AGNICO EAGLE

MEADOWBANK MINE

Preliminary AEM Report – Seepage Water From Waste Rock Storage Facility – Sample Location ST-16

SEPTEMBER 2013

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1. **Issue**

During an AANDC Water License inspection on July 29th and 30th 2013 it was observed that “red” colored seepage from the south - east side of the Waste Rock Storage Facility was seeping through the road perimeter into Lake NP-2. Samples were taken by both the Inspector and AEM staff (split sample). Analysis results from this sampling were received by AEM on August 16th, 2013. See Photos 1 and 2 below and Table 1.

Photo 1 – Shore of NP-2

Photo 2 – ST-16 Waste Rock seepage.

Table 1 – Historical ST-16 Results

Parameters	Date / Units	ST-16 Average 2011	ST-16 Average 2012	ST-16 11/06/2013	ST-16 04/07/2013	ST-16 Split 30/07/2013	ST-16 Split AANDC Result 30/07/2013
*pH		6.49	7.30	6.45	7.21		7.20
*Turbidity	NTU	17	34		17		123
*Conductivity	us/cm		154	420	1485		4510
Alkalinity	mg CaCo3/L	34	67	46	89	272	162
Aluminum	mg/L	0.159	0.513		0.464	0.042	0.045
Dissolved Aluminium	mg/L				0.027	< 0.006	
Ammonia	mgN/L	0.07	0.03	< 0.05	0.20	1.20	
Ammonia-nitrogen	mgN/L		0.22	0.45	7.80	34.00	
Total Dissolved Solids	mg/L	55	175	37	969	3792	
Total Suspended Solids	mg/L						50
Arsenic	mg/L	0.0020	0.0045	0.0029	0.0091	0.0139	0.0083
Dissolved As	mg/L				0.0031	0.0058	
Barium	mg/L	0.0095	0.0196		0.0741	0.1414	0.1480
Dissolved Barium	mg/L				0.0558	0.1433	
Cadmium	mg/L	0.00060	0.00004		0.00014	0.00065	0.00020
Dissolved Cadmium	mg/L				0.0001	0.0007	
Chloride	mg/L	2	3		15	450	192
Chromium	mg/L		0.0048		0.0034	0.0011	0.0010
Copper	mg/L	0.0017	0.0046	0.0028	2.3110	2.0380	3.3500
Dissolved Copper	mg/L				1.909	1.712	
Fluoride	mg/L	0.106	0.098		0.110	0.290	
Hardness	mg CaCO3/L	62	59		361	1417	1020
Iron	mg/L	1.21	1.94		1.60	4.40	21.90
Dissolved Iron	mg/L				0.17	0.06	
Lead	mg/L	0.0010	0.0056	< 0.0003	0.0015	0.0013	< 0.0001
Dissolved Lead	mg/L				< 0.0003	< 0.0003	
Manganese	mg/L	0.588	0.961		2.447	6.370	5.850
Dissolved Manganese	mg/L				2.110	6.055	
Mercury	mg/L	0.00062	0.00007		< 0.00010	0.00005	0.00015
Dissolved Mercury	mg/L				< 0.0001	< 0.0001	
Molybdenum	mg/L	0.001	0.001		0.026	0.170	0.083
Dissolved Molybdenum	mg/L				0.0204	0.1773	
Nickel	mg/L	0.0339	0.0395	0.0069	0.5149	2.0150	1.3300
Dissolved Nickel	mg/L				0.415	1.810	
Nitrate	mg/L	0.17	0.34		8.10	37.80	23.70
Selenium	mg/L	0.002	0.001		0.007	0.020	0.013
Dissolved Selenium	mg/L				0.005	0.023	

Silver	mg/L	0.0006	0.0049								0.0056
Dissolved Silver	mg/L					<	0.0002		0.0019		
Sulphate	mg/L	24	9				406		2400		1450
Thallium	mg/L	0.0025	0.0025			<	0.0050	<	0.0050	<	0.0001
Dissolved Thallium	mg/L					<	0.005	<			
Zinc	mg/L	0.005	0.008	<	0.001		0.010		0.009	<	0.005
Dissolved Zinc	mg/L						0.003		0.008		
Calcium (Ca)	mg/L										312
Magnesium (Mg)	mg/L										60
Potassium (K)	mg/L										88
Sodium (Na)	mg/L										590
Cesium	mg/L										0.0009
Rubidium	mg/L										0.0687
Ortho-Phosphate as Phosphorus	mg/L										
Antimony (Sb)	mg/L						0.0004		0.0012		0.0007
Boron (B)	mg/L						0.04		0.15		
Beryllium (Be)	mg/L					<	0.0005	<	0.0005	<	0.0001
Cobalt (Co)	mg/L						0.0729		0.3114		0.2290
Lithium (Li)	mg/L					<	0.005		0.006		0.004
Tin (Sn)	mg/L					<	0.001	<	0.001		
Strontium (Sr)	mg/L						0.44		2.14		1.40
Tianium (Ti)	mg/L						0.1300		0.5500		0.0007
Uranium (U)	mg/L						0.034		0.170		0.115
Vanadium (V)	mg/L					<	0.0005	<	0.0005		0.0011
Nitrite	mg/L						0.07		0.41		

2. Background Information

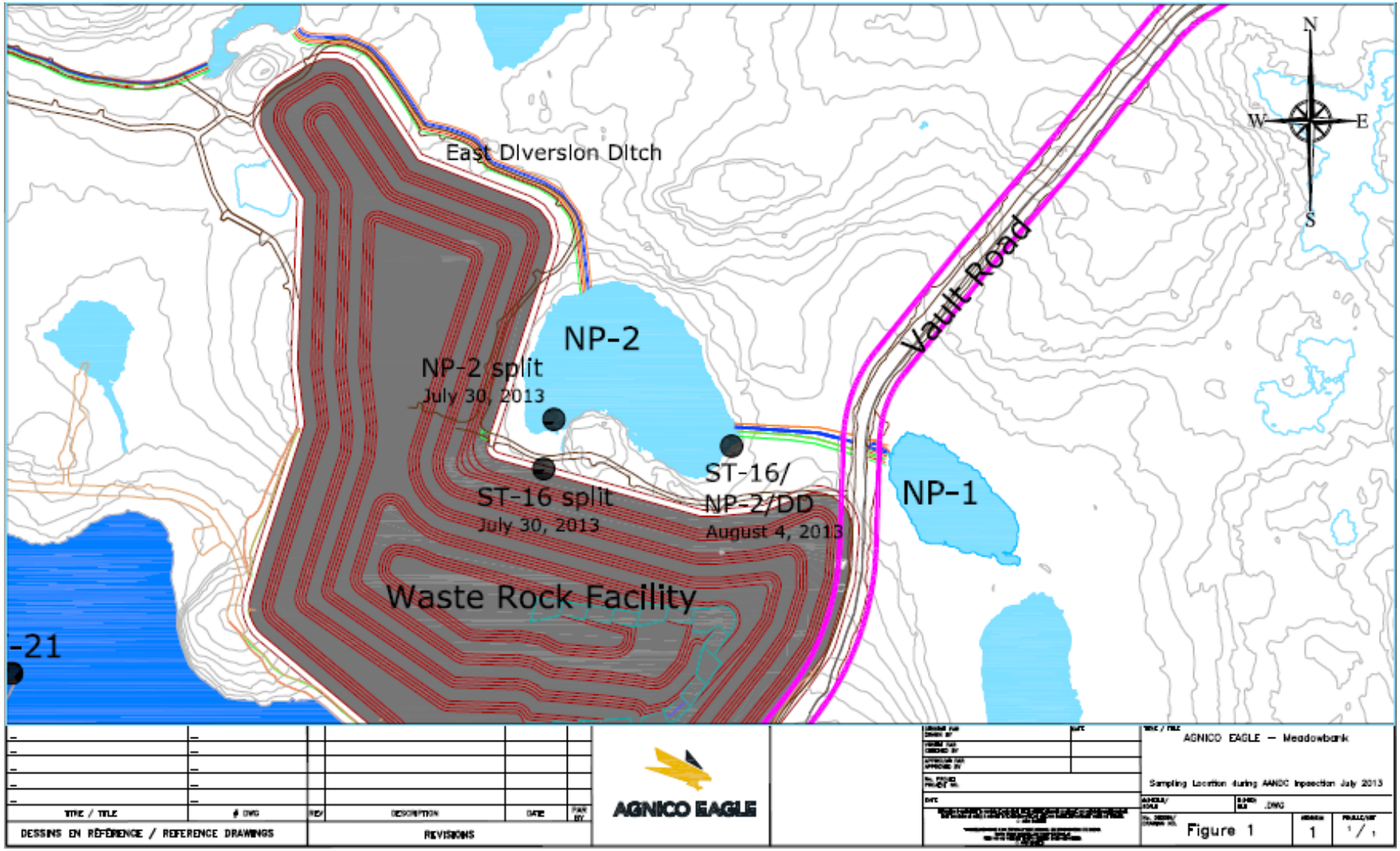
Historically, this “red” coloured water had not been observed previously at this location. The water was typically brown colored, indicative of freshet water which is usually impounded by the road and the waste rock. In the spring of 2012, a crushed NPAG rock road was constructed to isolate the sump from NP-2. Results from 2012 and initially in 2013 indicated that the water quality was good with no elevated copper or nickel and typical of freshet surface water quality (see Table 1 above). Based on the June water quality results and historical results in ST-16, AEM continued to monitor the sump as per the Type A water license.

