

February 20, 2012

To: C. Hubert, MVEIRB

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The following tables present the anticipated water quality to be discharged to the Pine Point Hydrometallurgical Tailing facility, based on the most recent November 2012 PP6 Hydrometallurgical pilot test work. The results are from test work based on the present hydrometallurgical plant design, and is updated to include Sulphate and Magnesium data. This document replaces the document sent February 19, 2012.

Parameter	Pine Point Hydrometallurgical Tailing Water (µg/L)	<i>Estimated Concentrations at Great Slave Lake (µg/L)</i>	Comparison to CCME Guidelines (µg/L)
Aluminum (Al)	20	2.0	100
Arsenic (As)	14.2	1.4	5.0
Cadmium (Cd)	0.148	0.0148	0.052
Chromium (Cr)	11.2	1.12	8.9
Copper (Cu)	2.9	0.29	2-4
Iron (Fe)	14	1.4	300
Lead (Pb)	0.13	0.013	1-7
Mercury (Hg)	<0.01	<0.001	0.026
Molybdenum (Mo)	2.89	0.289	73
Nickel (Ni)	5.6	0.56	25-150
Selenium (Se)	2.0	0.2	1
Silver (Ag)	<0.01	<0.001	0.1
Thallium (Tl)	<0.2	<0.02	0.8
Uranium (U)	0.146	0.0146	15
Vanadium (V)	3.9	0.39	6
Zinc (Zn)	2	0.02	30

- A conservative boundary condition was applied, shown to be conservative by sensitivity analysis;
- Flow rates were conservatively assumed to be double from known aquifer flow tests;
- There was no retardation considered in the model;
- The transport model included no sorption;
- The transport model included no precipitation; and
- The transport model included no chemical reactions.

The above are anticipated to significantly reduce the predicted concentrations of parameters at Great Slave Lake.

It is noted that the Mg and SO₄ reported above are higher than the concentrations modelled in the groundwater modelling effort of 800 mg/l magnesium and 4500 mg/l sulfate. However, the concentrations of magnesium and sulphate reported above are not anticipated to be discharged to the tailing management facility due to the optimization and recovery test work completed that achieve the concentrations modeled.

In conclusion, based on the conservative nature of the modelling, the concentrations of all parameters are anticipated to either be within the range of natural variability or below the CCME and proposed CCME guidelines in Great Slave Lake, and thus are not anticipated to have a negative environmental impact.