed this week due to boat equipment issues; however the boat was repaired and monitoring conducted subsequent to the end date of this report, such that no monthly or weekly monitoring is missed. Changes made to the monitoring program last week continued because Hazeltine Creek continued to be temporarily diverted into Edney Creek:

- 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).
- 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.

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

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 and downstream of the sedimentation ponds and at the outflow into Quesnel Lake, as well as for lower Edney Creek for the period when Hazeltine Creek is diverted into Edney Creek. The graph shows field turbidity data (previously daily, now weekly) since construction and armouring of the new Hazeltine Creek channel was completed in mid-May.

Figure 2 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.

Other Monitoring

Minnow Environmental was on site this week carrying out a benthic invertebrate sampling program in Edney Creek and Quesnel Lake.

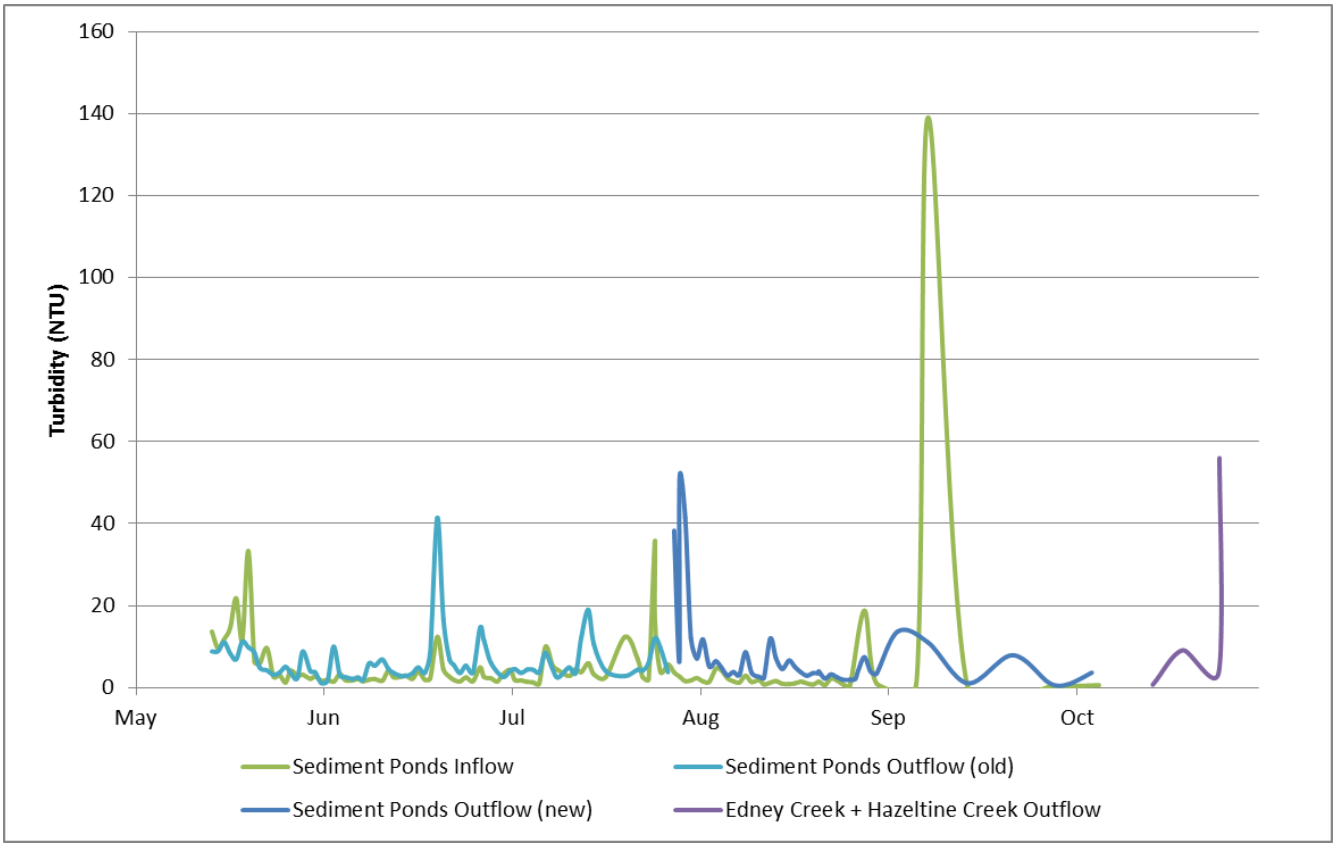

Figure 1. Time series graph for May 13th – October 26th showing turbidity levels at monitoring locations in lower Hazeltine Creek. Note that a new time series has been added to show the turbidity of the combined Hazeltine Creek and Edney Creek outflow for the period when Hazeltine Creek is temporarily diverted into Edney Creek

The turbidity increased on October 26th due to a rain event, however, visual observations show that the turbidity returned to typical levels later that same day. Hazeltine Creek water was temporarily diverted and stored in the upper sedimentation pond to reduce suspended solids loadings to Quesnel Lake (no water was released from the upper sedimentation pond).

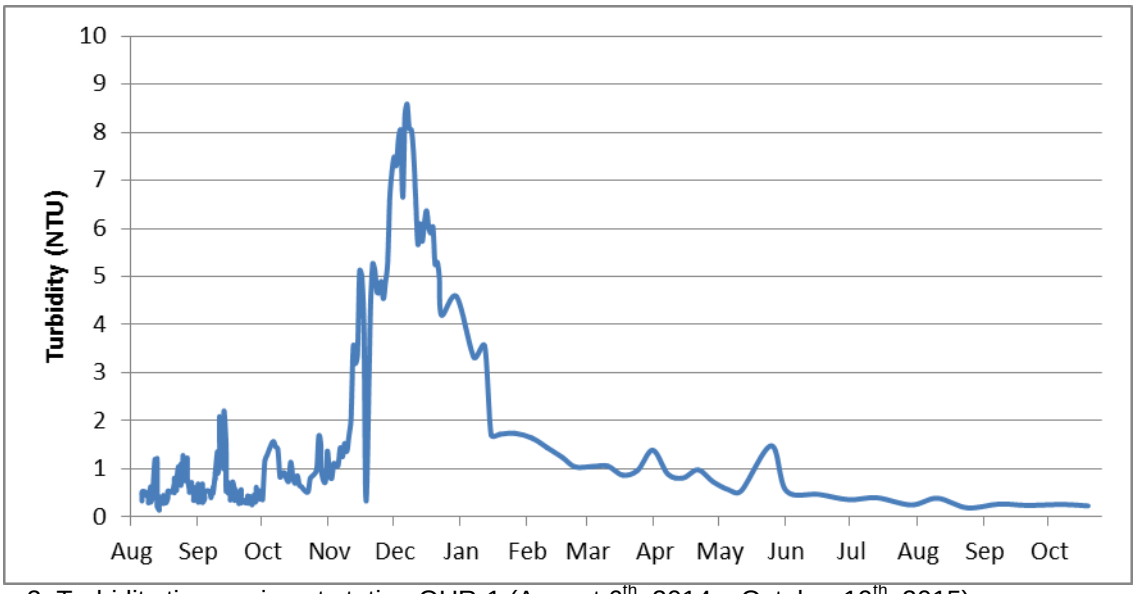

Figure 2. Turbidity time series at station QUR-1 (August 6th, 2014 – October 19th, 2015)