In 2012 the construction of the East and West Diversion ditches was completed. These ditches are designed to keep freshet surface drainage from contacting the Waste Rock Storage Facility and the Tailings Storage Facility (TSF). The East ditch flows through Lakes NP- 2 and connects to Lake NP-1. After freshet there is little turnover in these lakes and the only inflows and outflows would be rainwater (See Figure 1). The ditches ensure that the water levels in these lakes do not rise and overflow into active mine areas such as the Waste Rock Facility and TSF.

In June 2013 we observed the normal brown color in the seep area initially up until approximately July 26th and 27th when the colour had changed to “red”. This is indicative of iron precipitate. The normal procedure is to have site water trucks pump out the seepage and deposit either in the TSF or use as dust suppressant in the mine pit only. Sample results from July 4th indicated that copper and nickel were elevated. This was an anomaly and our plan was to verify with the next sampling results (August 4th). There was no confirmed indication of actual seepage migrating through the perimeter road to Lake NP-2 until the red coloured seepage appeared around July 26th and 27th. At that point the red could be observed along the shoreline in NP-2. This was confined to the near shore and not in the main part of the lake. It was not observed at the exit of Lake NP-2. Removal of the seep water had previously commenced and was continuing at this point in time. **There was and has been no fish mortalities observed to date.**

As mentioned the AANDC inspector was on site July 29th and 30th, 2013 and split samples were taken. The seepage was evident in the Lake, along the near shore only (see photo 2), and we increased the removal of the seep water from the ST-16 sample location. Please see Figure 1 below for sample locations.

Figure 1 – Sampling Location during AANDC Inspection July 2013



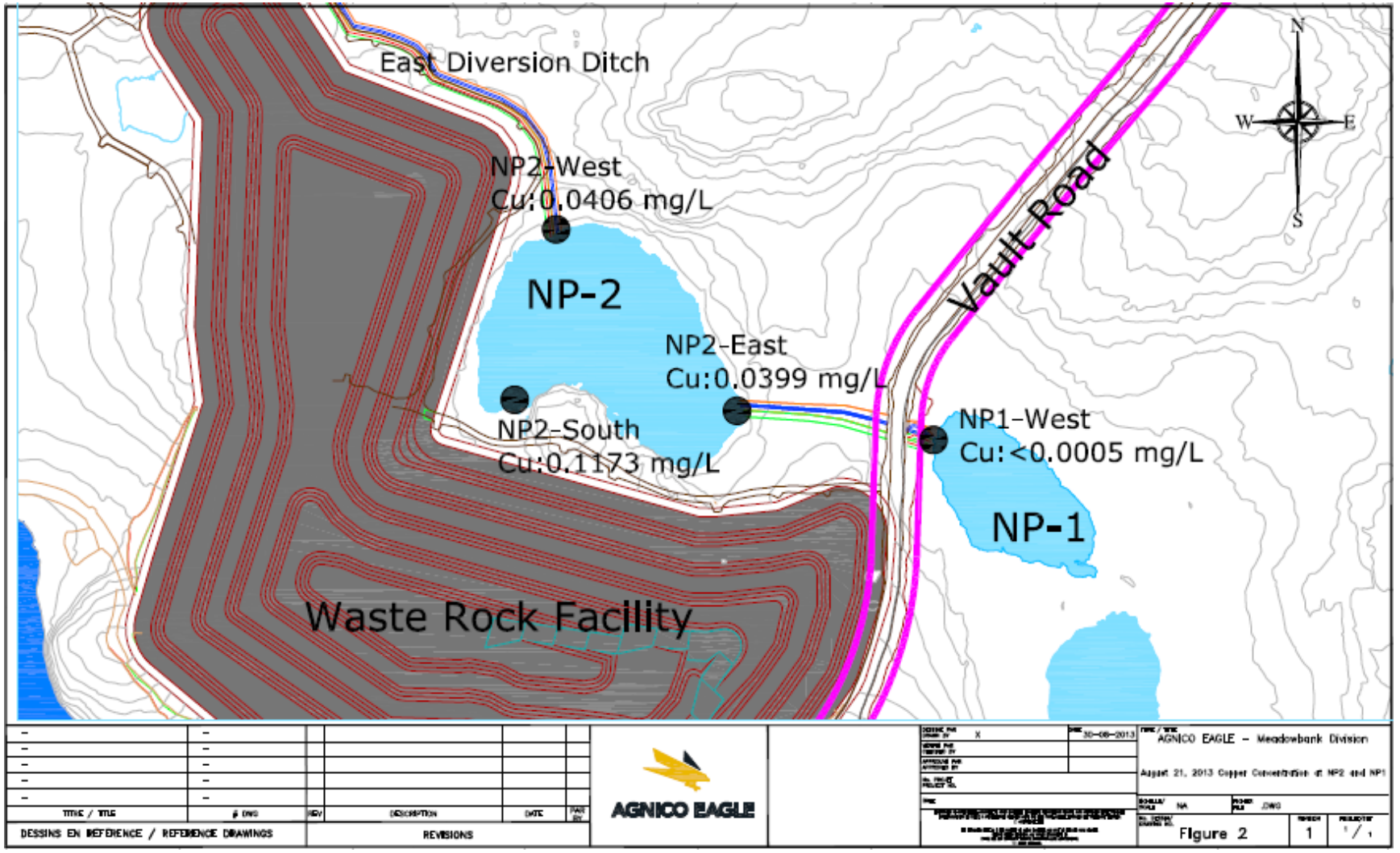
By August 4th AEM had lowered the level in the seepage area to the point where it was felt that the seepage through the road had stopped. Pumping of the sump continued and is still ongoing. Also on August 4th a sample was taken in NP-2 at the East end of the Lake in an area that exhibited clear water – see Figure 1 location.

On August 16th results were received from the sampling conducted with AANDC (see Table 1 above for results) and the certificates are attached as Appendix 1. The copper, nickel, iron, manganese and sulphate were elevated. A preliminary investigation was launched by the Environment and Engineering Departments. Pumping of the seep water continued and all of this water was directed to the TSF. On August 19th the results from AEM's August 4th sample in NP-2 Lake at the East end were received and this too indicated elevated copper at a level of 0.1713 mg/l which exceeded the CCME criteria for Protection of Aquatic Life. All of this information was forwarded to the AANDC Inspector including all analysis results.

The investigation at this time was centered on seepage from the waste rock, specifically from the PAG material. Some waste rock at the site contains copper, iron and sulphides which could explain the elevated values observed in the sample results. This was not observed historically at this site. The main immediate action was to keep the waste rock seepage pumped down to prevent migration through the road into NP-2 Lake.

Further monitoring for copper only was undertaken in NP-2 Lake on August 21st, 2013. Results were received on August 24th and are indicated on Figure 2 below. The level had dropped significantly at NP-South, East and West and was not detected in NP-1 Lake. This was an indication that the seepage to the Lake had stopped due to pumping.

Figure 2 – August 21, 2013 Copper Concentration at NP-2 and NP-1



The investigation continued and a Plug/Dike design request to prevent any seepage from migrating through the road to NP-2 Lake was submitted to AEM's Engineering Department. A design was produced (see Figure 3 below). This was an additional measure taken to augment the pumping of the seep water. Construction of the Waste Rock Plug commenced on August 26th, 2013. Also, it was observed, after the pumping out of the water to a low level, that water was still seeping from the waste rock and this included two distinct areas in close proximity (approximately 15 m apart) to each other. One was "red" colored and the other "brown" - see photos 3 and 4 below.

