AGNICO EAGLE

MEADOWBANK MINE

Nunavut Water Board (NWB 2AM MEA0815) Type A Water License Renewal Application – Main Supporting Document

JULY 2014

Executive Summary

The Type A License NWB 2AM MEA0815 was issued on June 9th, 2008 and expires May 31st 2015 (a total of 7 years). The following document presents a review of data collected since the beginning of mine operations in 2010, updated management plans, information in support of the License renewal and presents an updated Type A water license with a rationale for the proposed changes based on a review of our water quality results to date. AEM believes the information presented in the application and the supporting document has Meadowbank in good standing and the changes presented in this application are within the parameters of the original NWB 2AM MEA0815 and therefore constitutes a renewal (not a new license or an amendment to the current license).

To enhance the review process, proposed updates that are discussed in the supporting document are also presented in an updated Type A license in track changes. In summary, AEM is proposing a 10 year license renewal; the expiration date proposed for the renewal is June 1, 2025. This will take the Meadowbank Mine through operations and into closure. The NWB recently accepted AEMs request for an amendment to the freshwater use to increase the amount from 700,000 m^3 to 1.15 million m^3 per year. Recent updates in closure planning have advanced the Second Portage and Third Portage pit reflooding schedule which will begin in 2015. In 2018, it is expected that freshwater use for reflooding will increase to 4.88 Million m^3 from TPL and to 4.18 Million m^3 from Wally Lake for Vault Pit reflooding. At that time, 55,000 m^3 from TPL will also be needed for mill and camp use. AEM is requesting to use these updated pit reflooding water volumes for the license renewal. Furthermore, AEM proposes updates to certain items or conditions of the license that are *administrative* in nature. In many cases, AEM proposes to remove some items that no longer apply as they were related to construction (and therefore complete) or did not exist since operations began. Furthermore, AEM proposes to simplify Schedule I Tables 1 and 2. Parameters are proposed to be grouped into 6 monitoring categories – mine site, receiving environment, prior to mine site discharge (i.e. non-contact diversion ditches and attenuation pond discharge), prior to secondary containment of fuel storage areas, MMER and Full Suite.

AEM believes the updates to the license will improve clarity and consistency for both AEM and NWB.

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ᐊᓱᖏᖅ ᓯᐅᕐᓂᓯ NWB 2AM MEA0815 ᑐᓂᔨᐅᓯᐅᖅᑐᖅ ᔪᑦᓂ 9, 2008ᓗᒃ ᐊᒪᓗ ᐃᓯᓚᓂᐊᖅᓴᓂ ᒪᐃ 31, 2015ᓗᒃ (ᑲᑎᓴᓗᒃ ᐅᑭᐅᓄᓂ 7ᓗᓄᑦ). ᐅᑯᐊ ᐊᓚᓪᓕᐊᑦ ᑕᑯᖅᓴᐅᑎᑎᔪᑦ ᖃᑎᖅᑕᓂᕐᒥᖅ ᓇᕐᓴᐅᑎᓂᖅᑲᓂᖅ ᑲᑎᑕᐅᓂᖅ ᑕᐃᒪᖏᑦᑕ ᐊᐅᓪᓚᕐᒪᑦ 2010ᓗᒃ, ᐃᓐᓇᔨᓪᓚᖅᑐᖅᓯᒪᔪᑦ ᐊᐅᓪᓚᑎᓂᕐᒧᑦ ᐸᖅᓇᐅᑦᑐᑦ, ᑐᑭᓯᐅᒪᔪᓕᑦᑐᑦ ᓪᓚᐃᓐᓇᓯᓂᖅ ᓄᑖᖏᖅᑎᓇᓂᕐᒧᑦ ᐊᒪᓗ ᑕᑯᖅᑕᐅᓂᐅᑐ ᐃᓐᓇᔨᓪᓚᖅᓯᒪᔪᖅ A–ᒧᑦ ᐃᒪᖏᒧᑦ ᓪᓚᐃᓐᓇᓯᓂᐅᑎᖅᓴᓂᐅᑐ ᐊᓯᐊᖏᖅᑎᓇᓂᐅᕐᔪᒪᔪᓄᑦ ᖃᑎᖅᑕᓂᖅ ᐃᒪᓇᓱᑦᑕ ᖃᓚᐃᓐᓇᑦᑕᖏᓚᑦᑕ ᖃᓚᐃᖏᓂᓇᓱᖏᓚᑦᑕ ᐅᑦᓗᒥᔨᓯᓚᖅᑐᖅᓯᒪᔪᖅ ᒪᓪᓴᕐᒍ. AEM–ᑯᑦ ᐅᖃᐱᓯᓴᑦ ᑐᑭᓯᐅᑎᒋᑦ ᐊᒪᓗ ᐃᓪᓕᐅᕐᔪᑦ ᑐᑭᓯᐅᑎᓂᐅᑦ ᐊᐅᓪᓚᑎᓂᐅᑐ ᐊᓯᐊᖏᖅᑎᓇᓂᐅᕐᔪᒪᔪᑦ ᑐᑭᓯᐅᑎᑎᒋᑦ ᐃᓗᓐᓇ MWB 2AM MEA0815ᓗᒃ ᑕᐃᒪᓐᓇᒧᑦ ᓄᑖᖏᓚᐅᖏᖅᑐᖅᑐᖅ (ᓄᑖᒋᐅᓚᑎᓂᖅ ᓯᐃᓐᓇᓯᓂᒃ ᐅᖓᔪᓂᑦ ᐃᓪᓕᐅᕐᔪᒪᓂᖅ ᐃᓐᓇᔨᓪᓚᖅᓴᓂᐅᑐᖅ).

ᐱᐅᓂᐊᖅᑎᓐᓂᐊᕐᓗᒍ ᖃᒥᖅᑭᓂᐅᔪᖅ, ᐃᓐᓇᔨᓪᓚᖅᑐᐃᓂᐅᔪᓕᑦ ᐅᖅᑲᐅᓂᐅᔪᑦ ᐃᓪᓕᐅᔪᓂᑦ ᐊᓪᓚᔪᓂᑦ ᑕᑯᖅᓴᐅᖅᑕᐅᔪᑦ ᐃᓐᓇᔨᓪᓚᖅᑐᖅᓯᒪᔪᓕᒥᑦ Aᓯᖏᒥᑦ ᓯᐃᓴᐅᓂᒥᑦ ᐊᓂᐊᖏᖅᓂᓂᐅᔪᓂᑦ. ᓇᐃᓇᖅᓴᖅᓗᒍ, AEM–ᑯᑦ ᓄᑖᖏᖅᓂᔪᓕᑦ ᐅᑭᐅᓄᑦ ᖃᑯᓗᓄᑦ ᓯᐅᕐᓂᐊᖅᑎᓇᓂᖅᑐᖅ; ᐃᓯᓪᓕᐊᓂᐊᖅᑐᖅᓱᓄᑦ ᐅᖓᔪᖅ ᓄᑖᖏᖅᓂᐅᔪᓕᔪᒧᑦ ᔫᑉ 1, 2025ᓯᖏᖅ. ᑕᐃᓕᓴᐅ ᑕᓂᔪᐊᖅᑎᒥᑦ ᐅᖅᑲᐅᑕᓚᐊᖅᑎᒥᒃ ᑎᑭᐅᑎᑎᑕᐊᖅᑐᖅᑐᖅ ᐊᐅᓪᓚᕐᔪᖅᓱᓕᓄᑦ ᐊᓪᓚᓗᒍ ᐅᖃᖅᑐᐊᖅᑐᖅᓱᓕᓄᑦ. AEM–ᑯᑦ ᑐᑭᓯᐅᓂᐅᔪᐸᓪᓕᐅᖅᑐᑦ ᐃᓪᓕᐅᓂᒥᑦ ᐃᓕᑦᑎᐊᕐᓚᒥᒃ ᐊᑐᖅᓂᒥᑦ ᐊᐅᓚᑦᑎᑦᑎᑎᒥᒃ 700,000 m^3 –ᓂᑦ 1.15 ᒥᓪᓴᓐ m^3 –ᒧᑦ ᐅᑭᐅᑕᐃᓪᓗ. ᐃᓐᓇᐃᖅ ᐃᓐᓇᔨᓪᓚᖅᑐᖅᓯᒪᔪᑦ ᐅᖃᐱᓯᓴᑦᑐᓪᓚᐊᓂᕐᒧᑦ ᐸᖅᓇᐃᓂᕐᒥᑦ ᓯᐳᒪᒍᐊᓯᓴᖅᑎᑎᔪᑦ 2PLᓗᒃ ᐊᒪᓗ 3PLᓗᒃ ᒪᓂᕐᒥᑦ ᐃᓗᓕᑐᖅᓯᒪᔪᖅ ᐃᒪᓕᖅᑐᖅᑕᐅᓂᐊᓂᖅᓱᓕᓄᑦ. SNC (2013) ᓂᓚᐅᖅᑐᖅ ᐳᐊᑎᓴ (Portage) ᐊᒪᓗ ᔪᓴ (Goose) ᒪᓂᕐᒥᑦ ᐃᓗᓕᑐᖅᓯᒪᔪᖅ ᐃᒥᖅᑐᖅᑕᐅᓂᐊᓂᖅᓱᓕ ᐱᑎᐊᓂᐊᓂᖅᓱᓕᓂᐅᑦ 2015ᓗᒃ. 2018ᓗᒃ, ᓂᓚᐊᑎᓴᐅᔪᖅ ᐃᒪᓕᑎᐊᖅᑭᒥᑦ ᐊᑐᖅᓂᖅ ᐃᒪᓕᖅᑐᐃᓂᓪᓕᑦ ᐊᖅᑭᑦᑕᓚᐊᖅᓂᐊᓂᖅᓱᓕᓂᐅᑦ 4.88 ᒥᓪᓴᓐ m^3 –ᒧᑦ TPLᓗᒃ ᐊᒪᓗ 4.18 ᒥᓪᓴᓐ m^3 –ᒧᑦ ᐅᐃᓕ ᑕᓂᕐᒥᑦ (Wally Lake) ᖁᓕᑦ (Vault) ᒪᓂᕐᒥᑦ ᐃᓗᓕᑐᖅᓯᒪᔪᖅ ᐃᒥᖅᑐᖅᑕᐅᓂᖅᓱᓕᓂᐅᑦ. ᑕᒪᑐᒧᖅᓱᒪ, 55,000 m^3 -ᓂᓗ TPLᓗᒃ ᐱᖅᐅᖅᓚᐊᖅᑎᓂᐊᖅᑐᖅ ᓂᖅᑲᓪᓚᑎᓚᖕᖓᔪᓕᑦ ᐊᒪᓗ ᐅᖅᑲᐅᑕᓚᐊᒥᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑐᓕᑦ. AEM–ᑯᑦ ᑐᑭᓯᐅᖅᑐᖅ ᐊᑐᑭᒪᔨᓪᓚᑦ ᑕᔅᓯᐅᐊ ᐃᓐᓇᔨᓪᓚᖅᑎᓇᓂᕐᒧᑦ ᐃᓪᓕᐅᑎᓇᓂᕐᒧᑦ ᒪᓂᕐᒍᑐᖅ ᐃᒥᖅᑐᖅᑕᐅᓂᐅᕙᓪᓕᐅᓂᖅ ᐃᒪᕐᑲᑦ ᐊᑐᖅᓂᖅ ᐃᓕᑦᑎᐊᕐᓚᒥᒃ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑐᓕᑦ. ᐊᒪᓗᑲᑲᓂᖅ, AEM–ᑯᑦ ᑐᑭᓯᐅᖅᑐᖅ ᐃᓐᓇᔨᓪᓚᖅᑎᓇᓂᕐᒧᑦ ᓯᓚᕐᓗᓐᓂᓂᖅ ᐅᖅᑲᐅᑕᓚᐊᖅᑎᓇᓂᖅᑐᐃᓂᓪᓕᐅᓂᖅ ᓯᓚᕐᓗᓐᓂᓂᖅ ᐅᖅᑲᐅᑕᓚᐊᖅᑎᓇᓂᖅᑐᐃᓂᓪᓕᐅᓂᖅ ᑕᐃᓕᓴᐅᑎᓂᐅᑦ *ᐊᐅᓚᕆᓂᕐᔪᐃᖏᓚᓂᖅ*. ᐊᒥᓱᓂᓂ, AEM–ᑯᑦ ᐋᓵᖅᓯᒪᔪᓕᑦ ᐃᓕᖏᓐᓂᖅ ᐊᑐᑭᖅᑐᖅ ᐊᑐᐅᖃᖅᑐᖅᓱᓕᓄᑦ ᐱᓕᕐᓂᖅᑕᐅᑦᑎᓕᑕ ᓴᓇᐅᑦᑐᖅᓱᓕᓂᐅᑦ (ᐱᐊᓂᖅᓯᒪᓕᕐᓂᖅᑲᑎᓴᓗ) ᐅᖅᑲᐃᓐᓂᖅ

