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March 17, 2016

**Re: Meliadine – 2BB-MEL1424
Meliadine Portal Area – Water Quality Monitoring in Lake A54
Adverse Trends Noted – Mitigation Measures being implemented**

In preparing the 2015 Annual Report for the Nunavut Water Board, our technical teams have been reviewing all of the 2015 water quality data collected under Meliadine Exploration Type B Water License (2BB-MEL1424) and have identified a preoccupying trend associated with rising chloride and ammonia levels in several small ponds downstream of the exploration decline surface containment pond, P1. We are writing to report this observed trend, to present what we know of its history, probable cause and to present the measures proposed by Agnico to reduce the risk of this occurrence.

Background

At the Meliadine site, all waste rock excavated from the underground exploration decline has and continues to be placed on a series of rockfill platforms constructed on both sides and to the north of the decline entrance. These rockfill platforms are used to store waste rock; ore samples brought to surface; and for materials (supplies and equipment) used in the development of the underground mine workings. There are several temporary soft shell buildings sited on the pads either side of the decline used for storage and maintenance to support the underground exploration activities. The layout of this area is shown in the attached photo taken in July of 2014 (Figure 1). All precipitation runoff that



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has been in contact with these rockfill pads and the stored waste rock, ore samples, material and equipment drains into containment pond P1, which is located to the north east of the decline entrance and south of the north waste rock storage pad.

The watershed associated with containment pond P1 is shown as area A1 in Figure 2. Sub-watershed A1 has an area of about 134,500 m². It is limited to the north by some high ground (around elevation 68.0 m) and to the south-east by a platform and a rockfill road (south road) acting as a confining structure. Natural flow from the P1 containment pond area is toward the south-east toward Lake A54 (often referred as Peanut Lake due its shape). Containment pond P1 is limited to the south by some high ground and the portal platform.

Containment pond P1 is operated under an approved Water Management Plan (WMP) under the Meliadine Type B Water License 2BB-MEL1424. Currently no water has been sent directly from the underground workings to the surface. Most of the underground decline and associated exploration workings are still within the permafrost zone and thus at this point in time there has been no need to construct or install a pumping system to remove excess water from the underground. The water balance for the underground workings is currently in balance; that is there is no excess water. All the water use needs underground are provided through the combination of the water collected in the internal mine sumps plus the water provided by a borehole at level 300. The only water reporting to the surface is the pore water transported with the waste rock (or low-grade ore) brought to surface and then placed in storage on the rockfill pads adjacent to the portal. Precipitation runoff from the area immediately adjacent to the portal does enter the decline and is collected in a sump constructed for this purpose just below the ground surface known as Sump 1 (located just inside the portal entrance). The water that accumulates in this sump (mostly at freshet) is pumped to another small sump located on surface immediately adjacent (north-east) of the entrance into the ramp (known as the surface sump – see Figure 1). Historically, all water reporting to this surface sump



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appears to have been lost to the surrounding environment by either evaporation or natural seepage into the ground.

The amount of water contained in pond P1 varies seasonally, typically growing with the spring freshet, diminishing over the drier summer months and then increasing again with the fall rains. A constructed rockfill road (south road) serves to cut off the natural drainage outflow from containment pond P1. The upstream side of this roadway contains a geotextile liner designed to filter out solids but not to be impermeable, although it should be noted that this confining structure has been able to contain water quite effectively over the past years. Under the approved WMP, water quality in P1 was to be assessed and can only be discharged if water quality met the criteria for discharge. The discharge standard to be met was the standard contained in the Metal Mining Effluent Regulation under the Fisheries Act. Historically, water was discharged (pumped) via a culvert set at an elevated level within the north end of the rock fill roadway cutting off containment pond P1 from its natural drainage pathway towards Lake A54 (see Figure 2).

Containment pond P1 drains naturally to the southeast to Lake A54. Drainage is overland and not by means of any defined watercourse. Water from Lake A54 drains through Ponds A9 and A38 into Lake A8 again overland and not via any defined watercourses. Ponds A54, A9 and A38 are shallow waterbodies that freeze solid every winter and thus do not support any resident fish populations.

Water Quality Monitoring

Under the WMP, water quality monitoring stations have been established by Agnico and regularly sampled in the open water season, specifically P1 (Mel6), Pond A54, Pond A38, Pond A9 and in Lake A8 (Mel 2) (see Figure 3) (Mel6 and Mel2 are mandated under the Water License). Typically four sampling events have occurred each year. The results from this water quality monitoring activity has been previously reported to the NWB and KIA through the Water License monthly and annual reports since 2009 (2009 thru 2011 by Comaplex, 2012 thru today by Agnico).