Figure 3 – Plug Design

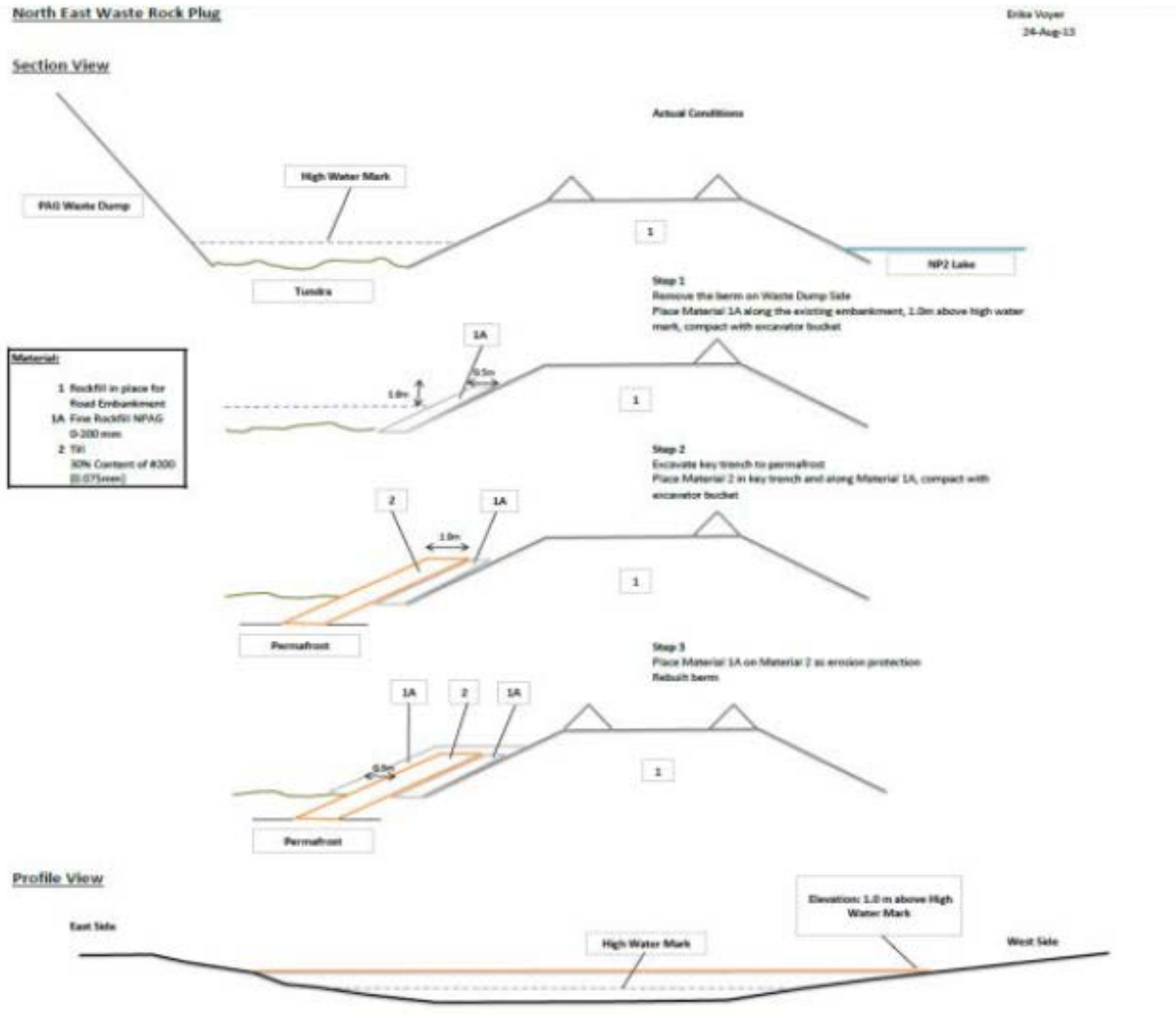


Photo 3 – Brown seepage

Photo 4 – Red seepage

A staff gauge has been placed at the seepage to determine the water level increases more definitively – see photo 5 below.

Photo 5 – Seepage Staff Gauge

On August 27th two Inspectors from AANDC and two Inspectors from Environment Canada attended the Meadowbank site and conducted sampling at the seep – ST-16 and at four locations around NP-2 Lake. AEM took duplicate samples during this visit. The construction project of the Waste Rock Plug had started and was being conducted during the visit. As previously stated AEM was of the opinion that the seepage through the road had stopped by August 21st.

Concurrent to the inspection, the preliminary investigation had determined that there was a hydraulic gradient that existed between the TSF reclaim water level and NP-2 Lake. The TSF water level was at elevation 145.7 m and NP-2 Lake was at elevation 141.2 m. Upon examining a topographical photo prior to mine development there was an indication that the former watercourse connecting the seep area to the North West Arm Second Portage Lake (now the TSF) could act as a conduit under the waste rock to the seep area – see photo 6 below. After conducting a comparison analysis of sample results in the TSF (sample station ST-21) several similarities became evident. Notably this included copper, nickel, chloride, sulphate, hardness – see comparison Table 2 below. AEM determined that is was possible that the TSF reclaim water could be migrating through the former water course to the seep area at a location along RF 1 rockfill road (TSF perimeter structure). This is the suspected migration route.

Table 2 – Comparison between ST-21 and ST-16

Parameters	Date / Units	ST-21 Average 2013	ST-21 04/07/2013	ST-16 Split 30/07/2013	30/07/2013 Split AANDC Result
*pH		8.95	8.28		7.20
*Turbidity	NTU	20	9		123
*Conductivity	us/cm				4510
Alkalinity	mg CaCo3/L	116	127	272	162
Aluminum	mg/L	0.409	0.409	0.042	0.045
Dissolved Aluminium	mg/L	0.124	0.152	< 0.006	
Ammonia	mgN/L	25.70		1.20	
Ammonia-nitrogen	mgN/L	31.9	17.6	34.0	
Total Dissolved Solids	mg/L	3504	1988	3792	
Total Suspended Solids	mg/L				50
Arsenic	mg/L	0.0208	0.0208	0.0139	0.0083
Dissolved As	mg/L	0.0129	0.0137	0.0058	
Barium	mg/L	0.0598	0.0598	0.1414	0.1480
Dissolved Barium	mg/L	0.0936	0.0465	0.1433	
Cadmium	mg/L	0.00043	0.00043	0.00065	0.00020
Dissolved Cadmium	mg/L	0.00203	0.00035	0.0007	
Chloride	mg/L	1129	292	450	192
Chromium	mg/L	0.0007	0.0007	0.0011	0.0010
Copper	mg/L	0.6531	0.6531	2.0380	3.3500
Dissolved Copper	mg/L	10.8004	0.3915	1.712	
Fluoride	mg/L	3.36	0.26	0.290	
Hardness	mg CaCO3/L	1454	662	1417	1020
Iron	mg/L	0.56	0.56	4.4	21.9
Dissolved Iron	mg/L	0.71	< 0.01	0.06	
Lead	mg/L	0.0045	0.0045	0.0013	< 0.0001
Dissolved Lead	mg/L	0.0019	< 0.0003	< 0.0003	
Manganese	mg/L	0.5164	0.5164	6.370	5.850
Dissolved Manganese	mg/L	0.0839	0.4254	6.055	
Mercury	mg/L	0.000005	< 0.00001	0.00005	0.00015
Dissolved Mercury	mg/L	0.00015	< 0.0001	< 0.0001	
Molybdenum	mg/L	0.2041	0.2041	0.170	0.083
Dissolved Molybdenum	mg/L	0.372	0.171	0.1773	
Nickel	mg/L	0.1204	0.1204	2.0150	1.3300
Dissolved Nickel	mg/L	0.1638	0.0962	1.810	
Nitrate	mg/L	15.6	12.2	37.8	23.7
Selenium	mg/L	0.012	0.012	0.020	0.013
Dissolved Selenium	mg/L	0.021	0.010	0.023	
Silver	mg/L				0.0056
Dissolved Silver	mg/L	0.0067	< 0.0002	0.0019	
Sulphate	mg/L	2268	1085	2400	1450

Thallium	mg/L	0.0025	<	0.0050	<	0.0050	< 0.0001
Dissolved Thallium	mg/L	0.01	<	0.01			
Zinc	mg/L	0.006		0.006		0.009	< 0.005
Dissolved Zinc	mg/L	0.0865		0.004		0.008	
Calcium	mg/L						312
Magnesium	mg/L						60
Potassium	mg/L						88
Sodium	mg/L						590
Cesium	mg/L						0.0009
Rubidium	mg/L						0.0687
Antimony	mg/L	0.0014		0.0014		0.0012	0.0007
Boron	mg/L					0.15	
Beryllium	mg/L	0.00025	<	0.0005	<	0.0005	< 0.0001
Cobalt	mg/L					0.3114	0.2290
Lithium	mg/L	0.0025	<	0.005		0.006	0.004
Tin	mg/L	0.0005	<	0.001	<	0.001	
Strontium	mg/L	0.798		0.798		2.14	1.40
Titanium	mg/L	0.2900		0.2900		0.5500	0.0007
Uranium	mg/L	0.009		0.009		0.170	0.115
Vanadium	mg/L	0.00025	<	0.0005	<	0.0005	0.0011
Nitrite	mg/L	0.25		0.31		0.41	