ᐱᑕᖃᓕᐅᖅᓯᒪᔨᕐᑕᑐᑦ ᑕᐃᒪᓐᓇᑦ ᐊᐅᓪᓚᓕᐊᖏᒪᑕ. ᐊᒪᓗᒃᑲᓐᓂᖅ, AEM–ᑯᑦ ᓇᓗᓇᕈᔨᓂᖅᑎᑎᒃᑲᓐᓂᕈᒪᔪᑦ ᑎᑎᖅᑲᓂᒃ Ⅰ–ᒋᑐᓂᒃ ᐊᒪᓗ 1–ᒋᑐᓂᒃ 2–ᒋᑐᓂᓗᓗ. ᑭᓚᓚᐅᕈᒪᔪᑦ ᑲᑎᑕᐅᓂᐊᖏᓗᑎᒃ ᐊᖏᕕᓂᓚᔨᓄᑦ ᖃᐅᔨᒋᐊᖅᑕᖏᓂᖏᓐᓇᑦ ᐊᕕᒃᑐᖅᓯᒪᔪᓄᑦ – ᐅᔪᖅᑕᕆᐊᕐ ᐃᓂᔨᓂᑦ, ᑎᑭᕕᐅᑕᖅᑐᒥᑦ, ᐅᔪᖅᑕᕆᐊᕐ ᐃᓂᔨᓂᑦ ᑯᕕᕕᐅᕕᖏᓐᓄᑲᑎᒃᑲᖅᑎᓂᓕᐊᖏᑲᓐᓂᖅᓄᓚᒍ (ᓄᖏᓗ, ᐊᒃᑐᖅᑕᐅᔨᕐᑕᑐᑦ ᓴᖓᑎᑎᕐᔪᑦ ᓄᕐᓗᓂᕐ ᐊᒪᓗ ᑯᕕᖅᑕᖏᓀᑦ), ᑐᓴᓕᕆᔨᓚᐅᐊᖅᑲᖅᑎᓂᓕᐊᒍ ᐅᖅᓄᐊᓗᔭᓄᕕᖏᓐᓇᒥᑦ, MMER ᐊᒪᓗ ᐃᓗᐃᑐᓕᔨᓴᒥᑦ.

AEM–ᑯᑦ ᐅᐅᐱᓄᑐᑦ ᑕᒪᐅᑯᐊ ᒧᐊᓇᒋᓕᔨᓕᖅᓄᐅᔪᑦ ᓕᐃᓴᓄᓕᐊᑦ ᐱᖅᓕᓕᖅᑎᑎᓂᐊᖏᓂᐅᓐᓇᑦ ᐊᒪᓗ ᐊᔪᐅᑎᓕᔨᓚᐅᑎᓂᖏᓐᓇᑦ ᑕᐃᓴᖅᓄᓚᑦ ᑕᑯᑯᓇᓚᐅᖅ AEM–ᑯᐊᓄᑦ ᐊᒪᓗ MWB–ᑯᐊᓄᑦ.

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Document Control

Version	Date	Section	Page	Revision
1	June 25, 2014	All	All	

Prepared by:
Agnico Eagle Mines Limited - Meadowbank Division

Approved by:

Stephane Robert – Manager of Regulatory Affairs

RyanVanEngen MSc. – Meadowbank Environment Superintendent- Interim

1 INTRODUCTION

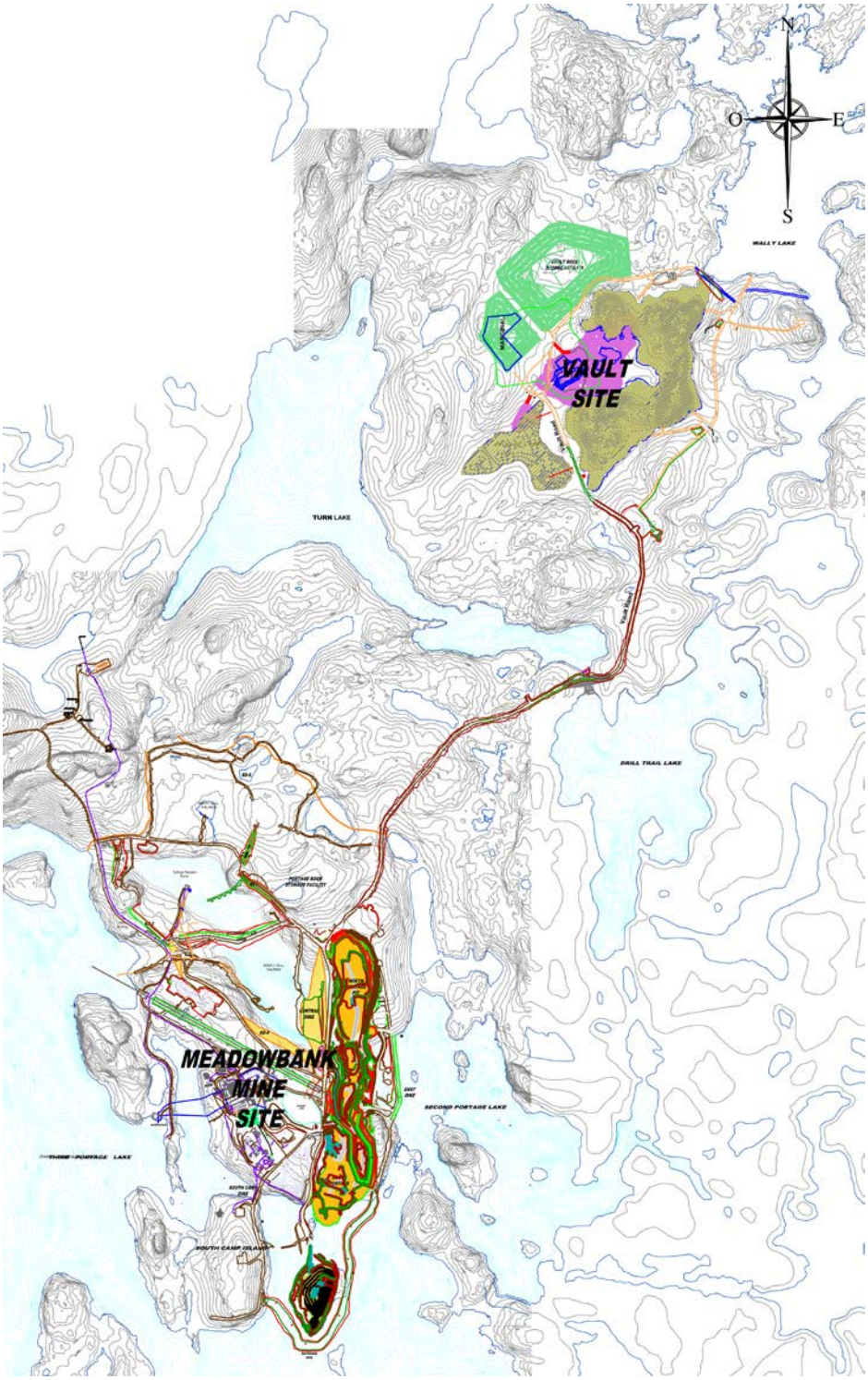
1.1 Background

Since 2009, Agnico Eagle Mines Limited - Meadowbank Division (AEM) has operated the Meadowbank Gold Mine, which is located 75 km north of the Hamlet of Baker Lake, Nunavut. The project components include marshalling facilities in Baker Lake, the 110 km All Weather Private Access Road (AWPAR) between Baker Lake and Meadowbank, the Vault mine site and the Meadowbank mine site. The Meadowbank mine consists of several gold-bearing deposits that will be mined until 2017. Mining at Meadowbank is occurring in three open pits (Goose Pit, Portage Pit and Vault Pit - Figure 1-1). Much of the pit development is located in close proximity to the mill, office and lodging infrastructure, with the exception of the Vault Pit which is approximately 8 km northeast of the main mine site.

These various components and activities associated with the project require numerous authorizations, leases and permits from regulatory agencies that AEM applied for and were granted prior to construction and operation (all leases are presented in Appendix A). This includes licenses under the Nunavut Water Board (NWB Type A Water License 2AM- MEA0815, the subject of this renewal); Environment Canada (EC) Metal Mining Effluent Regulations (MMER) and Schedule II listing of Second Portage Lake Northwest Arm; the Department of Fisheries and Oceans Canada (DFO); Aboriginal Affairs and Northern Development Canada (AANDC) (formerly Indian and Northern Affairs Canada (INAC)); the Kivalliq Inuit Association (KIA) and the Nunavut Impact Review Board (NIRB- Project Certificate No.4).

All of the permits were considered based on the original (2005) environmental management plans and associated life of mine (LOM) plans. The management plans have since been updated, presented to the NWB (and NIRB) during annual reporting and have been revised to reflect optimization of the mine and expansions. Updated plans can be found in Appendix B.

Figure 1-1 - Meadowbank General Mine Site



1.2 Objectives and Approach

The following document presents a review of data collected since the beginning of mine operations in 2010, updated management plans, information in support of the License renewal and presents an updated Type A water license with a rationale for the proposed changes.

AEM believes the information presented in the application and the supporting document has Meadowbank in good standing and the changes presented in this application are within the parameters of the original NWB 2AM MEA0815 and therefore constitutes a renewal (not a new license or an amendment to the current license).

License NWB 2AM MEA0815 was issued on June 9th, 2008 and expires May 31st 2015 (a total of 7 years). AEM is proposing a 10 year license renewal; the expiration date proposed for the renewal is June 1, 2025[a]. This will take the Meadowbank Mine through operations and into closure. A final Closure and Reclamation plan will be discussed in advance with the NWB and submitted 12 months prior to closure as per condition Part J Item 3.

The Type A License renewal application (Section 9) outlines updates to the original license. To enhance the review process, proposed updates that are discussed in the supporting document and updated in the Type A license are indicated with footnotes*. AEM believes the updates to the license will improve clarity and consistency for both AEM and NWB.

For this renewal, the approach AEM has taken is similar to other recent license renewals in the north and is based on the following principles:

1. This is a renewal, not a new license nor an amendment.
2. The changes that are presented are:
    a. Corrections and removal of errors (i.e. stations that do not exist, or conditions that do not apply because of changes to the site layout);
    b. Updates to the license because of new site conditions or information that has been presented to the NWB in amendments, modifications, updated plans and previous annual reports, and
    c. To improve clarity, consistency and reflect current mine conditions.
3. AEM will seek certainty and consensus through the process

[a] Proposed update to the Type A Water License
*Example

2 REVIEW OF MINE OPERATIONS AND FUTURE PLANS

2.1 Existing Production

The Meadowbank Gold Mine consists of several gold-bearing deposits within reasonably close proximity to one another. The three main deposits are: Vault Pit, Portage Pit (South, Center and North Portage deposits), and Goose Island Pit.