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Analysis of this water quality monitoring data conducted in preparing the 2015 annual report shows a fairly rapid increase in chloride concentrations in Lake A54 starting in mid-June of 2015. This coincides with a similar trend increase in chloride concentrations in containment Pond P1 suggesting that something changed in the source loading for chloride coming into containment pond P1 that starts somewhere around mid-June of 2015 and that water is exiting containment pond P1 into Lake A54 in a means other than being pumped or overflowing through the installed roadway culvert (most likely seepage through the roadway – see Figure 1). A similar trend in chloride concentrations is seen in Pond A38 downstream of Lake A54. At Lake A8 water quality monitoring indicates that chloride concentrations are above the natural background of around 10 mg/l, trending around 40 mg/l in past years but now trending around 50 mg/l in the summer of 2015 and have spiked previously in summer months (as high as 90 mg/l in one sample in 2014) but have always been below the CCME long term guidance of 120 mg/l for protection of freshwater aquatic life. There is no MMER discharge standard for chloride (see Figures 4, 5, 6 and 7).

Analysis of the water quality monitoring data also shows a change in the trend of ammonia concentrations measured in containment pond P1 again starting in mid-June of 2015 (see Figure 8).

It is our belief that the probable source of this increase in chloride and ammonia concentrations has to be from the underground mine development activities, chloride from the salt used in drilling and/or from increased inflow of higher salinity groundwater from the surrounding rock and from explosive use underground and possibly from surface management issues of the calcium chloride stored on surface and from snow management. We are currently having development activity occurring below the permafrost but are experiencing low ground water inflow in these areas.

Agnico has initiated a series of actions designed to both better understand the reasons behind these trends and to contain and/or treat the water coming from the underground workings to control these trends. These actions include:



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1. Increased frequency and more intensive sampling of the underground sources to allow for a better understanding of where the increased chloride and ammonia is coming from;
2. A review of explosives use practices in the underground to tighten up any wastage;
3. Engineering review to find alternatives to construct a larger and tighter containment facility on surface at containment pond P1 to ensure long term containment of all underground mine water to prevent further release of chloride and ammonia into Lake A8. The immediate focus is on increasing storage capacity in containment pond P1 to accommodate the 2016 spring freshet and to limit to the greatest extent practical any seepage from containment pond P1 into Lake A54;
4. Engineering review to eliminate the surface sump at the top of the exploration decline and to re-route all water pumped from sump 1 located just inside the portal directly into containment pond 1; and
5. A review of current practices to improve the management on surface of calcium chloride storage and the management of potentially contaminated snow.

These activities are currently ongoing. Agnico will provide a further update as we know more and as we develop these mitigation plans in greater detail. In the interim please contact the undersigned for additional information if needed.

Regards;

Agnico Eagle Mines Limited

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Figures



Figure 1: Configuration of the Meliadine Exploration Decline Surface Area - Photo taken in July of 2014



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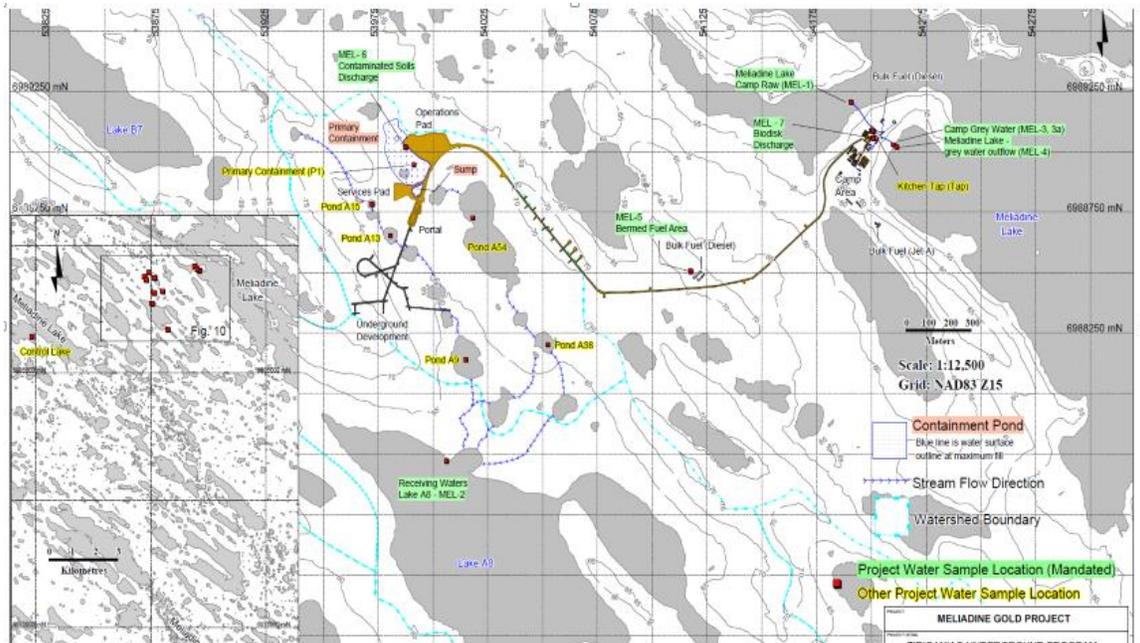