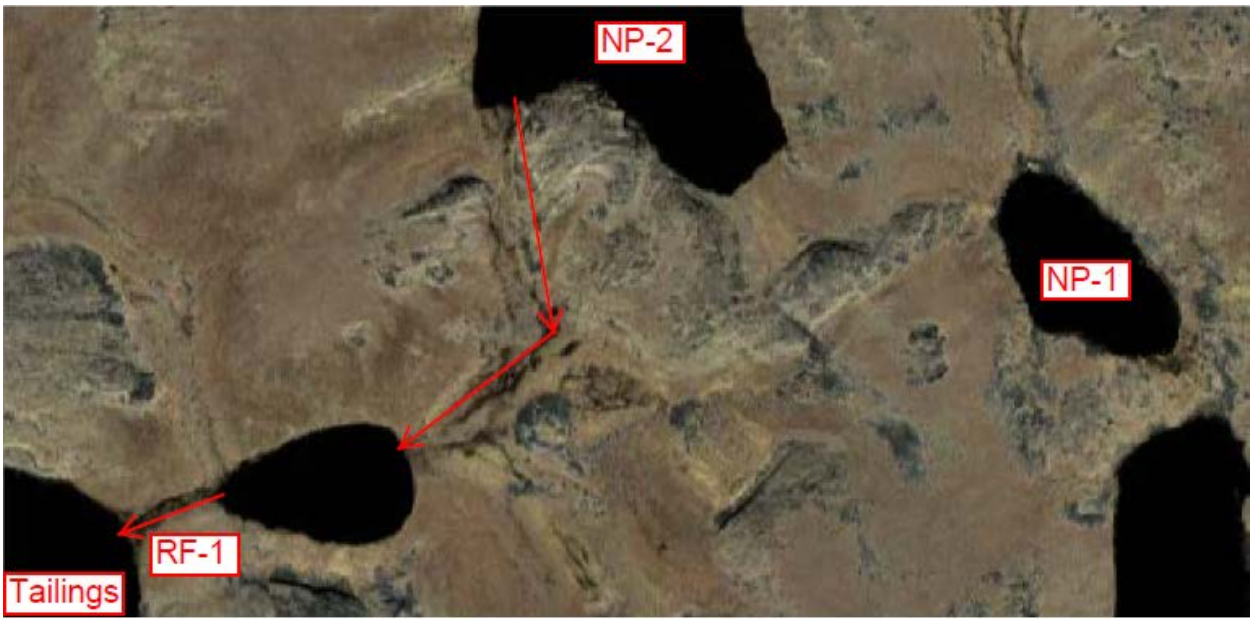


Photo 6 – Topography prior to mine development

Construction of the Waste Rock Plug was completed on September 1st. The seep areas are segregated and have been kept at low levels – see photo 7 below.

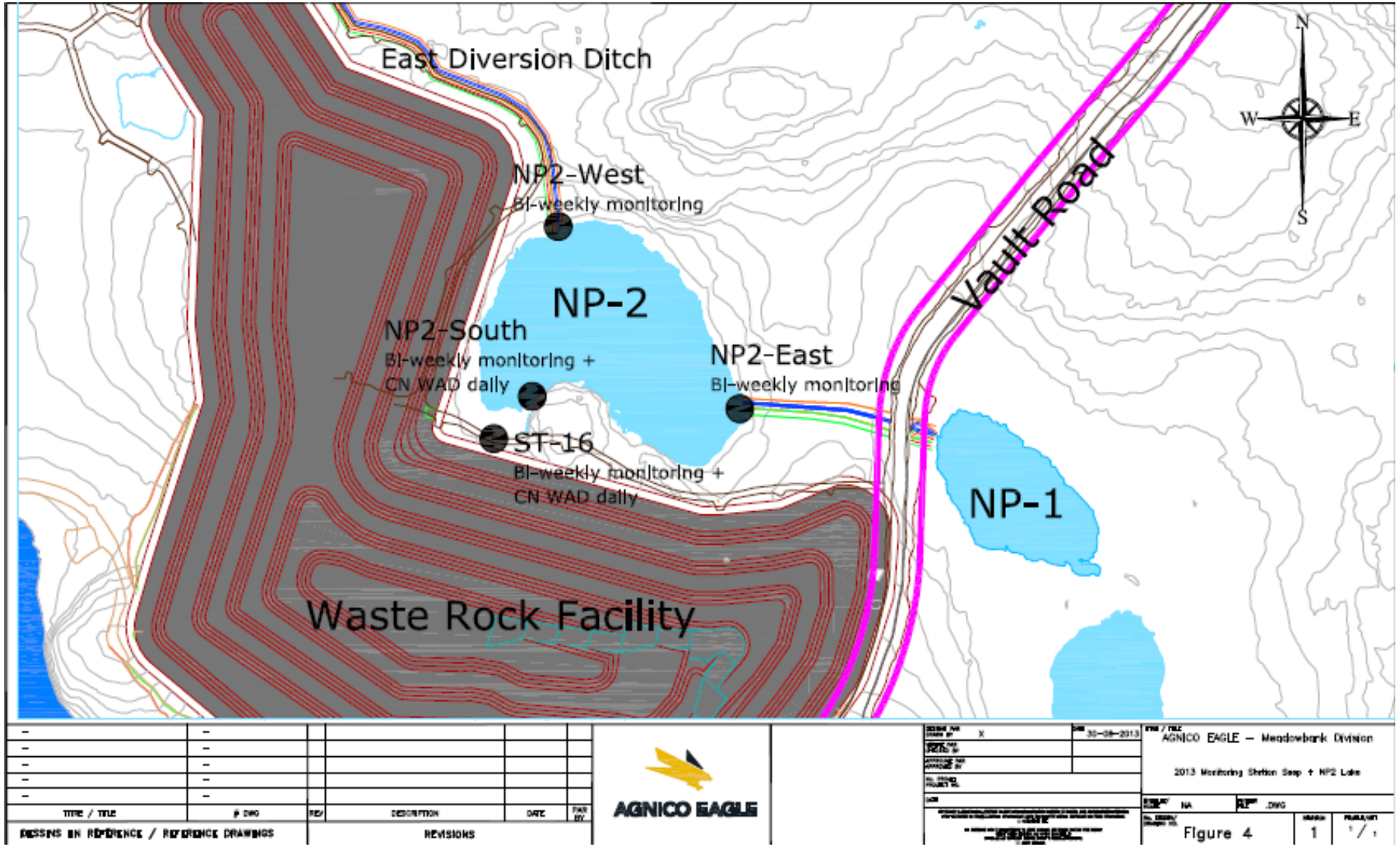
Photo 7 – Construction of Waste Rock Plug

3. Measures Taken/Action Plan

- Upon first noting the "red" seep water in NP-2 Lake (approximately July 26th) and after the initial AANDC inspection of July 30th AEM increased pumping of the seep water to prevent migration through the road. The seeps will be monitored daily and pumped out accordingly – daily if necessary;
- After receiving the sample analysis results from July 30th sampling conducted with the AANDC Inspector indicating elevated copper, nickel, etc. an investigation was started to determine the source of these metals. There was no previous history of this. Initially AEM concentrated on the waste rock properties and possible seepage of PAG rock;
- By August 28th, after noting a hydraulic gradient between the TSF and NP-2 Lake, the fact that a former watercourse connected the two areas (RF-1 and ST-16) under the Waste Rock Facility and the results of a comparative analysis of sample results from the TSF (ST-21) and the ST-16 seep area it was determined that it was possible for TSF reclaim to migrate to the seep area;
- A short term monitoring program was implemented (See Figure 4). The short term monitoring program includes daily monitoring of CN WAD using our on site assay laboratory at the seep areas ST-16 and in NP-2 Lake South location. In addition we will sample ST-16, NP-2 South, East and West bi weekly for total and dissolved metals, general chemistry as well as total and free cyanide (Group 2 and 3 of our NWB Water License parameters). Phaser Lake will be sampled also as an external reference; background samples for most metals were taken in 2003;
- A Waste Rock Plug/Dike was designed and constructed (commencing August 26th), under the supervision of the AEM Engineering Department, along the perimeter road to prevent any further seepage to Lake NP-2. This was completed on September 1st. A complete construction report and as-built drawing will be prepared;
- A staff gauge was placed in the seeps to better determine the seepage inflow;
- An internal SOP was completed (see Appendix 2) to ensure that seeps are pumped in a timely manner at the commencement of freshet and kept at a low level;
- Tailing deposition will be concentrated along the rockfill road in the area where the former watercourse was located to a level higher than the current water level in the TSF. This will direct the water away from the suspected migration route toward the reclaim barge and act as a plug. This commenced on September 2nd; and

- AEM has submitted (on September 2nd) a request for proposal from a third party engineering firm to assess why this seepage has occurred, verify the pathway under the waste rock storage area, if there any additional short term measures that can be implemented, further suggestions for management of freshet, whether an engineered collection and sump system is required for the seepage area, an evaluation of the seepage risk in the TSF and provision of recommendations for a permanent solution.