The South Portage deposit is located on a peninsula, and extends northward under Second Portage Lake (2PL) and southward under Third Portage Lake (3PL). The North Portage deposit is located within a former lake basin, on the northern shore of 2PL. The South, Center and North Portage deposits will be mined from a single pit, termed the Portage Pit, which will extend approximately 2 km in a north-south direction. The Goose deposit lies approximately 1 km to the south of the Portage deposit, and is located in what was a portion of the east basin of 3PL. The Vault deposit is located adjacent to Vault Lake, approximately 6 km north of the Portage deposits. A series of dikes (East, West Channel, Bay-Goose, South Camp and Vault) were constructed to isolate the mining activities from the lakes. Additional dikes (Central Dike, Stormwater Dike and Saddle Dams) have been constructed to manage tailings within the dewatered 2PL Arm. East Dike, Vault Dike, West Channel, Bay-Goose, South Camp and Stormwater Dikes, Vault Dike, Saddle Dam 1 and Saddle Dam 2 were all constructed between 2008 and 2013. The dikes were constructed using materials produced on site.

The Meadowbank gold mine began the operations phase of the project in February 2010 with the commercial production from Portage Pit. In the first quarter of 2012, operations began in the Bay Goose Pit, and in the first quarter of 2014, commercial production began in Vault pit. By the end of 2014, Bay Goose pit will be depleted leaving entire commercial production to Portage Pit and Vault Pit until the end of the mine life in 2017. Tables 3.1 to 3.5 of the *Updated Mine Waste Rock and Tailings Management Plan* (Appendix B) present the mined tonnage per year from 2009 to 2013 and Table 3.10 of this plan presents the mine development sequence for the remaining years of operation and closure.

Mining is a truck-and-shovel open pit operation. As shown on Table 2-1 below, the current mine plan (2014 to 2017) indicates that an approximate further 15 Mt of ore will be processed over a nominal mine life of 4 years, including ore from pits and stockpiles. During this time, approximately 77.2 Mt of mine waste rock and till will be produced. At the end of the mine life, an approximate total of 23.2 Mt of tailings will have been generated.

Table 2-1 - Summary of ore, waste rock and till production estimates based on the current life-of-mine plan. NAG and PAG values indicate approximate percentage of waste rock that is non-acid generating and potentially-acid generating, respectively

		2014	2015	2016	2017	
Portage Pit	Total Waste Rock (t)	13,728,025	9,826,926	3,109,248	2,489,498	**29,153,697**
	NAG (~ %)	53%	66%	33%	13%	**52%**
	PAG (~ %)	47%	34%	67%	87%	**48%**
	Till (t)	155,671	-	-	-	**155,671**
	Ore (t)	1,816,026	2,405,371	331,283	645,325	**5,198,005**
Goose Pit	Total Waste Rock (t)	2,632,126		-	-	**2,632,126**
	NAG (~ %)	65%	-	-	-	**65%**
	PAG (~ %)	35%	-	-	-	**35%**
	Till (t)	-	-	-	-	**0**
	Ore (t)	971,337	-	-	-	**971,337**
Vault Pit	Total Waste Rock (t)	9,851,664	13,724,806	15,827,238	3,700,788	**43,104,496**
	NAG (~ %)	95%	95%	95%	95%	**95%**
	PAG (~ %)	5%	5%	5%	5%	**5%**
	Till (t)	1,743,327	-	198,449	254,101	**2,195,877**
	Ore (t)	982,253	2,005,890	4,202,292	1,623,345	**8,813,780**

2.2 Waste Rock Storage

Waste rock from the Portage and Goose Island Pits is currently being stored in the Portage Rock Storage Facility (PRSF), or used in Portage pit infill or backfilling. Pit infill is only carried out in areas where mining is completed, and contributes to the overall fish habitat compensation approved by Fisheries and Oceans Canada (DFO). The Portage Rock Storage Facility was constructed to minimize the disturbed area and will be capped with a 4 m layer of non-acid-generating rock to constrain the active layer within relatively inert materials. This capping is ongoing as parts of the RSF reach their limits. The final top capping will be completed at closure. The control strategy to minimize the onset of oxidation and the subsequent generation of acid rock drainage (ARD) includes freeze control of the waste rock through permafrost encapsulation and capping with an insulating convective layer of NAG rock. The waste rock below the capping layer is expected to freeze, resulting in low rates of ARD generation in the long term. The Portage RSF will operate from 2009 to 2016.

In 2012, AEM revised Portage rock storage facility (PRSF) footprint which resulted in a temporary expansion from the original area of the Waste Storage Facility from 63 ha to 80.8 ha. The expansion was necessary as it was determined there was insufficient area within the PRSF for the storage of NAG material. The current PRSF design volume (39.3 Mm^3) is similar to the original 2009 design (32.0 Mm^3); the deposition pattern has however changed to allow for a separate NAG material storage area that will be used for closure. The expansion is still within the original mine footprint and all runoff is directed to the TSF or the Attenuation Pond, as in the original design. A diversion ditch system prevents any watershed freshet or overland flow from reaching the PRSF, mitigating any potential contamination of surrounding waterbodies. Reclamation activities will return the area affected by the temporary NAG expansion in accordance to the original design.

Waste rock from the Vault Pit will be stored in the Vault Rock Storage Facility. Most of the waste rock (90%) from the Vault deposit is NAG and water quality modeling concluded that the Vault RSF is not expected to require capping. As a precautionary measure, any PAG material encountered at Vault will be capped with NAG waste rock as necessary. The Vault RSF will operate from 2014 to 2018.

2.3 Waste Disposal

The Tailings Storage Facility (TSF) is delineated by a series of dikes built and to be built around and across the basin of the dewatered northwest arm of Second Portage Lake. The TSF is divided into the North and South Cells. From February 2010 to approximately December 2014 tailings will be stored in the North Cell, delineated by the Stormwater Dike, Saddle Dams 1 and 2 and the NPAG Waste rock extension. Once the North Cell is full, deposition will switch to the South Cell until mine operations cease in 2017. The South Cell will be delineated by the Central Dike and Saddle Dams 3, 4 and 5. For the early years of operation, the pond in the South Cell is operated as an attenuation storage pond (Portage Attenuation Pond), while the reclaim pond is operated within the North Cell. When the deposition switches to the South Cell, the Attenuation and Reclaim ponds will be combined. The division of the TSF into cells allows tailings management in comparatively smaller areas with shorter beach lengths that reduce the amount of water that is trapped and permanently stored as ice. Operation in cells also allows progressive closure and cover trials to begin in the North Cell while tailings deposition continues in the South Cell.

Tailings are placed sub-aerially as slurry and water from the pond is reclaimed during operation. The tailings deposition strategy is to build beaches against the faces of the perimeter dikes to push the pond away, and ultimately produce a tailings surface that directs drainage towards the

western abutment of the Stormwater Dike. Following mine operations, a minimum 2 to 4 m thick cover of NPAG rockfill will be placed over the tailings as an insulating convective layer to confine the active layer within relatively inert materials. The final thickness of the rockfill cover layer will be confirmed based on thermal monitoring to be completed during operations. The closure strategy is based on freeze control of the tailings through permafrost encapsulation to minimize water infiltration into the TSF and the migration of constituents from within the facility[b].

Details on waste storage and treatment facilities on site, such as the incinerator, landfills (in which non-salvageable, non-hazardous solid wastes are disposed of), landfarm (in which petroleum-contaminated soils are treated), and sewage are discussed in their respective management plans that can be found in Appendix B. The material disposed of since mining is summarized in Table 2-2. In principle, plans are similar to the 2007 application document but have been updated to reflect updates to mine sequencing and operational changes.

Table 2-2 - Waste and Material disposed of since 2010

Year	Incinerator (m^3)	Landfill (m^3)	Landfarm (m^3)	Waste Oil (L)		Sewage Treatment Plant effluent (m^3)– disposed in TSF		Hazardous Material – sent to registered waste management facility
				Incinerated onsite	Sent to a registered waste management facility	Waste Water	Sewage Sludge	
2010	2,738	43,800	0	178,750	212,400	32,481	557	50 seacans
2011	3,740	11,185	0	5,878	421,338	31,214	735	91 seacans (662 tonne)
2012	4,015	14,062	1,250	3,143	476,682	33,304	382	120 seacans (1,471 tonne)
2013	3,959	14,024	2,577	60,000	303,156	28,029	361	242 seacans (2,080 tonne)

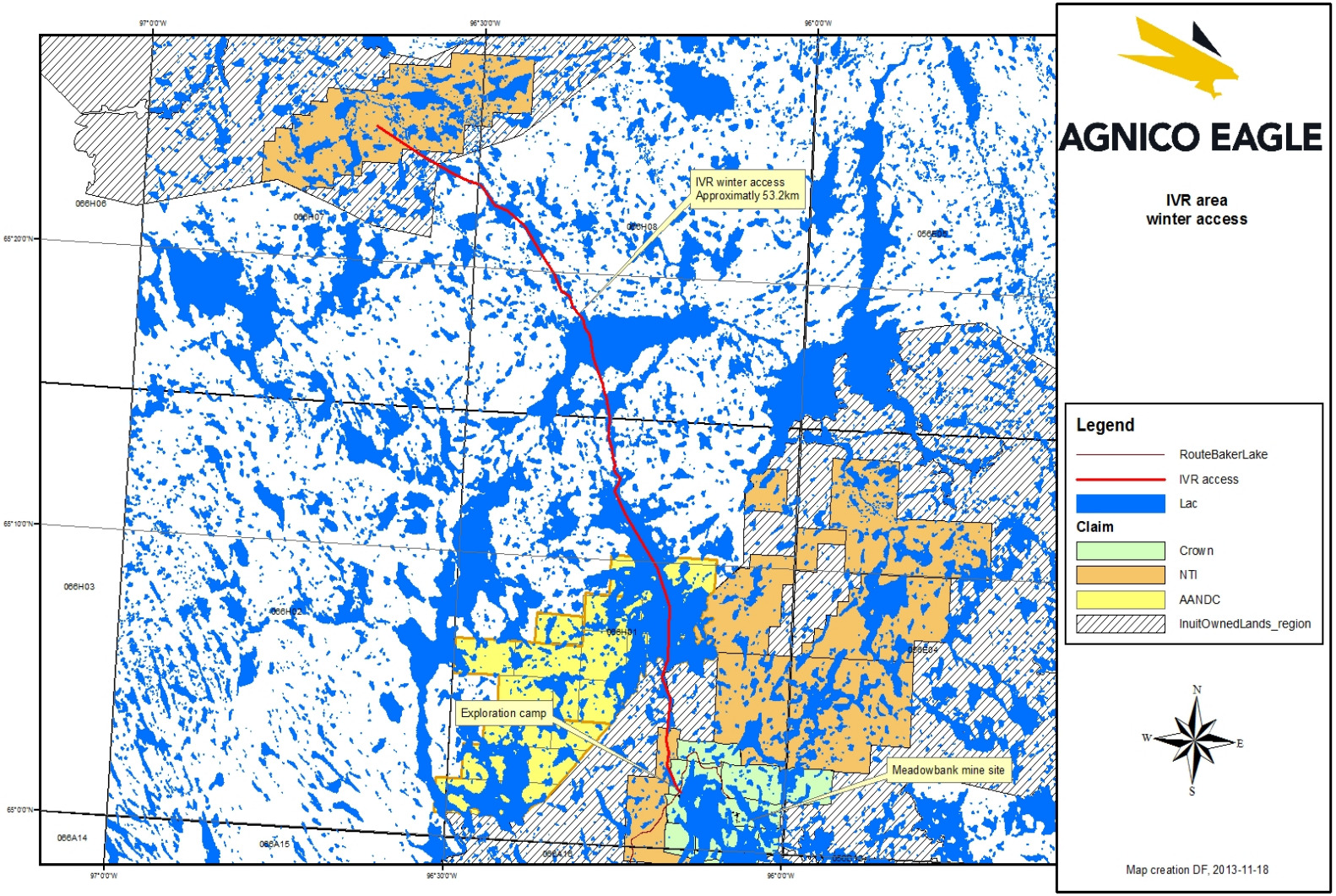
[b] AEM is working with researchers at the UQAT RIM to determine capping depth and assist in determining best practices for tailings storage management at closure

2.4 Future Plans

Consideration for expansion, within the scope of the project description approved by NIRB, is a continuous process. As part of the mine optimization, mine engineers evaluate the scale, timing, environmental concerns, and economics of potential project expansions. For example, the Vault Pit expansion would be a small open pit that extends from the perimeter of the Vault Pit to the southwest into Phaser Lake. AEM has begun discussions regarding the Vault Pit expansion with the Baker Lake HTO, KIA and DFO. For economic reasons, it has not been part of the life of mine at Meadowbank and therefore Vault Pit Expansion is not included in the License renewal.