Figure 3: Meliadine Decline Water Management - Water Quality Monitoring Stations



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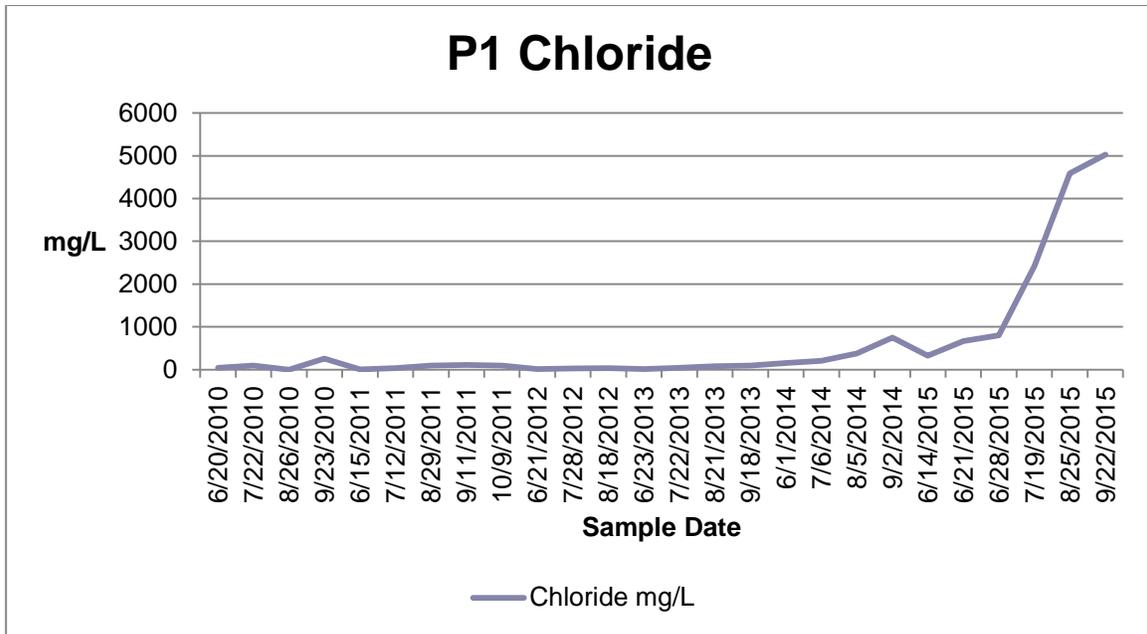