Figure 4 – Short term monitoring stations



4. Conclusion

AEM has completed a preliminary investigation into the discharge of seepage from the Waste Rock Storage Area in the location of sampling station ST-16 and determined that this material has likely seeped through the perimeter road into NP-2 Lake (fish bearing). Further to this, it appears likely that the seepage source is possibly reclaim water from the TSF migrating under the waste rock pile to ST-16 and subsequently through the perimeter road to NP-2 Lake. The seepage water at the ST-16 location has been kept to a low level and is checked daily.

Measures were implemented to stop the seepage to NP- 2 Lake and prevent it from re-occurring (Waste Rock Plug installation). Tailings deposition was changed on September 2nd to an area where the seepage is thought to be migrating. This action will also assist in pushing the water away from the rockfill perimeter structure and act as an additional “plug”.

A third party engineering firm was requested, on September 2nd, to submit a proposal to provide further assessment and recommendations, including whether additional permanent structures are required to correct this problem.

AEM is of the opinion that appropriate corrective and preventive measures have been undertaken in the short term to isolate the seepage and protect the receiving environment. For the longer term AEM plans to assess the findings of the third party engineering firm and submit any additional actions that are necessary.

APPENDIX 1
Results from the sampling conducted with AANDC

Analytical Report

Company: **Agnico Eagle Division Meadowbank**

Client: M. Stéphane Robert
Address: General Delivery
Baker Lake Nunavut X0C 0A0
Phone: (604) 677-0689 (--)
Fax: (604) 677-0687

Lab number: V-28320

Sampling location: SW-6(S-RSF) split (ST-6)
Sampling date: July 30, 2013

Sample name: SW-6(S-RSF) split (ST-6)
Sampling hour: N/D

Sampled by: Jeff Pratt
Date received: July 31, 2013

Matrix: Water

Drinking water distribution:

Reported on: August 16, 2013

Unless otherwise stated, all samples were received in acceptable condition.

Results relate only to the sample tested.

All samples will be disposed of after 30 days following analysis.

125, boul Industriel
Rouyn-Noranda (Québec)
J9X 6P2
Tél: (819) 797-0550
Fax:(819) 797-2155
Courriel:
multilab@cablevision.qc.ca

Analytical Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter	Result	Method name	Analysis date
Alkalinity	272 mg CaCO3/L	M-TIT-1.0	August 01, 2013
Aluminium (Al)	0.042 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Aluminium (Al)	<0.006 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Antimony (Sb)	0.0012 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Silver (Ag)	0.0019 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Arsenic (As)	0.0139 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Arsenic (As)	0.0058 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Ammonia nitrogen (NH3-NH4)	34 mg N/L	Sous-traitance\Multilab Direct	August 02, 2013
Barium (Ba)	0.1414 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Barium (Ba)	0.1433 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Beryllium (Be)	<0.0005 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Boron (B)	0.15 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Cadmium (Cd)	0.00065 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Cadmium (Cd)	0.00065 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Chloride	450 mg/L	Sous-traitance\Multilab Direct	August 01, 2013
Chrome (Cr)	0.0011 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Cobalt (Co)	0.3114 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Copper (Cu)	2.038 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Copper (Cu)	1.712 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Hardness	1417 mg CaCO3/L	Sous-traitance\Multilab Direct	August 05, 2013
Tin (Sn)	<0.001 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Iron (Fe)	4.4 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Iron (Fe)	0.06 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Fluoride (F)	0.29 mg/L	Sous-traitance\Multilab Direct	August 08, 2013
Lithium (Li)	0.006 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Manganese (Mn)	6.370 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Manganese (Mn)	6.055 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Mercury (Hg)	0.00005 mg/L	Sous-traitance\Multilab Direct	August 02, 2013
Dissolved Mercury (Hg)	<0.0001 mg/L	Sous-traitance\Multilab Direct	August 15, 2013
Molybdenum (Mo)	0.1704 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Molybdenum (Mo)	0.1773 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Ammonia (NH3)	1.2 mg N/L	Sous-traitance\Multilab Direct	August 02, 2013
Nickel (Ni)	2.015 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Nickel (Ni)	1.810 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Nitrate (NO3)	37.8 mg N/L	Sous-traitance\Multilab Direct	August 01, 2013
Nitrite (NO2)	0.41 mg N/L	Sous-traitance\Multilab Direct	August 01, 2013
Lead (Pb)	0.0013 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Lead (Pb)	<0.0003 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Selenium (Se)	0.02 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Selenium (Se)	0.023 mg/L	Sous-traitance\Multilab Direct	August 05, 2013

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Analytical Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter	Result	Method name	Analysis date
Dissolved Solids	3792 mg/L	M-TIT-1.0	August 01, 2013
Strontium (Sr)	2.14 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Sulfate (SO4)	2400 mg SO4/L	Sous-traitance\Multilab Direct	August 05, 2013
Thallium (Tl)	<0.005 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Dissolved thallium (Tl)	<0.005 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Titanium (Ti)	0.55 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Uranium (U)	0.17 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Vanadium (V)	<0.0005 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Zinc (Zn)	0.009 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Zinc	0.008 mg/L	Sous-traitance\Multilab Direct	August 05, 2013

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Multilab DIRECT

Detection limit

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter	Value	Unit	Method	Accreditation
Alkalinity	2	mg CaCO3/L	M-TIT-1.0	
Aluminium (Al)	0.006	mg/L	Sous-traitance	
Dissolved Aluminium (Al)	0.006	mg/L	Sous-traitance	
Antimony (Sb)	0.0001	mg/L	Sous-traitance	Yes
Dissolved Silver (Ag)	0.0002	mg/L	Sous-traitance	
Arsenic (As)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Arsenic (As)	0.0005	mg/L	Sous-traitance	
Ammonia nitrogen (NH3-NH4)	0.01	mg N/L	Sous-traitance	Yes
Barium (Ba)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Barium (Ba)	0.0005	mg/L	Sous-traitance	
Beryllium (Be)	0.0005	mg/L	Sous-traitance	
Boron (B)	0.01	mg/L	Sous-traitance	Yes
Cadmium (Cd)	0.00002	mg/L	Sous-traitance	Yes
Dissolved Cadmium (Cd)	0.00002	mg/L	Sous-traitance	
Chloride	0.5	mg/L	Sous-traitance	Yes
Chrome (Cr)	0.0006	mg/L	Sous-traitance	Yes
Cobalt (Co)	0.0005	mg/L	Sous-traitance	
Copper (Cu)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Copper (Cu)	0.0005	mg/L	Sous-traitance	
Hardness	1	mg CaCO3/L	Sous-traitance	
Tin (Sn)	0.001	mg/L	Sous-traitance	Yes
Iron (Fe)	0.01	mg/L	Sous-traitance	Yes
Dissolved Iron (Fe)	0.01	mg/L	Sous-traitance	
Fluoride (F)	0.02	mg/L	Sous-traitance	Yes
Lithium (Li)	0.005	mg/L	Sous-traitance	
Manganese (Mn)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Manganese (Mn)	0.0005	mg/L	Sous-traitance	
Mercury (Hg)	0.00001	mg/L	Sous-traitance	Yes
Dissolved Mercury (Hg)	0.0001	mg/L	Sous-traitance	
Molybdenum (Mo)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Molybdenum (Mo)	0.0005	mg/L	Sous-traitance	
Ammonia (NH3)	0.05	mg N/L	Sous-traitance	
Nickel (Ni)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Nickel (Ni)	0.0005	mg/L	Sous-traitance	
Nitrate (NO3)	0.01	mg N/L	Sous-traitance	Yes
Nitrite (NO2)	0.01	mg N/L	Sous-traitance	Yes
Lead (Pb)	0.0003	mg/L	Sous-traitance	Yes
Dissolved Lead (Pb)	0.0003	mg/L	Sous-traitance	
Selenium (Se)	0.001	mg/L	Sous-traitance	Yes
Dissolved Selenium (Se)	0.001	mg/L	Sous-traitance	

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Detection limit

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter	Value	Unit	Method	Accreditation
Dissolved Solids	1	mg/L	M-TIT-1.0	
Strontium (Sr)	0.005	mg/L	Sous-traitance	
Sulfate (SO4)	1	mg SO4/L	Sous-traitance	Yes
Thallium (Tl)	0.005	mg/L	Sous-traitance	
Dissolved thallium (Tl)	0.005	mg/L	Sous-traitance	
Titanium (Ti)	0.01	mg/L	Sous-traitance	
Uranium (U)	0.001	mg/L	Sous-traitance	
Vanadium (V)	0.0005	mg/L	Sous-traitance	Yes
Zinc (Zn)	0.001	mg/L	Sous-traitance	Yes
Dissolved Zinc	0.001	mg/L	Sous-traitance	