AEM is currently conducting additional exploration at a small satellite deposit called IVR which is approximately 50 km NW of the Meadowbank mine. Exploration activity is advancing in this area in 2014 but this area is not part of the current LOM plan (see Figure 2-1).

Figure 2-1 – IVR Exploration Location



3 FINANCIAL INFORMATION

The statement of financial security has not changed since from the existing water license issued on June 9, 2008.

4 SECURITY INFORMATION

4.1 Mine Site and Infrastructure

Progressive closure measures undertaken to date, which are reflected in the financial security cost estimate, include the PRSF progressive reclamation works (placement of a 4 m NPAG rock cover over the exterior slopes as the PRSF is filled in lifts, and development of internal cells to encapsulate PAG materials by NPAG rock). As of January 2013, 42% of the ultimate area of the Portage PRSF had been covered with NPAG rock.

The financial security cost estimate has been conservatively developed assuming no further progressive reclamation activities are completed throughout the remaining life of the mine, and all remaining reclamation costs are incurred at the onset of permanent closure. For this reason the financial security cost estimate should be revisited as progressive reclamation measures are completed.

A financial security cost estimate of the closure and reclamation activities for the Project, based on the current end of mine life configuration, has been prepared using the RECLAIM template (Version 6.1, March 2009). Details of this estimate are provided in Section 4.0, Appendix I1 and I2 of the closure plan found in Appendix B. The cost estimate has been developed assuming third party contractor rates, on the basis that AEM is unable to fulfill its closure and reclamation obligations, and the government is required to take over reclamation of the Meadowbank Gold Project.

The estimated closure costs have been divided between Land Liability and Water Liability costs following the breakdown of the previous cost estimate prepared by Brodie Consulting Ltd. in 2008 (Brodie 2008). The updated closure and reclamation cost estimate for the Meadowbank Gold Project is $73,666,647 compared to $43,874,543 in the 2008 closure plan ($43.9M in the current water license). Of this, the direct costs for demolition and rehabilitation total $56,993,484. The remaining cost is comprised of mobilization and demobilization ($2,424,791), a 5% allowance for project management and 5% for engineering ($2,849,674, each) and a 15% contingency allowance on direct closure costs ($8,549,023).

The more recent version of the RECLAIM Excel template used to develop this updated cost estimate uses higher unit rates than the version used in 2008 by Brodie, to better match current demolition and rehabilitation costs.

4.2 Fisheries Offsetting

Prior to the acquisition of the mining rights for Meadowbank by AEM in 2007, Cumberland Resources Ltd. (Cumberland) had conducted baseline studies to begin the permitting process for the alteration, disruption or destruction of fish habitat. Cumberland obtained a Nunavut Impact Review Board (NIRB) Project Certificate (No 004 – dated December 30, 2006), which required Fisheries and Oceans Canada (DFO) approval as part of the Final Environmental Impact Statement. Subsequently, a Fisheries Authorization from DFO (NU-03-0191) for the main portion of the mine site (Second and Third Portage Lakes) was provided to AEM in 2008 following DFO approval of the original No Net Loss Plan (NNLP) with amendments (Cumberland, 2006; Azimuth, 2007). In 2012, AEM submitted a revised plan (AEM, 2012) that described the impacts to fish habitat that were expected to occur, and the habitat compensation measures (referred to as offsetting since 2013) that will be implemented to re-gain the lost fisheries habitat, including losses related to the entire mine site, tailings storage facility and Vault Lake area.

As part of closure planning, AEM re-evaluated the cost estimate for fisheries offsetting as outlined in AEM (2012). With changes to the compensation features, having completed approximately 28% of the habitat compensation and partially completed an additional 15%, the remaining portion was estimated to cost $10.4 million, which does not include reflooding (as it is part of the mine site closure). Although, AEM stands by the revised cost estimate for the completion and construction of the compensation measures under DFO Authorizations (i.e. Tailings Storage Facility under Section 36, mine site authorization (NU-03-0191.3) and Vault Area (NU-03-0191.4)), AEM is upholding the LOC at $25.95 million as the closure security for fisheries offsetting.

5 PUBLIC CONSULTATION FOR TYPE A WATER LICENSE RENEWAL

In October, 2013, AEM has met with community members and various regulatory agencies regarding the Type A Water license renewal. These discussions and consultations reflect AEM's goal to seek certainty and consensus through the Type A Water License renewal. Many of the proposed changes to the Type A License, as outlined in Section 9, were discussed during these meetings.

Table 5-1 - Summary of Type A Water License Renewal Consultation

Date	Description	Attendees
October 17, 2013	Technical hearing and prehearing conference for Meadowbank Freshwater Use amendment (during the meetings, discussions were also related to Type A License Renewal).	NWB and Baker Lake hamlet
November 28, 2013	Annual report review; Meadowbank Water and Waste Management Review	AANDC, KIA, NWB, EC and AEM by WebEx
January 22, 2014	Meadowbank Water Management Review Workshop to meet conditions of the Freshwater Use Amendment application	NWB, KIA, AANDC, EC and AEM by WebEx
March 11, 2014	Review of Annual Report, Water Management, and Type A renewal update	NIRB and AEM by WebEx
June 11, 2014	Presentation made to KIA board during site visit to Meadowbank from June 10 -12th, 2014	KIA board and AEM

6 REVIEW OF FRESH WATER USE

6.1 Summary of Freshwater Use

Meadowbank's current water license permits Agnico Eagle Mines Ltd. (AEM) to obtain 700,000 m^3 per year of fresh water for domestic camp use, mining, milling and associated uses. Despite significant success at engineering solutions to optimize fresh water use, requirements were projected to continue to exceed the permitted rate. Increased fresh water use was due to higher than anticipated rates of ore processing, and an adjustment of the initial water balance model, resulting in a deficit of reclaimed water. As a result of these conditions, fresh water use was higher than anticipated in 2010 (1,050,000 m^3), 2011 (1,088,254 m^3), 2012 (1,044,675 m^3) and 2013 (1,593,578 m^3). During their inspections in March and July 2012, AANDC recommended that AEM apply for a license amendment.

In April 2013, AEM updated their water balance based on unexpected problems with the reclaim water barge that occurred at the end of February 2013. Under the revised maximum use scenario, fresh water requirements for the mill in 2013 would be 1,608,104 m^3, or 184 m^3/h on average. In 2013, actual freshwater use was 1,593,578m^3. In the remaining years of operation (2014 – 2018), fresh water use is expected to be lower, as reclaimed water usage returns to maximum capacity.

On April 23, 2013 AEM submitted an application for an amendment to NWB License 2AM-MEA0815, Part E, Item 3, to permit the withdrawal of 1,870,000 m^3/yr in 2013, and 1,150,00 m^3/yr thereafter, for domestic camp use, mining, milling and associated uses. This amount includes 50,000 m^3/yr for the camp, and 2,400 m^3/yr for the emulsion plant. On July23, 2014, the Minister of AANDC approved the amended freshwater use. These values were based on the 2012 Water Management Plan and Balance prepared by SNC (2013). These totals do not include the water required to reflood the pits from 2PL, 3PL and Vault Lake.

Recent updates in closure planning have advanced the 2PL and 3PL pit reflooding schedule. SNC (2013) anticipated pit reflooding to begin in 2015. Presently AEM estimates to begin reflooding in 2015 which is consistent with the 450,000 m^3/yr (51 m^3/hr) predicted in SNC (2013). In 2018, it is expected that freshwater use for reflooding will increase to 4.88 Million m^3 for TPL. The reflooding of Vault Lake will start in 2018. An annual volume of 4.18 Million m^3 of water from Wally Lake will be required from 2018 to 2023 and 4.05Mm^3 in 2024. Vault Pit will be completely flooded by 2025. Updated pit reflooding estimates are presented in Table 6.1

below. AEM is requesting to use these updated pit reflooding water volumes and license amendment volumes for the license renewal. [c]

Table 6-1 - Freshwater requirements from Third Portage Lake, Unnamed Lake and Wally Lake. Updated and Adapted From SNC 2013 Water Management Plan (Table 4-2)

Year	Mill/Camp Freshwater Use from TPL (m^3/yr)	Emulsion Plan Freshwater Use from Unnamed Lake (m^3/yr)	Portage and Goose Pit Flooding from TPL (m^3/yr)	Vault Lake Pit Flooding from Wally Lake (m^3/yr)
2013	1,585,009	2,400	0	0
2014	1,147,600	2,400	0	0
2015	1,147,600	2,400	450,000	0
2016	1,147,600	2,400	1,200,000	0
2017	1,147,600	2,400	1,200,000	0
2018	55,000*	0	4,880,000	4,184,652
2019	55,000	0	4,880,000	4,184,652
2020	55,000	0	4,880,000	4,184,652
2021	55,000	0	4,880,000	4,184,652
2022	55,000	0	4,880,000	4,184,652
2023	55,000	0	4,880,000	4,184,652
2024	55,000	0	4,880,000	4,053,862
2025	55,000	0	0	0

*Fresh water consumption for domestic camp use.

As described in the water license renewal application, no significant impacts to the local aquatic ecosystem are anticipated as a result of the requested increase in fresh water use, because the total volume withdrawn for mining under maximum use for 2010 – 2018 would be less than 2.5% of the volume of Third Portage Lake. Monitoring of water levels will continue as per the water license amendment application[d].

[c] Proposed update to Type A Water License
[d] Updated in Type A water License – accepted by NWB as part of the Freshwater use amendment

7 REVIEW OF WATER QUALITY MONITORING DATA

7.1 Water Quality Results - 2010 to December 2013

A review of onsite water quality data collected since the beginning of operation (2010) was conducted to assist in evaluating the need to update parts of the license. Samples exceeding water quality criteria presented in the Water License were identified in this review and trends in key parameters that are considered to be representative of mine activity (SO_4, TDS, TSS, conductivity, NH_3, Fe and cyanide) were tracked to identify any apparent patterns (e.g. increasing concentrations over time). Ultimately, the purpose of onsite monitoring under the Type A Water License is to anticipate potential impacts and mitigate effects prior to discharging into the receiving environment. Therefore, in the occasional case where licensed limits for these onsite stations were exceeded, water quality data from the closest offsite stations was reviewed (based on CREMP, 2013) to determine whether any corresponding offsite impacts or receiving environment trends could be identified.

To provide context, results for representative parameters at stations discharging to the receiving environment (ST-5 through ST-10) are presented along with CCME or BC guidelines for the Protection of Aquatic Life. These guidelines are considered to be protective of aquatic life in the long term, and are used here to provide context or a "regulatory reference". It is important to note that although these stations are discharge points, compliance with CCME/BC guidelines is not mandated but provided as a benchmark and provides a linkage to the analysis in the CREMP. However, effluent discharged at these stations is required to comply with water quality criteria under the Metals Mining Effluent Regulations (MMER), as well as criteria stipulated in the NWB Type A license. Monitoring of water quality in the receiving environment at large occurs under the Aquatic Ecosystem Monitoring Program (AEMP) which is reviewed in Section 7.2.