Figure 4: Measured Chloride Concentrations in UG Decline Containment Pond P1

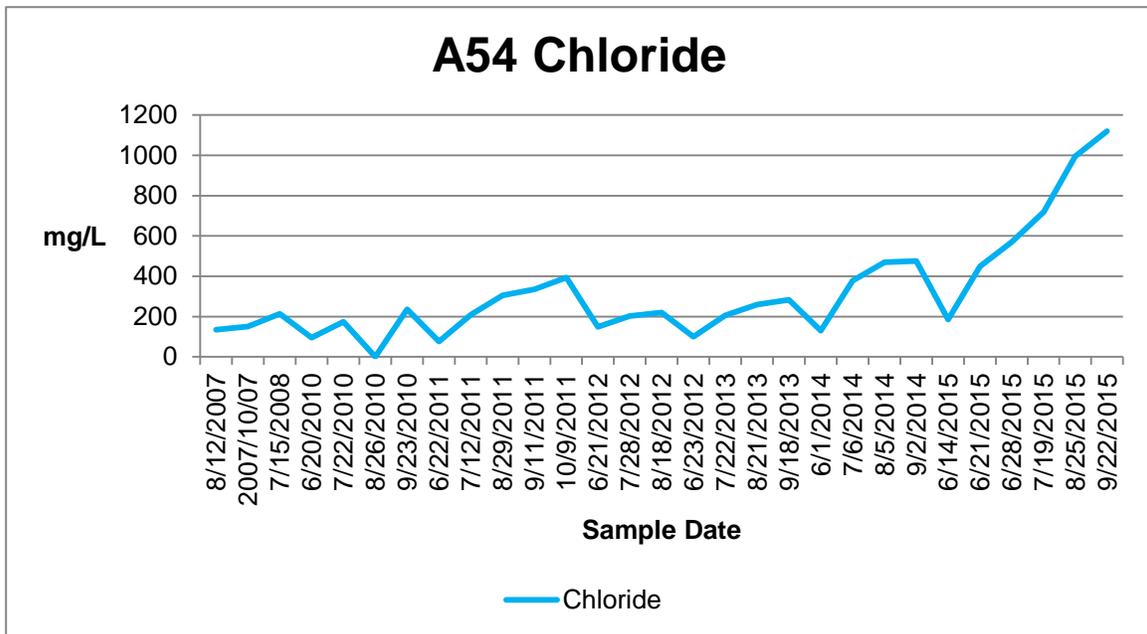


Figure 5: Measured Chloride Concentrations in Lake A54 - Peanut Lake



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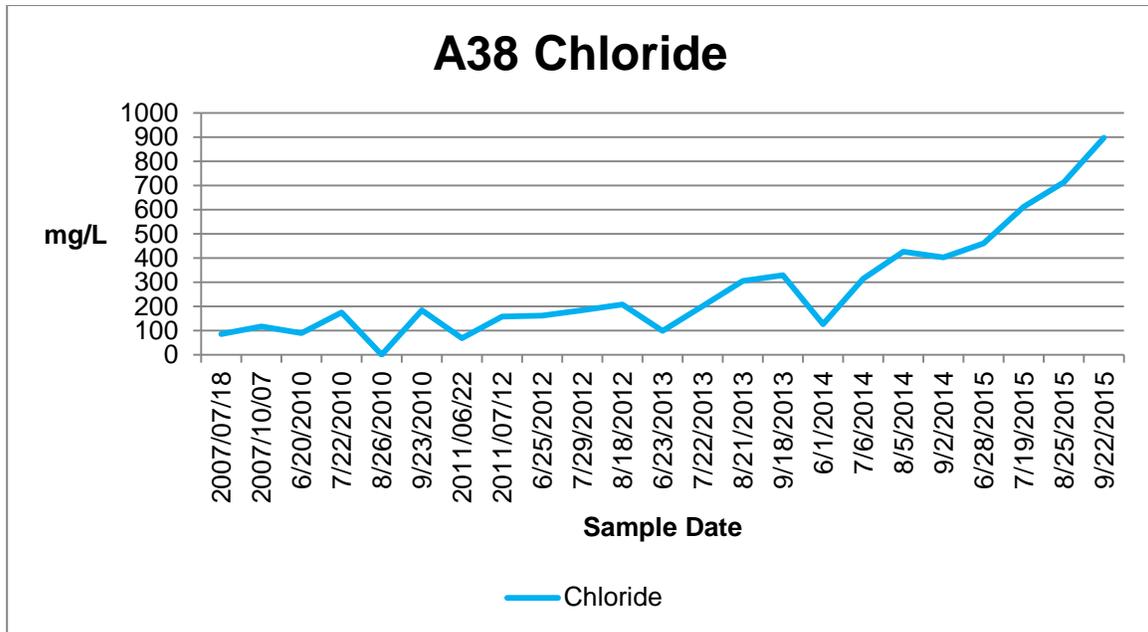