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Quality control Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter		
Alkalinity mg CaCO3/L	Standard name	STD alcalinité
	Result	158
	Accuracy	91%
	Limit	123 - 167
Aluminium (Al) mg/L	Blank	<0.006
	Standard name	DMR-0311-2013-23m
	Result	5.77
	Accuracy	93.2%
	Limit	5.26 - 7.12
Dissolved Aluminium (Al) mg/L	Blank	<0.006
	Standard name	DMR-0311-2013-23
	Result	6.22
	Accuracy	99.5%
	Limit	5.26 - 7.12
Antimony (Sb) mg/L	Blank	<0.0001
	Standard name	DMR-0311-2013-23m
	Result	0.1885
	Accuracy	85.3%
	Limit	0.188 - 0.254
Dissolved Silver (Ag) mg/L	Blank	<0.0002
Arsenic (As) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	0.3401
	Accuracy	79.8%
	Limit	0.198 - 0.368
Dissolved Arsenic (As) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	0.3176
	Accuracy	95.5%
	Limit	0.236 - 0.372
Ammonia nitrogen (NH3-NH4) m	Blank	<0.01
	Standard name	DMR-0446-2013-NH3
	Result	5.3
	Accuracy	98.5%
	Limit	4.44 - 6.00
Barium (Ba) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	2.146
	Accuracy	89.4%
	Limit	2.0 - 2.8

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Quality control Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter		
Dissolved Barium (Ba) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	2.254
	Accuracy	93.9%
	Limit	2.04 - 2.76
Beryllium (Be) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.591
	Accuracy	93.6%
	Limit	1.4 - 2.0
Boron (B) mg/L	Blank	<0.01
	Standard name	DMR-0311-2013-23m
	Result	2.5
	Accuracy	86.8%
	Limit	2.45 - 3.31
Cadmium (Cd) mg/L	Blank	<0.00002
	Standard name	DMR-0311-2013-23m
	Result	0.91111
	Accuracy	98.8%
	Limit	0.8 - 1.0
Dissolved Cadmium (Cd) mg/L	Blank	<0.00002
	Standard name	DMR-0311-2013-23
	Result	0.87322
	Accuracy	97%
	Limit	0.8 - 1.0
Chloride mg/L	Blank	<0.5
	Standard name	DMR-0446-2013-CL
	Result	100
	Accuracy	99%
	Limit	87 - 111
Chrome (Cr) mg/L	Blank	<0.0006
	Standard name	DMR-0311-2013-23m
	Result	4.064
	Accuracy	99.7%
	Limit	3.44 - 4.66
Cobalt (Co) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.643
	Accuracy	94.7%
	Limit	1.33 - 1.79

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Quality control Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter		
Copper (Cu) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.404
	Accuracy	86.8%
	Limit	1.05 - 1.43
Dissolved Copper (Cu) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	1.301
	Accuracy	95.1%
	Limit	1.05 - 1.43
Tin (Sn) mg/L	Blank	<0.001
Iron (Fe) mg/L	Blank	<0.01
	Standard name	DMR-0311-2013-23m
	Result	11.6
	Accuracy	89.5%
	Limit	8.9 - 12.1
Dissolved Iron (Fe) mg/L	Blank	<0.01
	Standard name	DMR-0311-2013-23
	Result	10.4
	Accuracy	99%
	Limit	8.9 - 12.1
Fluoride (F) mg/L	Blank	<0.02
	Standard name	DMR-0446-2013-12-F
	Result	2.9
	Accuracy	94.8%
	Limit	2.83 - 3.29
Lithium (Li) mg/L	Blank	<0.005
	Standard name	DMR-0773-2011-18a
	Result	0.863
	Accuracy	97.3%
	Limit	0.714 - 0.966
Manganese (Mn) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	3.956
	Accuracy	97.5%
	Limit	3.28 - 4.44
Dissolved Manganese (Mn) mg/l	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	3.675
	Accuracy	95.2%

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Quality control Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter		
	Limit	3.28 - 4.44
Mercury (Hg) mg/L	Blank	<0.00001
	Standard name	DMR-0311-2013-14-Hg
	Result	0.00418
	Accuracy	95.5%
	Limit	0.003 - 0.005
Dissolved Mercury (Hg) mg/L	Blank	<0.0001
	Standard name	DMR-0311-2013-14-Hg
	Result	0.0032
	Accuracy	80%
	Limit	0.003 - 0.005
Molybdenum (Mo) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	0.6781
	Accuracy	96.2%
	Limit	0.599 - 0.811
Dissolved Molybdenum (Mo) mg	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	0.6419
	Accuracy	91%
	Limit	0.599 - 0.811
Ammonia (NH3) mg N/L	Blank	<0.05
	Standard name	DMR-0446-2013-NH3
	Result	5.3
	Accuracy	98.5%
	Limit	4.44 - 6.00
Nickel (Ni) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.232
	Accuracy	91%
	Limit	0.96 - 1.30
Dissolved Nickel (Ni) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	1.147
	Accuracy	92.5%
	Limit	1.05 - 1.43
Nitrate (NO3) mg N/L	Blank	<0.01
	Sample duplicate	37.8-35.3
Nitrite (NO2) mg N/L	Blank	<0.01
	Standard name	DMR-0446-2013-NO2

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Quality control Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter		
	Result	2.5
	Accuracy	99.2%
	Limit	2.14 - 2.90
	Sample duplicate	0.41-0.40
Lead (Pb) mg/L	Blank	<0.0003
	Standard name	DMR-0311-2013-23m
	Result	0.9249
	Accuracy	97.2%
	Limit	0.8 - 1.0
Dissolved Lead (Pb) mg/L	Blank	<0.0003
	Standard name	DMR-0311-2013-23
	Result	0.9053
	Accuracy	99.4%
	Limit	0.8 - 1.0
Selenium (Se) mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23m
	Result	1.46
	Accuracy	91.9%
	Limit	1.15 - 1.55
Dissolved Selenium (Se) mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23
	Result	1.39
	Accuracy	97%
	Limit	1.15 - 1.55
Strontium (Sr) mg/L	Blank	<0.005
	Standard name	DMR-0773-2011-18a
	Result	1.25
	Accuracy	99.2%
	Limit	1.05 - 1.43
Sulfate (SO4) mg SO4/L	Blank	<0.6
	Standard name	DMR-0446-2013-SO4
	Result	117
	Accuracy	93.6%
	Limit	99 - 121
Thallium (Tl) mg/L	Blank	<0.005
	Standard name	STD Tl SC0187114 1000ppm
	Result	1001
	Accuracy	99.9%
	Limit	850 - 1150
Dissolved thallium (Tl) mg/L	Blank	<0.005

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Quality control Report

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6) Sampling date: July 30, 2013

Sampling location: SW-6(S-RSF) split (ST-6) Sampling hour: N/D

Parameter		
	Standard name	STD Tl SC0187114 1000ppm
	Result	1001
	Accuracy	99.9%
	Limit	850 - 1150
Titanium (Ti) mg/L	Blank	<0.01
Uranium (U) mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23m
	Result	2.01
	Accuracy	85.1%
	Limit	1.49 - 2.01
Vanadium (V) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.950
	Accuracy	98%
	Limit	1.69 - 2.29
Zinc (Zn) mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23m
	Result	5.07
	Accuracy	87.6%
	Limit	3.83 - 5.19
Dissolved Zinc mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23
	Result	4.78
	Accuracy	94%
	Limit	3.83 - 5.19

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Additional information

Lab number: V-28320

Sample name: SW-6(S-RSF) split (ST-6)
Sampling location: SW-6(S-RSF) split (ST-6)
Sampling date: July 30, 2013
Sampling hour: N/D

Lab method	Method reference
M-TIT-1.0	MA.303-Titr Auto 2.0
M-MET-3.0	MA.200-Mét. 1.2
M-NH3-2.0	MA.300-N 2.0
M-CL-2.0	MA.300-Ions 1.3
M-CI-1.0	MA.300-Anions 1.0
M-NITR-2.0	MA.300-NO3 2.0
M-Lix-1.0	MA.100-Lix.com. 1.1
M-SULF-2.0	MA.300-Ions 1.3

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Analytical Report

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Baker Lake Nunavut X0C 0A0
Phone: (604) 677-0689 (--)
Fax: (604) 677-0687

Lab number: V-28321

Sampling location:	NP2 split	Sampling date:	July 30, 2013
Sample name:	NP2 split	Sampling hour:	15:00
Sampled by:	Jeff Pratt	Date received:	July 31, 2013
Matrix:	Waste Water		

Drinking water distribution:

Reported on: August 16, 2013

Unless otherwise stated, all samples were received in acceptable condition.

Results relate only to the sample tested.

All samples will be disposed of after 30 days following analysis.