Nearly all of the stations (with the exception of ST-5 through ST-10) discussed in this section are not receiving environment discharge points, but rather mine site monitoring stations (i.e. pit sumps, TSF, secondary containment storage) and not considered aquatic environment. Water at the majority of these stations is pumped to the TSF and reclaimed in the mill as described in the water management plan (SNC, 2013 and AEM, 2014).

Overall, the analysis demonstrates that despite a few periodic exceendances, internal monitoring stations and limits are adequately protecting the receiving water environment. For this reason, AEM is proposing a straight renewal. The suggested changes to the license are discussed and a revised license is presented in Section 9.

7.1.1 Review by Station Type

7.1.1.1 ST-5, ST-6 (Portage Area East and West Diversion Ditches)

7.1.1.1.1 Overview

These stations are non-contact water diversion ditches which flow to Second Portage Lake and NP-2, respectively; these stations are sampled monthly during open water. Based on the Water License, they are only subject to NWB's TSS criteria, but are periodically sampled for all MMER parameters + SO_4, turbidity and Al as well.

Overall, it appears that the sampled parameters, limits and sampling frequency for these stations are still adequately protective of the receiving environment and do not require updating.

Table 7-1 - Summary of non-contact diversion ditch sampling stations

Station	Discharged To	Sampled Parameters	Sampling Frequency	License Criteria
ST-5 (Portage East Diversion Ditch)	Second Portage Lake	Group 5 (MMER +SO_4 + turbidity) + Al	Monthly during open water	NWB – TSS
ST-6 (Portage West Diversion Ditch)	NP-2	Group 5 (MMER +SO_4 + turbidity) + Al	Monthly during open water	NWB – TSS

7.1.1.1.2 Exceedances of Water License Criteria

ST-5 was only sampled in 2013, and TSS did not exceed the licenced limit. ST-6 was sampled in 2012 and 2013, and one sample exceeded the limit for TSS.

Table 7-2 - Exceedances of water licence criteria in non-contact diversion ditches

Station	Year	Total # Samples	# Samples Exceeding Licenced Limit	Parameter Exceeding Licensed Limit	Measured Value (s)
ST-5	2013	5	0	N/A	N/A
ST-6	2012	8	1	TSS (30 mg/L)	60 mg/L
	2013	5	0	N/A	N/A

7.1.1.1.3 Receiving Environment Trends

As indicated above, only one diversion ditch sample was found to exceed NWB criteria for TSS (ST-6). ST-6 discharges to TPL and the receiving environment (Station TPN) is monitored in the CREMP.

In response to ST-16 seepage in 2013, AEM began monitoring NP-2 water quality more closely. NP-2 has since been added as part of our AEMP receiving environment water quality

monitoring and is proposed as a new water quality monitoring station along with NP-1 and Dogleg Pond[e]. The next downstream location (Second Portage Lake) has not experienced an exceedance of the TSS trigger value of 3 mg/L since 2008 (East Dike construction). As well, the nearest downstream location of ST-5 (Third Portage Lake East) has not experienced an exceedance of the TSS trigger value.

7.1.1.1.4 Trends in Key Parameters (SO_4, TDS, TSS, Conductivity, NH_3, Fe, CN)

Of these parameters, only SO_4, TSS and CN are regularly analyzed in non-contact water diversion ditches. Conductivity was also recorded at ST-6. These values are presented below with references to the NWB licensed criteria for TSS, MMER criteria for discharge to surface water (CN), and BC's Ambient Water Quality Guideline (sulphate). This guideline is the lowest provided (based on very soft water) for a 5-sample average over 30 days, so is considered to be conservative and is indicated for context only.

No clear trends are apparent at ST-5, and no samples exceeded the guidelines. Increasing SO_4 and conductivity over the 2012 season, appear to have occurred at ST-6, but were not apparent in 2013.

[e] Proposed update to Type A water license

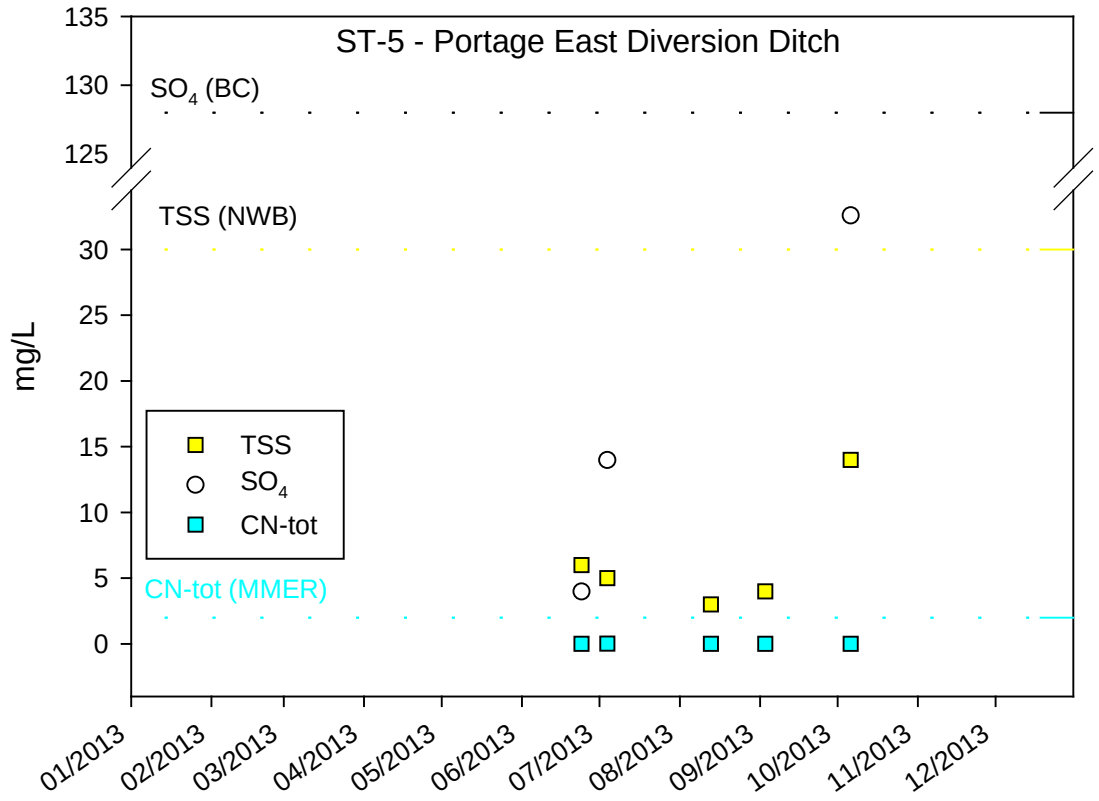


Figure 7-1 - Concentrations of representative parameters measured at ST-5

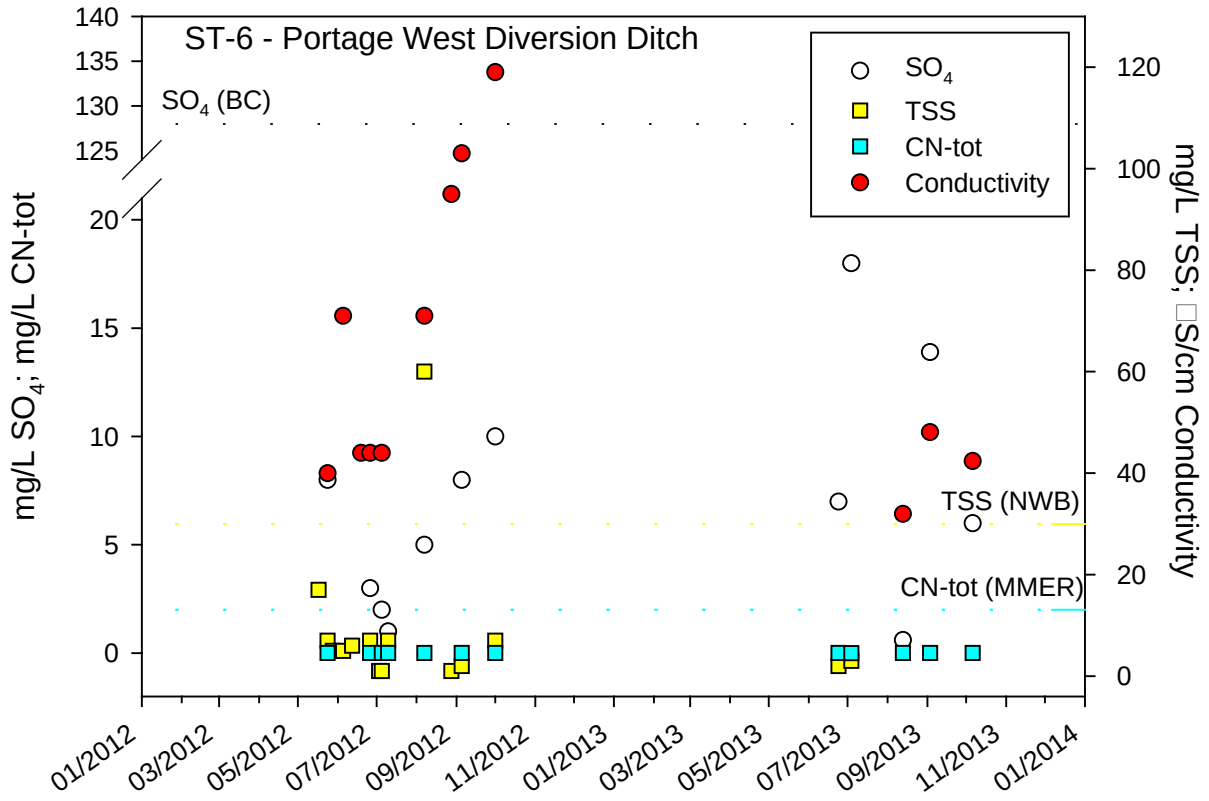


Figure 7-2 - Concentrations of representative parameters measured at ST-6

7.1.1.2 ST-9 and ST-10 (Portage and Vault Attenuation Pond Discharges)

7.1.1.2.1 Overview

ST-9 represents discharge from the Portage Attenuation Pond through a diffuser to Third Portage Lake, after treatment for TSS (and sampling of the pond itself once prior to discharge). Discharge at ST-9 began in 2012 and continued in 2013 after the completion of dewatering activities. This station corresponds to ST-18 (early operation).

ST-10 will represent a similar location upon construction of the Vault Attenuation Pond (2014) and when contact water from Vault Operations is sent through a diffuser into Wally Lake.

NWB and/or MMER criteria apply for Cl, CN, pH, TSS, NH_3, NO_3, total P, TPH, and total Al, As, Cd, Cu, Hg, Ni, Pb, Zn, dissolved Al and radium 226. Where both occur, NWB criteria are more conservative than MMER. However, NWB does not include radium 226, which is included in MMER.

Overall, it appears that the ST-9 and ST-10 parameters, limits and frequency are still adequately protective of the receiving environment and do not require updating.

Table 7-3 - Summary of Attenuation Pond effluent discharge sampling stations

Station	Discharged To	Sampled Parameters	Sampling Frequency	Applicable Criteria
ST-9 (Portage Attenuation Pond)	Third Portage Lake	Full suite	Once prior to discharge. Weekly during discharge.	NWB (multiple) + MMER
ST-10 (Vault Attenuation Pond)	Wally Lake	Full suite	Once prior to discharge. Weekly during discharge.	NWB (multiple) + MMER

7.1.1.2.2 Exceedances of Water License Criteria

In 2012 and 2013, a total of three samples at ST-9 exceeded NWB criteria, and all were for total aluminum.