Figure 6: Measure Chloride Concentrations in Pond A38

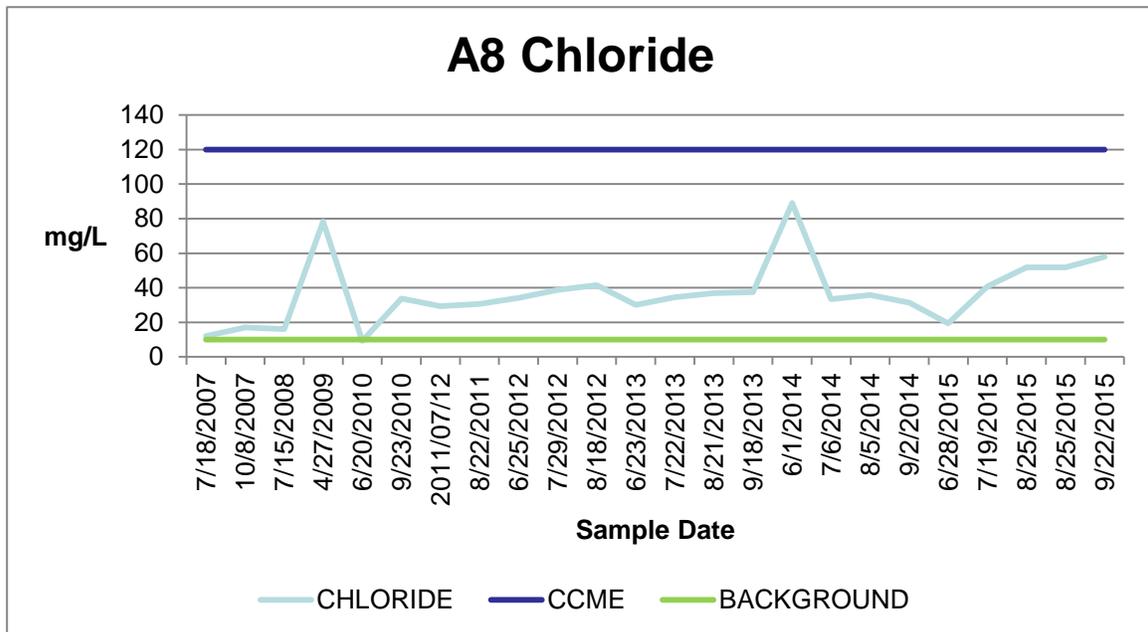


Figure 7: Measured Chloride Concentrations in Lake A8



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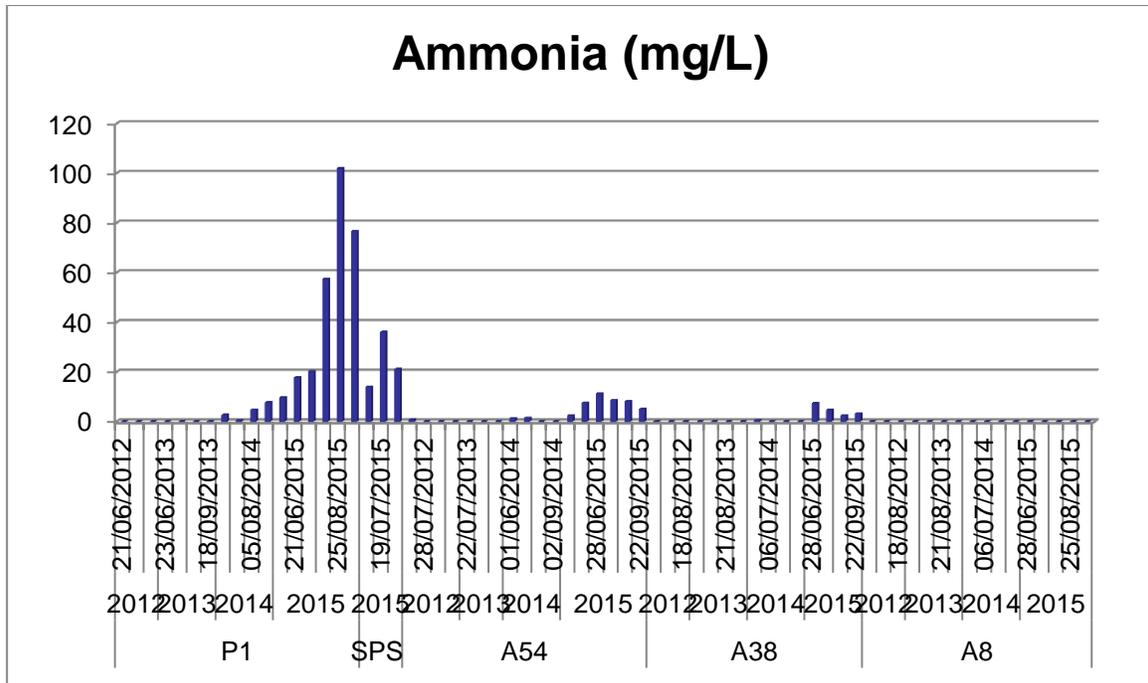


Figure 8: Measured Ammonia Concentrations in Containment Pond P1, Surface Sump, Lake A54, Pond A38 and Lake A8