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Analytical Report

Lab number: V-28321
Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter	Result	Method name	Analysis date
Alkalinity	177 mg CaCO3/L	M-TIT-1.0	August 01, 2013
Aluminium (Al)	0.024 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Aluminium (Al)	<0.006 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Antimony (Sb)	0.0004 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Silver (Ag)	0.0024 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Arsenic (As)	0.0068 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Arsenic (As)	0.0022 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Ammonia nitrogen (NH3-NH4)	27.4 mg N/L	Sous-traitance\Multilab Direct	August 02, 2013
Barium (Ba)	0.1419 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Barium (Ba)	0.1329 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Beryllium (Be)	<0.0005 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Boron (B)	0.09 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Cadmium (Cd)	0.0003 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Cadmium (Cd)	0.00022 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Chloride	587 mg/L	Sous-traitance\Multilab Direct	August 01, 2013
Chrome (Cr)	<0.0006 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Cobalt (Co)	0.2515 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Copper (Cu)	3.261 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Copper (Cu)	2.949 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Hardness	1031 mg CaCO3/L	Sous-traitance\Multilab Direct	August 05, 2013
Tin (Sn)	<0.001 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Iron (Fe)	23.6 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Iron (Fe)	0.15 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Fluoride (F)	0.02 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Lithium (Li)	0.005 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Manganese (Mn)	6.464 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Manganese (Mn)	5.427 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Mercury (Hg)	0.00002 mg/L	Sous-traitance\Multilab Direct	August 02, 2013
Dissolved Mercury (Hg)	<0.0001 mg/L	Sous-traitance\Multilab Direct	August 15, 2013
Molybdenum (Mo)	0.0871 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Molybdenum (Mo)	0.0716 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Ammonia (NH3)	0.14 mg N/L	Sous-traitance\Multilab Direct	August 02, 2013
Nickel (Ni)	1.465 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Nickel (Ni)	1.246 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Nitrate (NO3)	23.5 mg N/L	Sous-traitance\Multilab Direct	August 01, 2013
Nitrite (NO2)	0.4 mg N/L	Sous-traitance\Multilab Direct	August 01, 2013
Lead (Pb)	<0.0003 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Lead (Pb)	<0.0003 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Selenium (Se)	0.014 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Selenium (Se)	0.014 mg/L	Sous-traitance\Multilab Direct	August 05, 2013

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Analytical Report

Lab number: V-28321

Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter	Result	Method name	Analysis date
Dissolved Solids	2854 mg/L	M-TIT-1.0	August 01, 2013
Strontium (Sr)	1.62 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Sulfate (SO4)	1546 mg SO4/L	Sous-traitance\Multilab Direct	August 05, 2013
Thallium (Tl)	<0.005 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Dissolved thallium (Tl)	<0.005 mg/L	Sous-traitance\Multilab Direct	August 07, 2013
Titanium (Ti)	0.39 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Uranium (U)	0.144 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Vanadium (V)	<0.0005 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Zinc (Zn)	0.006 mg/L	Sous-traitance\Multilab Direct	August 05, 2013
Dissolved Zinc	0.007 mg/L	Sous-traitance\Multilab Direct	August 05, 2013

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Multilab DIRECT

Detection limit

Lab number: V-28321

Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter	Value	Unit	Method	Accreditation
Alkalinity	2	mg CaCO3/L	M-TIT-1.0	
Aluminium (Al)	0.006	mg/L	Sous-traitance	
Dissolved Aluminium (Al)	0.006	mg/L	Sous-traitance	
Antimony (Sb)	0.0001	mg/L	Sous-traitance	Yes
Dissolved Silver (Ag)	0.0002	mg/L	Sous-traitance	
Arsenic (As)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Arsenic (As)	0.0005	mg/L	Sous-traitance	
Ammonia nitrogen (NH3-NH4)	0.01	mg N/L	Sous-traitance	Yes
Barium (Ba)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Barium (Ba)	0.0005	mg/L	Sous-traitance	
Beryllium (Be)	0.0005	mg/L	Sous-traitance	
Boron (B)	0.01	mg/L	Sous-traitance	Yes
Cadmium (Cd)	0.00002	mg/L	Sous-traitance	Yes
Dissolved Cadmium (Cd)	0.00002	mg/L	Sous-traitance	
Chloride	0.5	mg/L	Sous-traitance	Yes
Chrome (Cr)	0.0006	mg/L	Sous-traitance	Yes
Cobalt (Co)	0.0005	mg/L	Sous-traitance	
Copper (Cu)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Copper (Cu)	0.0005	mg/L	Sous-traitance	
Hardness	1	mg CaCO3/L	Sous-traitance	
Tin (Sn)	0.001	mg/L	Sous-traitance	Yes
Iron (Fe)	0.01	mg/L	Sous-traitance	Yes
Dissolved Iron (Fe)	0.01	mg/L	Sous-traitance	
Fluoride (F)	0.02	mg/L	Sous-traitance	Yes
Lithium (Li)	0.005	mg/L	Sous-traitance	
Manganese (Mn)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Manganese (Mn)	0.0005	mg/L	Sous-traitance	
Mercury (Hg)	0.00001	mg/L	Sous-traitance	Yes
Dissolved Mercury (Hg)	0.0001	mg/L	Sous-traitance	
Molybdenum (Mo)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Molybdenum (Mo)	0.0005	mg/L	Sous-traitance	
Ammonia (NH3)	0.05	mg N/L	Sous-traitance	
Nickel (Ni)	0.0005	mg/L	Sous-traitance	Yes
Dissolved Nickel (Ni)	0.0005	mg/L	Sous-traitance	
Nitrate (NO3)	0.01	mg N/L	Sous-traitance	Yes
Nitrite (NO2)	0.01	mg N/L	Sous-traitance	Yes
Lead (Pb)	0.0003	mg/L	Sous-traitance	Yes
Dissolved Lead (Pb)	0.0003	mg/L	Sous-traitance	
Selenium (Se)	0.001	mg/L	Sous-traitance	Yes
Dissolved Selenium (Se)	0.001	mg/L	Sous-traitance	

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Detection limit

Lab number: V-28321

Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter	Value	Unit	Method	Accreditation
Dissolved Solids	1	mg/L	M-TIT-1.0	
Strontium (Sr)	0.005	mg/L	Sous-traitance	
Sulfate (SO4)	1	mg SO4/L	Sous-traitance	Yes
Thallium (Tl)	0.005	mg/L	Sous-traitance	
Dissolved thallium (Tl)	0.005	mg/L	Sous-traitance	
Titanium (Ti)	0.01	mg/L	Sous-traitance	
Uranium (U)	0.001	mg/L	Sous-traitance	
Vanadium (V)	0.0005	mg/L	Sous-traitance	Yes
Zinc (Zn)	0.001	mg/L	Sous-traitance	Yes
Dissolved Zinc	0.001	mg/L	Sous-traitance	

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Quality control Report

Lab number: V-28321
Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter		
Alkalinity mg CaCO3/L	Standard name	STD alcalinité
	Result	158
	Accuracy	91%
	Limit	123 - 167
Aluminium (Al) mg/L	Blank	<0.006
	Standard name	DMR-0311-2013-23m
	Result	5.77
	Accuracy	93.2%
	Limit	5.26 - 7.12
Dissolved Aluminium (Al) mg/L	Blank	<0.006
	Standard name	DMR-0311-2013-23
	Result	6.22
	Accuracy	99.5%
	Limit	5.26 - 7.12
Antimony (Sb) mg/L	Blank	<0.0001
	Standard name	DMR-0311-2013-23m
	Result	0.1885
	Accuracy	85.3%
	Limit	0.188 - 0.254
Dissolved Silver (Ag) mg/L	Blank	<0.0002
Arsenic (As) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	0.3401
	Accuracy	79.8%
	Limit	0.198 - 0.368
Dissolved Arsenic (As) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	0.3176
	Accuracy	95.5%
	Limit	0.236 - 0.372
Ammonia nitrogen (NH3-NH4) m	Blank	<0.01
	Standard name	DMR-0446-2013-NH3
	Result	5.3
	Accuracy	98.5%
	Limit	4.44 - 6.00
Barium (Ba) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	2.146
	Accuracy	89.4%
	Limit	2.0 - 2.8

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Quality control Report

Lab number: V-28321
Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter		
Dissolved Barium (Ba) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	2.254
	Accuracy	93.9%
	Limit	2.04 - 2.76
Beryllium (Be) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.591
	Accuracy	93.6%
	Limit	1.4 - 2.0
Boron (B) mg/L	Blank	<0.01
	Standard name	DMR-0311-2013-23m
	Result	2.5
	Accuracy	86.8%
	Limit	2.45 - 3.31
Cadmium (Cd) mg/L	Blank	<0.00002
	Standard name	DMR-0311-2013-23m
	Result	0.91111
	Accuracy	98.8%
	Limit	0.8 - 1.0
Dissolved Cadmium (Cd) mg/L	Blank	<0.00002
	Standard name	DMR-0311-2013-23
	Result	0.87322
	Accuracy	97%
	Limit	0.8 - 1.0
Chloride mg/L	Blank	<0.5
	Standard name	DMR-0446-2013-CL
	Result	100
	Accuracy	99%
	Limit	87 - 111
Chrome (Cr) mg/L	Blank	<0.0006
	Standard name	DMR-0311-2013-23m
	Result	4.064
	Accuracy	99.7%
	Limit	3.44 - 4.66
Cobalt (Co) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.643
	Accuracy	94.7%
	Limit	1.33 - 1.79