Table 7-4 - Exceedances of water licence criteria in Attenuation Pond effluent discharge

Station	Year	Total # Samples	# Samples Exceeding Licenced Limit	Parameter Exceeding Licensed Limit	Measured Value(s)
ST-9	2012	21	1	Al (tot) – 1.5 mg/L	1.85 mg/L
	2013	9	2	Al (tot) – 1.5 mg/L	2.15 mg/L 2.16 mg/L

7.1.1.2.3 Receiving Environment Trends

A review of data from the receiving environment (Third Portage North) since 2006 was conducted to determine whether exceedances of the licenced limit may be causing excess concentrations of aluminum in TPL (see CREMP, 2013). No exceedances of the trigger value have ever occurred in Third Portage North. Therefore, it appears that occasional exceedances of licensed limits for aluminum in ST-9 discharge are not resulting in excess concentrations in the receiving environment.

7.1.1.2.4 Trends in Representative Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

All of the above parameters are analyzed at ST-9. There was a slight increase in average concentrations of SO_4, TDS and conductivity in 2013 compared to 2012, but a decrease in TSS and Fe that is related to dewatering. The trends of SO_4, TDS and conductivity are discussed in the CREMP summary (see Section 7.2); none of these parameters are potentially causing effects to the receiving environment. There was a slight increasing trend in CN in 2013, but average concentrations appear to have remained similar to 2012 and all values are still well below licenced limits.

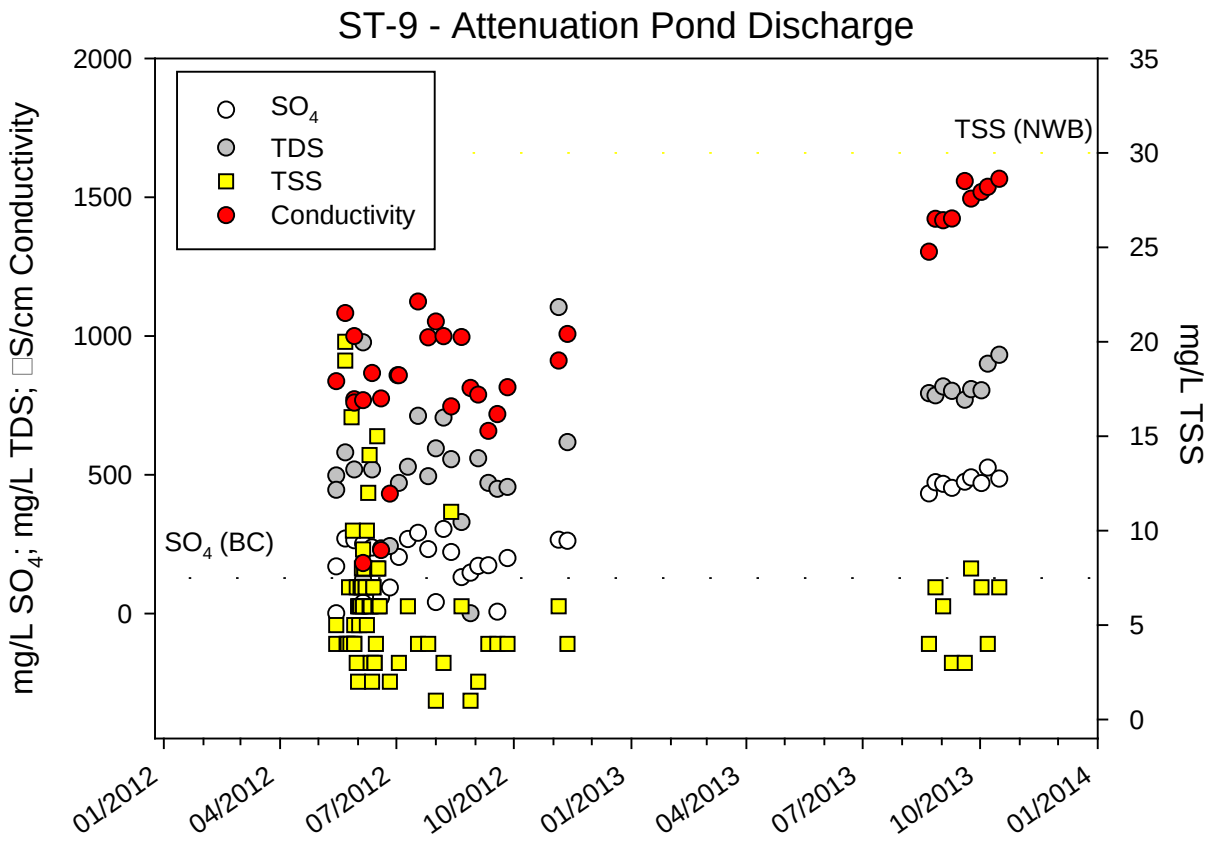


Figure 7-3 - Concentrations of representative parameters measured at ST-9

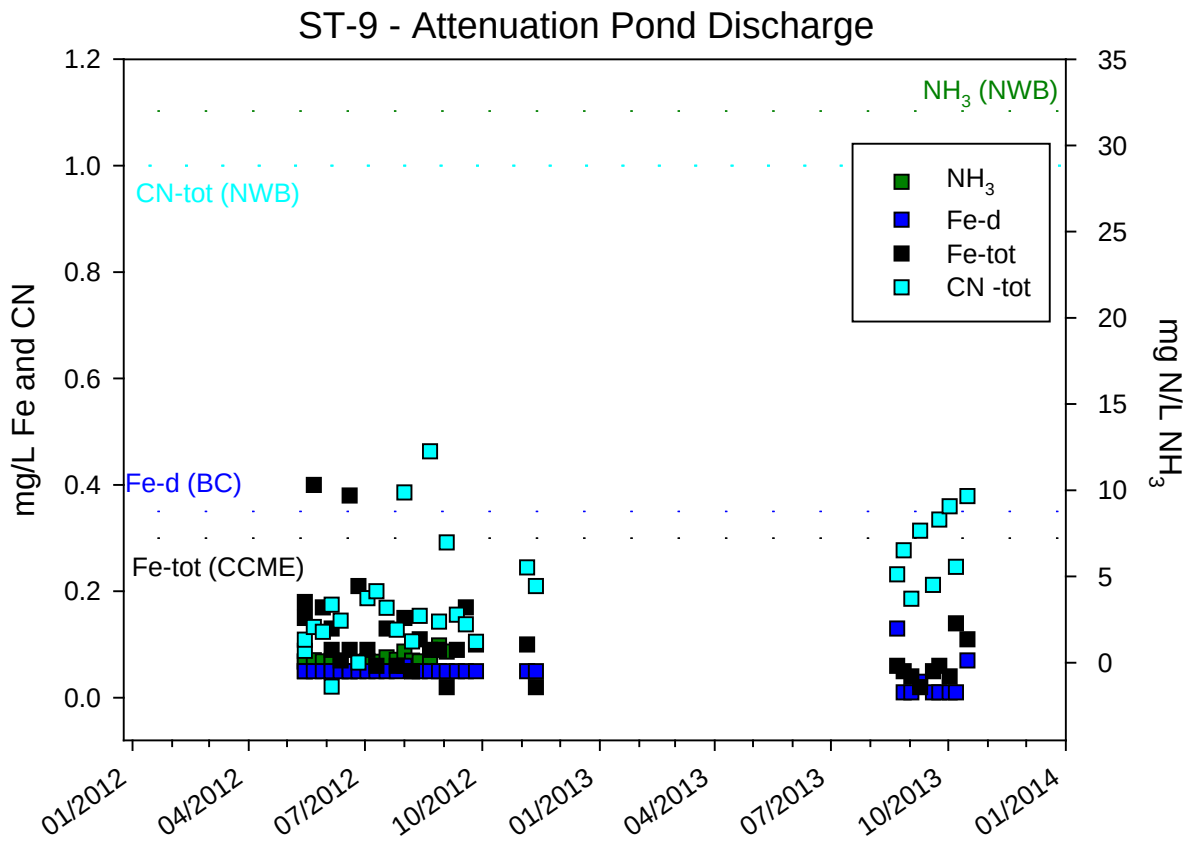


Figure 7-4 - Concentrations of representative parameters measured at ST-9

7.1.1.3 ST-14 (Landfarm Sump), ST-40 (Baker Lake Fuel Storage), MB-Fuel (Meadowbank Fuel Storage)

7.1.1.3.1 Overview

These samples represent water accumulation in containment berms of fuel storage facilities. The Water License includes two sets of criteria for discharge of this water – one for "effluent from fuel containment facilities requiring discharge to land" (Part F, Item 6) and one for "discharge of effluent from the constructed facilities at the Baker Lake Marshalling Facility, including the Marshalling Area Bulk Fuel Storage Facility"(Part F, Item 23). Part F, Item 6 are followed for the MB-Fuel and Part F, Item 23 are followed for station ST-40.

Although the NWB license does not explicitly state limits for the landfarm discharge (ST-14), this was conservatively considered as "Effluent from fuel containment facilities that require

discharge to land" when the sampling program was developed in the 2013 Landfarm Management Plan (although effluent is to be directed to the TSF)[f].

The Mine Site Bulk Fuel Storage Facility (MB-Fuel) was to be discharged to the Stormwater Management Pond and no sampling parameters or limits were defined (now discharged to land following Part F, Item 6 criteria[g]).

AEM is proposing improved clarity on sampling at ST-14, ST-40 and MB-Fuel license criteria in the Type A renewal. The Water License criteria for these stations' parameters should include BTEX, Pb, oil and grease limits as per Part F Item 23. The frequency (once prior to discharge) remains suitable.

Table 7-5 - Summary of bulk fuel storage facility and landfarm sump sampling stations

Station	Discharged To	Sampled Parameters	Sampling Frequency	License Criteria[h]
ST-14	TSF	BTEX, Pb, oil/grease	Once prior to discharge, weekly during	Did not exist in the actual license. Should be NWB- BTE, Pb, oil/grease (as in 2013 Landfarm Plan)
ST-40	Land	Group 6 and 7	Once prior to transfer or discharge	NWB- BTE, Pb, oil/grease + MMER if effluent (should not include MMER as discharge is to land)
MB-Fuel	Land	BTEX, Pb, oil/grease	Once prior to discharge, weekly during	None referenced – should be as for ST-40

7.1.1.3.2 Exceedances of Water License Criteria

ST-14 has been sampled one time, and all BTEX, Pb and oil/grease values were below detection limits.

ST-40 has been sampled at least 2x per year since 2011 and MB-Fuel was sampled 1-2 times per year from 2010 to 2013. All BTEX and oil/grease samples have been below detection but the limit for Pb (0.001 mg/L) is regularly exceeded at these stations. This limit from Part F, item 6 represents the lowest published CCME value for the Protection of Aquatic Life, which is not consistent with the end use (discharge to land). For comparison, Part F, Item 23 provides a limit for total Pb in discharge of effluent from the Baker Lake Marshalling Area Bulk Fuel Storage Facility of 0.1 mg/L, and the MMER limit for Pb in discharge of effluent to surface water is 0.4

[f] Proposed update to the Type A Water License
[g] Proposed update to the Type A Water License
[h] Proposed update to the Type A Water License

mg/L (these values have not been exceeded). For consistency and clarity, AEM proposes to keep limits for Pb consistent at all similar stations (ST-38 to 40) and therefore proposes to adopt Part F Item 23 for station MB-Fuel (proposed to be renamed ST-37). Furthermore, AEM would like to add a sampling station at the Jet A Fuel Pad (proposed to be called ST-38) with the same frequency of sampling and criteria as ST-14, ST-38 and ST-40[i] Table 1 – Monitoring Group found in the Water License Renewal (Section 9) is proposed to be changed to the list of effluent water quality monitoring parameters to reflect the Type A license limits.