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Quality control Report

Lab number: V-28321

Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter		
Copper (Cu) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.404
	Accuracy	86.8%
	Limit	1.05 - 1.43
Dissolved Copper (Cu) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	1.301
	Accuracy	95.1%
	Limit	1.05 - 1.43
Tin (Sn) mg/L	Blank	<0.001
Iron (Fe) mg/L	Blank	<0.01
	Standard name	DMR-0311-2013-23m
	Result	11.6
	Accuracy	89.5%
	Limit	8.9 - 12.1
Dissolved Iron (Fe) mg/L	Blank	<0.01
	Standard name	DMR-0311-2013-23
	Result	10.4
	Accuracy	99%
	Limit	8.9 - 12.1
Lithium (Li) mg/L	Blank	<0.005
	Standard name	DMR-0773-2011-18a
	Result	0.863
	Accuracy	97.3%
	Limit	0.714 - 0.966
Manganese (Mn) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	3.956
	Accuracy	97.5%
	Limit	3.28 - 4.44
Dissolved Manganese (Mn) mg/l	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	3.675
	Accuracy	95.2%
	Limit	3.28 - 4.44
Mercury (Hg) mg/L	Blank	<0.00001
	Standard name	DMR-0311-2013-14-Hg
	Result	0.00418
	Accuracy	95.5%

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Quality control Report

Lab number: V-28321
Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter		
	Limit	0.003 - 0.005
Dissolved Mercury (Hg) mg/L	Blank	<0.0001
	Standard name	DMR-0311-2013-14-Hg
	Result	0.0032
	Accuracy	80%
	Limit	0.003 - 0.005
Molybdenum (Mo) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	0.6781
	Accuracy	96.2%
	Limit	0.599 - 0.811
Dissolved Molybdenum (Mo) mg	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	0.6419
	Accuracy	91%
	Limit	0.599 - 0.811
Ammonia (NH3) mg N/L	Blank	<0.05
	Standard name	DMR-0446-2013-NH3
	Result	5.3
	Accuracy	98.5%
	Limit	4.44 - 6.00
Nickel (Ni) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
	Result	1.232
	Accuracy	91%
	Limit	0.96 - 1.30
Dissolved Nickel (Ni) mg/L	Blank	<0.0005
	Standard name	DMR-0311-2013-23
	Result	1.147
	Accuracy	92.5%
	Limit	1.05 - 1.43
Nitrate (NO3) mg N/L	Blank	<0.01
Nitrite (NO2) mg N/L	Blank	<0.01
	Standard name	DMR-0446-2013-NO2
	Result	2.5
	Accuracy	99.2%
	Limit	2.14 - 2.90
Lead (Pb) mg/L	Blank	<0.0003
	Standard name	DMR-0311-2013-23m
	Result	0.9249

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Quality control Report

Lab number: V-28321
Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter		
	Accuracy	97.2%
	Limit	0.8 - 1.0
Dissolved Lead (Pb) mg/L	Blank	<0.0003
	Standard name	DMR-0311-2013-23
	Result	0.9053
	Accuracy	99.4%
	Limit	0.8 - 1.0
Selenium (Se) mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23m
	Result	1.46
	Accuracy	91.9%
	Limit	1.15 - 1.55
Dissolved Selenium (Se) mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23
	Result	1.39
	Accuracy	97%
	Limit	1.15 - 1.55
Strontium (Sr) mg/L	Blank	<0.005
	Standard name	DMR-0773-2011-18a
	Result	1.25
	Accuracy	99.2%
	Limit	1.05 - 1.43
Sulfate (SO4) mg SO4/L	Blank	<0.6
	Standard name	DMR-0446-2013-SO4
	Result	117
	Accuracy	93.6%
	Limit	99 - 121
Thallium (Tl) mg/L	Blank	<0.005
	Standard name	STD Tl SC0187114 1000ppm
	Result	1001
	Accuracy	99.9%
	Limit	850 - 1150
Dissolved thallium (Tl) mg/L	Blank	<0.005
	Standard name	STD Tl SC0187114 1000ppm
	Result	1001
	Accuracy	99.9%
	Limit	850 - 1150
Titanium (Ti) mg/L	Blank	<0.01
Uranium (U) mg/L	Blank	<0.001
	Standard name	DMR-0311-2013-23m

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Quality control Report

Lab number: V-28321

Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Parameter		
Vanadium (V) mg/L	Result	2.01
	Accuracy	85.1%
	Limit	1.49 - 2.01
	Blank	<0.0005
	Standard name	DMR-0311-2013-23m
Zinc (Zn) mg/L	Result	1.950
	Accuracy	98%
	Limit	1.69 - 2.29
	Blank	<0.001
	Standard name	DMR-0311-2013-23m
Dissolved Zinc mg/L	Result	5.07
	Accuracy	87.6%
	Limit	3.83 - 5.19
	Blank	<0.001
	Standard name	DMR-0311-2013-23
	Result	4.78
	Accuracy	94%
	Limit	3.83 - 5.19

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Additional information

Lab number: V-28321
Sample name: NP2 split
Sampling location: NP2 split
Sampling date: July 30, 2013
Sampling hour: 15:00

Lab method	Method reference
M-TIT-1.0	MA.303-Titr Auto 2.0
M-MET-3.0	MA.200-Mét. 1.2
M-NH3-2.0	MA.300-N 2.0
M-CL-2.0	MA.300-Ions 1.3
M-CI-1.0	MA.300-Anions 1.0
M-NITR-2.0	MA.300-NO3 2.0
M-Lix-1.0	MA.100-Lix.com. 1.1
M-SULF-2.0	MA.300-Ions 1.3

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APPENDIX 2

SOP: Management of Water in Diversion Ditches, Seeps, and Collection Locations during Freshet

Water Management in Diversion Ditches, Seeps, and Collection Locations during Freshet

PROCEDURE NUMBER:			MBK-ENV-0006
People concerned	Mine, Dikes, Engineering and Environment	**Prepared by**	**Jeffrey Pratt** **Environmental Coordinator**
		Authorized by	**Kevin Buck** **Environmental Superintendent**
Effective :	**September 4, 2013**	***"Safety First, Safety Last … Safety Always!"*** ***"No Repeats" – Our Stepping Stone to ZERO HARM***	
This procedure corresponds to the required minimum standard. Each and everyone also have to comply with the rules and regulations of the Nunavut Government in terms of health and safety at work.			

Objective:

This procedure is put in place to give specific dates in which actions must be taken to avoid excess non-contact water impacting on site mining activity, and also to prevent excessive pooling of contact water that could lead to a release of contact water off the mine site. This procedure will keep the project in conformance with NWB license, Part D, Item 33; Part E, Item 9.

Concerned departments:


Environment


Mine


Engineering


Dyke and Dewatering

Risks/ Impacts Legend


Health & Safety


Process/quality


Costs


Environment

Management of Water in Diversion Ditches, Seeps, and Collection Locations during Freshet

Procedure	*Risks / Impacts*
Diversion Ditches	
1. No later than May 1, all diversion ditches must be cleaned free of ice and snow to allow freshet melt water to flow freely and prevent any obstructions within the diversion ditches.	 Avoid Environmental Impact Avoid Excess water on Mine Site
2. Culverts under Vault road are to be steamed, if necessary, to free ice obstructions.	 Avoid Environmental Impact Avoid Excess water on Mine Site and road wash out
3. Starting May 1 commence monitoring water moving through the diversion ditch system. Sampling for TSS must be completed by Environment Department, and shall initiate as soon as water flowing.	 Avoid Environmental Impact
4. If TSS levels are elevated Sediment control measures must be put in place. This may include installation of silt fence, or turbidity barrier. To be conducted by Environment staff	 Avoid Environmental Impact

Seep and Collection Locations	
1. May 1st begin weekly inspections of seep areas and melt water collection locations. As per NWB license, Part E, Item 9.	  Avoid Environmental Impact Avoid Excess water on Mine Site
2. At first sign of melt water collection, contact Environment Department. It will need to be determined if the water requires analysis prior to movement.	  Avoid Environmental Impact Avoid Excess water on Mine Site
3. At first sign of melt water arrange with Mine or Dyke and Dewatering to begin removing water from seep and collection locations. Be sure to get an approved disposal location from the Environment Department.	  Avoid Environmental Impact
4. Any movement of water must be recorded. Quantity of water moved and location water is drawn and dispensed must be recorded.	Required for Reporting to Government Agencies
5. All actions listed in this SOP are required corrective measures to mitigate any impacts related to surface drainage resulting from the Project's activities on off site receiving waters. As per NWB license, Part D, Item 33.	  Avoid Environmental Impact