Table 7-6 - Exceedances of water license criteria in bulk fuel storage facility and landfarm sump samples

Station	Year	Total # Samples	# Samples Exceeding Licenced Limit	Parameter Exceeding Licensed Limit	Measured Value(s)
ST-14	2013	1	0	N/A	N/A
ST-40	2011	4	1	Pb – 0.001 mg/L	0.022 mg/L
	2012	2	2	Pb – 0.001 mg/L	0.0016 mg/L 0.0026 mg/L
	2013	7	3	Pb – 0.001 mg/L	0.0058 mg/L 0.0203 mg/L 0.022 mg/L
MB-Fuel	2010	2	1	Pb – 0.001 mg/L	0.0012 mg/L
	2011	1	1	Pb – 0.001 mg/L	0.1051 mg/L
	2012	1	1	Pb – 0.001 mg/L	0.0026 mg/L
	2013	2	0	N/A	N/A

7.1.1.3.3 Receiving Environment Trends

As per the Water License, if Pb exceeded the license limits, it was not discharged into the environment, rather it was pumped and shipped to Meadowbank and disposed of in the tailings storage facility. Mitigative efforts have adequately controlled impacts of the tank farm discharge at Meadowbank and Baker Lake. As a result there have been no changes in CREMP data from Baker Lake and Third Portage Lake North related to tank farm water discharge.

7.1.1.3.4 Trends in Representative Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

Of these parameters, ST-40 is analyzed for CN, TSS, NH_3, Fe and Pb (based on current Water License requirements) but key parameters for this station are better represented by BTEX, Pb and oil/grease (results described above), because it is a fuel storage facility.

[i] Proposed update to the Type A water License – Stations were part of the conceptual laydown area in BL and do not exist.

ST-14 and MB-Fuel are only analyzed for BTEX, Pb and oil/grease as described above as per license criteria.

7.1.1.4 ST-16 (Portage Storage Facility Sumps)

7.1.1.4.1 Overview

ST-16 is currently directed to the Tailing Storage Facilities. Overall, it appears that the ST-16 parameters, limits and frequency are still adequately protective of the receiving environment and do not require updating.

Table 7-7 - Summary of waste rock storage sump sampling stations

Station	Discharged To	Sampled Parameters	Sampling Frequency	License Criteria
ST-16 (Portage Waste Rock Storage Facility Sump)	TSF	Early operation – Group 3, total metals Late operation – Group 2 Closure - Group 3, total metals	Group 3 – bi-annually Total Metals – annually Group 2 - monthly	None (to TSF)

7.1.1.4.2 Exceedances of Water License Criteria

This water is not directly discharged to the receiving environment. As a result, there are no criteria in the Type A license. Trends in parameters that are generally representative of mine activity are assessed below to provide an indication of water quality.

7.1.1.4.3 Trends in Representative Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

Of these representative parameters, only TSS, conductivity and Pb are not analyzed at ST-16. A general increase in all parameters year-over-year has been observed. Water from this sump is currently discharged to the TSF.

During an AANDC Water License inspection on July 29 – 30, 2013 it was observed that "red" colored seepage from the south-east side of the Waste Rock Storage Facility at sample location ST-16 was migrating through the road perimeter into Lake NP-2. Following this observation, AEM increased pumping of the seep water to prevent migration through the road. By August 4, AEM had lowered the level in the seepage area to the point where it was felt that the seepage through the road had stopped. From August 26 to September 1, a Waste Rock Plug/Dike was constructed, and continual sump pumping occurred. AEM also increased monitoring and a request to advise on seepage causes and recommendations for solutions was submitted to a third party consulting firm.

On November 8, AEM received an AANDC Inspector's Direction (Order) regarding the RSF Seepage into NP-2 and on November 20, AEM sent a response to this Inspector's Direction (Appendix E). In this Inspector's Direction, AANDC requested that AEM conduct an investigation and develop a plan in consultation with an independent engineering firm. The independent engineering firm report from Golder and Associates, which includes recommendations, was submitted to AANDC in response to the Inspector's Direction.

On November 15, AEM received an email advising that AANDC Field Operations Division has initiated an investigation in regard to the incident that was discovered during the AANDC July 29 – 30 Inspection. The investigation has been initiated for the purpose of gathering additional information in regard to alleged violations under subsection 12 (1) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act. AEM also received, on November 15, an email advising that Environment Canada Environmental Enforcement Division has initiated an investigation. The investigation has been initiated for the purposes of gathering additional information in regard to alleged violations under subsection 36(3) of the Fisheries Act. The investigation is still ongoing.

On January 29, 2014 a meeting was held with KIA and their consultant in Rankin Inlet to discuss the RSF seepage. AEM plans to continue our monitoring program at NP-2 Lake and will add stations requested by the KIA (which included monitoring at NP-1, Dogleg and Second Portage Lake, for the parameters specified by the KIA). Monitoring will start at these locations during freshet and will continue during the open water season (July, August and September). Thorough water quality monitoring of the seepage at the Portage waste rock storage facility will continue in 2014 at ST-16, NP-2 Lake, NP-1, and Dogleg pond as part of the receiving water quality monitoring[j].

Furthermore, AEM has implemented a freshet action plan that will include the RSF seepage at ST-16, as a proactive measure to ensure non-contact and contact water is effectively monitored, diverted, controlled and managed. In addition, several guiding principles are applicable to the formation of this plan. The highest priority principles are 1) to ensure that mine contact water from runoff or seepage is managed to prevent any environmental impacts, 2) to ensure that the health and safety of AEM employees is protected, especially with respect to mining operations when excess water is present (i.e. pit wall seepage, ice melt in pit walls, etc.) and 3) to make sure the site is in compliance with the Type A Water License.

[j] Proposed update to the Type A Water License – new AEMP stations

Golder recommendation that can be found in the report "Rock Storage Facility Seepage – Meadowbank Gold Mine, Nunavut" are included in AEM's Freshet Action Plan which will be updated as part of the Water Management Plan.

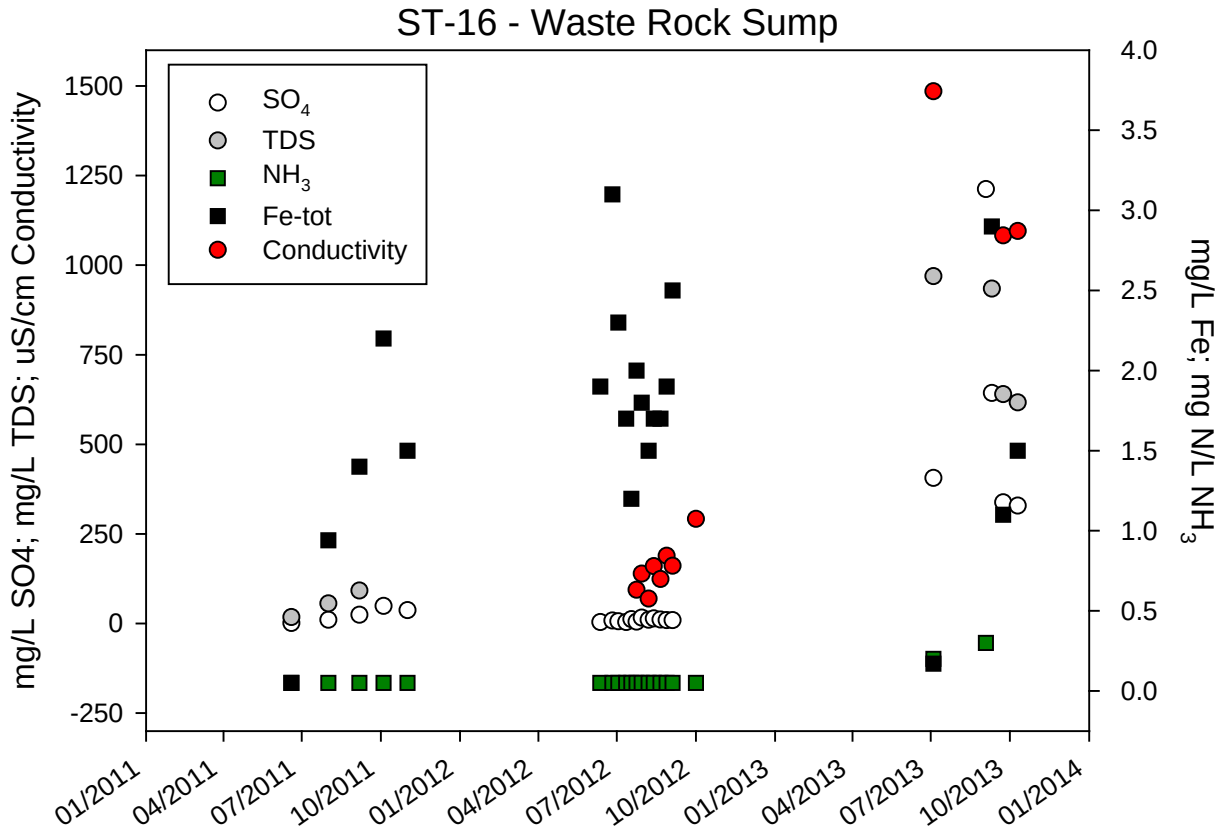


Figure 7-5 - Concentrations of representative parameters at ST-16

7.1.1.5 ST-17, ST-19 (Portage North and South Sump/Pit Lake), ST-20 (Goose Island Sump/Pit Lake), ST-23 (Vault Pit Sump) and ST-26 (Vault Pit Lake)

7.1.1.5.1 Overview

ST-17 (North Portage Pit Sump) was only sampled in 2010 and 2011, no water was found after 2011. The fact that this section of the pit is in the permafrost explain why no water is found in this section of the pit. ST-19 is now South Portage Pit Sump, rather than Third Portage Pit Sump as in the NWB license[k]. Along with ST-20, this water is pumped to the Portage Attenuation

[k] Proposed update to Type A Water License – reflects operational changes

Pond. ST-23 will be directed to the Vault Attenuation Pond beginning in 2014. A new designation is given to the Vault Pit Lake (ST-26) during flooding[l].

In 2014, AEM updated the water quality predictions for pit re-flooding. SNC (2014) identified Cyanide (total), Chloride, Copper, Iron, Nitrate and Ammonia as potential long term contaminant risks. As monitoring shifts from operation to pit re-flooding, parameters in the license for sumps should be evaluated as part of Group 1 and Group 4 in late operation and closure. AEM suggests updating the parameter list to include total cyanide in Group 1 and total & free cyanide in Group 4[m]. This will mirror AEMP water quality monitoring stations in pits and assist in ensuring water quality in the pits post-closure. For consistency and clarity, Group 2 and Group 3 should be eliminated. Group 4 would apply to the groundwater monitoring, AEMP, CREMP, Portage pits and lake basin which will be flooded during late operation, and fully flooded at closure. The Vault pit lake is flooded during closure.

Overall, AEM proposes a number of updates to monitoring parameters and frequency to improve consistency and clarity for stations ST-17, 19, 20, 23 and removing station ST-26 in the Type A License renewal. These are further described in Section 9.

[l] Proposed to keep Station ST-23 into closure. Remove ST-26.
[m] Proposed update to Type A Water License

Table 7-8 - Summary of pit sump and end pit lake sampling stations

Station	Discharged To	Sampled Parameters	Sampling Frequency	License Criteria
ST-17 (North Portage Sump; Portage Pit Lake)	Sump: Attenuation Pond Pit lake: N/A	Early operation: Group 2, Group 3 Late operation: Group 4 Closure: Group 3	Group 2 - monthly Group 3 – bi-annually Group 4 - monthly	Sump: None (to Attenuation Pond) Pit lake: Compare to CCME/background prior to dike breach
ST-19 (now South Portage Sump)	Attenuation Pond	Early operation: Group 2, Group 3 Late operation: Group 4	Group 2 - monthly Group 3 – bi-annually Group 4 - monthly	None (to Attenuation Pond)
ST-20 (Goose Island Pit Sump; Goose Island Pit Lake)	Sump: Attenuation Pond Pit lake: N/A	Early operation: Group 2, Group 3 Late operation: Group 4 Closure: Group 3	Group 2 - monthly Group 3 – bi-annually Group 4 - monthly	Sump: None (to Attenuation Pond) Pit lake: Compare to CCME/background prior to dike breach
ST-23 (Vault Pit Sump)	Vault Attenuation Pond	Late operation: Group 2, Group 3	Group 2 - monthly Group 3 – bi-annually	None (to Attenuation Pond)
ST-26 (Vault Pit Lake)	N/A	Closure: Group 3 and 4	Group 3 – quarterly (fully flooded) Group 4 – monthly (during flooding)	Pit lake: Compare to CCME/background prior to dike breach

7.1.1.5.2 Exceedances of Water License Criteria

No criteria are indicated in the license, so trends in parameters that are generally representative of mine activity were assessed (below) to provide an indication of water quality.

7.1.1.5.3 Trends in Representative Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

Of these parameters, SO_4, TDS, NH_3 and dissolved Fe are analyzed at ST-17, ST-19 and ST-20. ST-17 was only sampled in 2010 and 2011, ST-19 has been sampled since 2011, and ST-20 was first sampled in June, 2012. Water is pumped to the Attenuation Pond from the pits and is not directly discharged to the receiving environment. Nevertheless, it has previously been determined that both copper and ammonia may require treatment during pit reflooding and the assimilation of TSF water and pit water. As part of the closure planning and as a condition of the Type A water license, AEM will continue to monitor these results and model the levels of contaminants of potential concern as per condition Part E Item 6 and Item 7[n].

[n] Proposed update to Type A Water License.

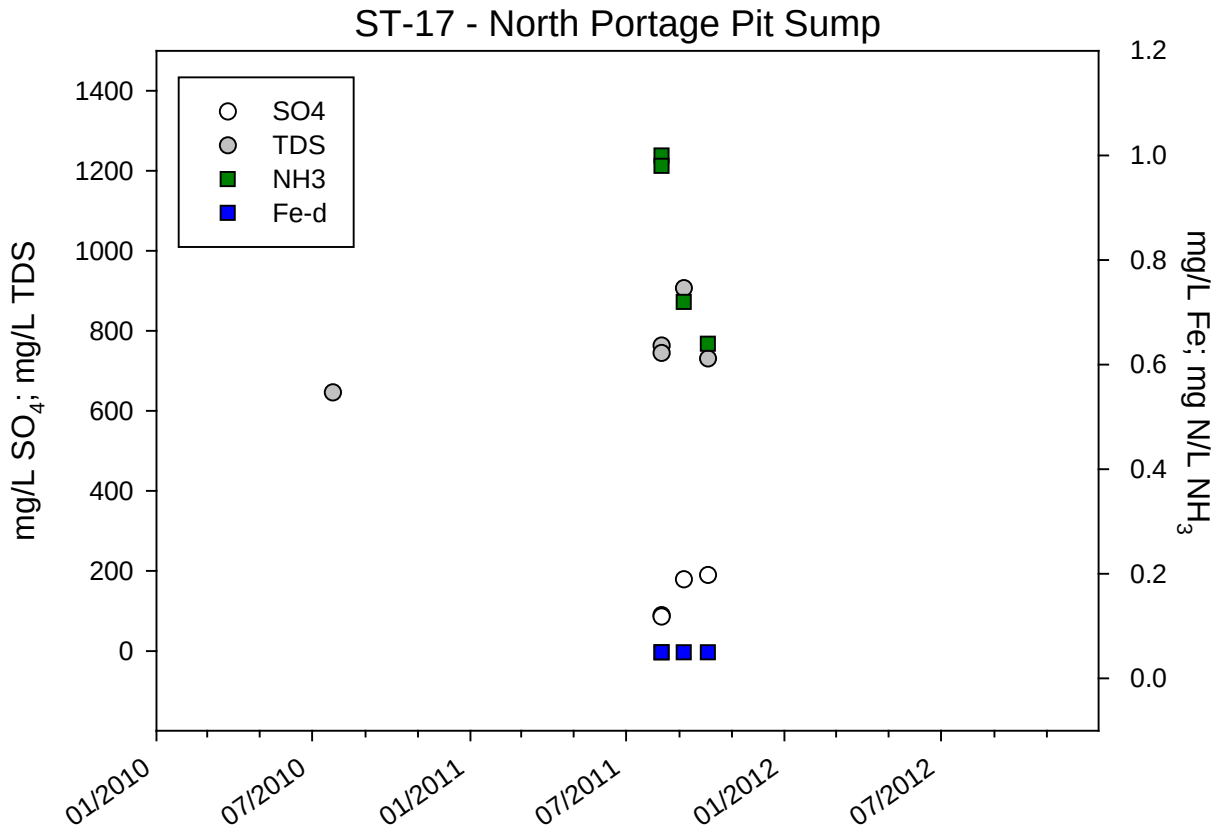


Figure 7-6 - Concentrations of representative parameters at ST-17

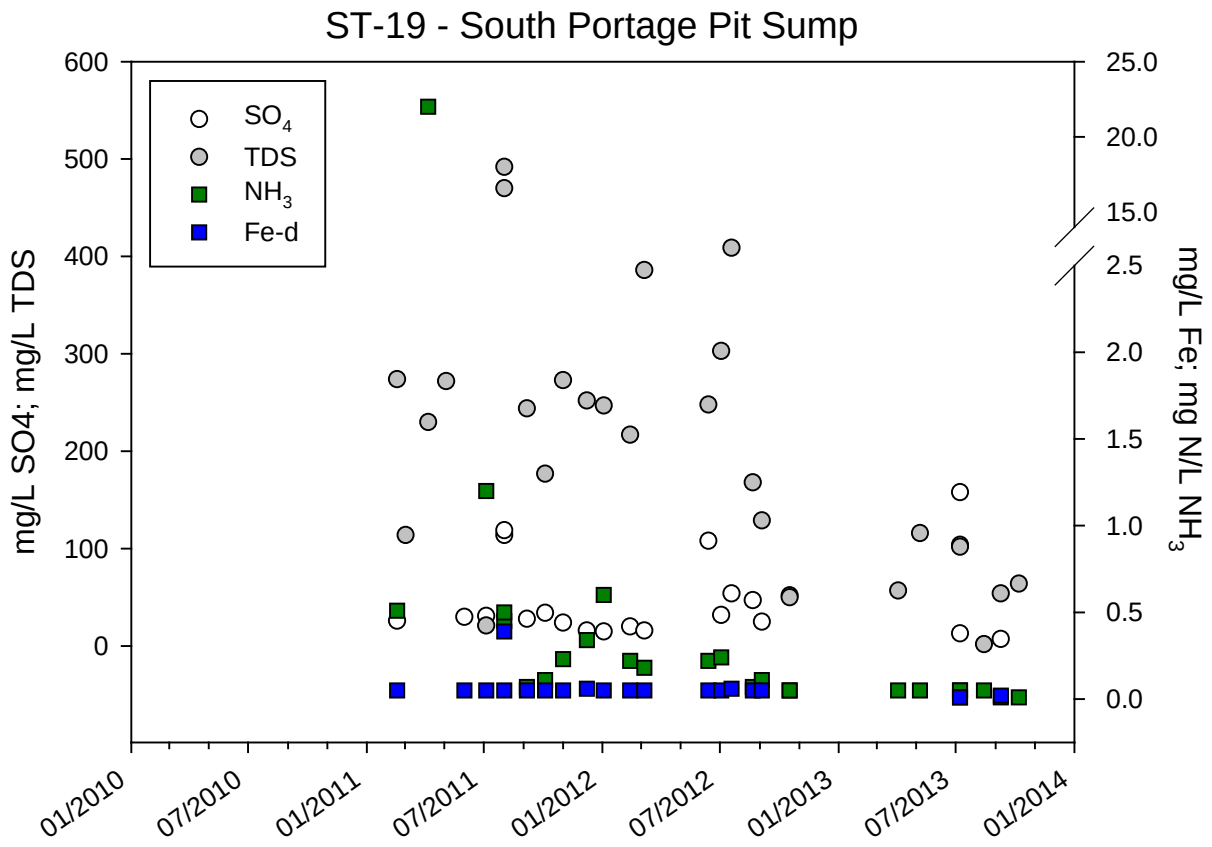


Figure 7-7 - Concentrations of representative parameters at ST-19

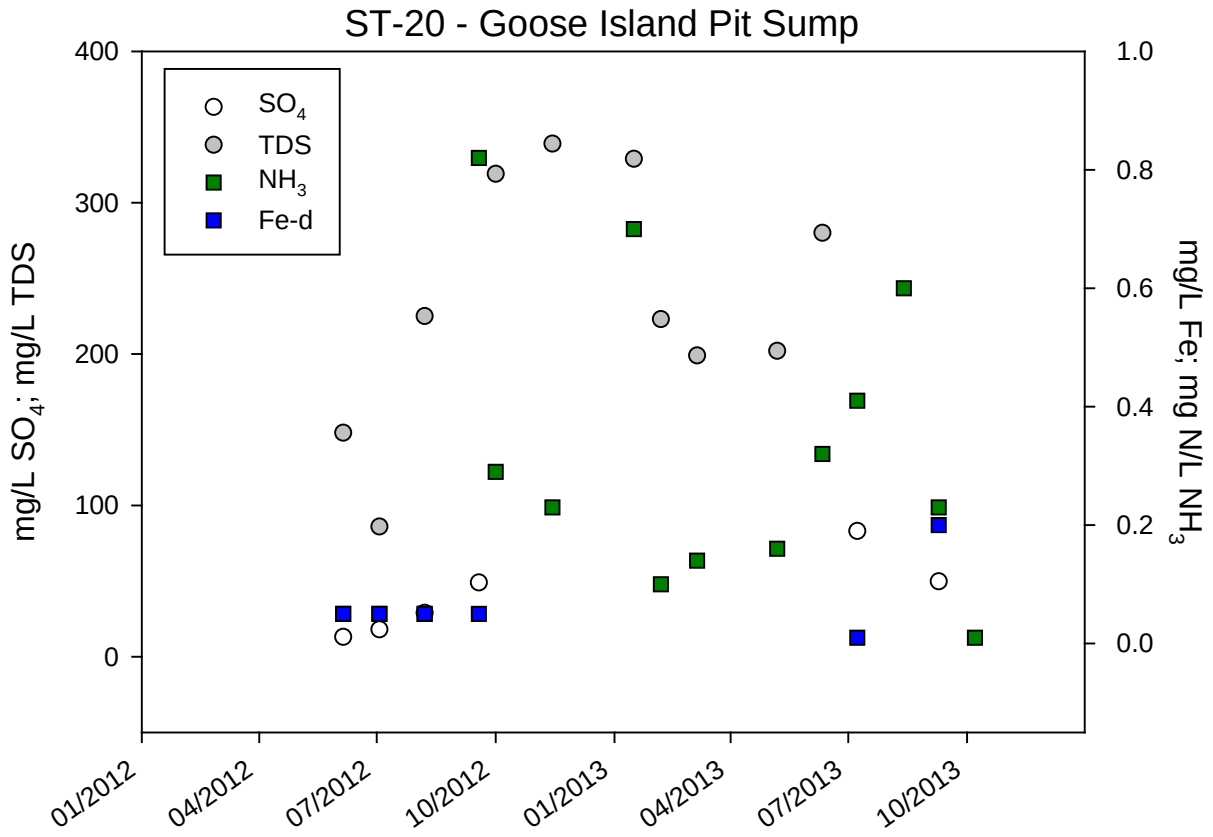


Figure 7-8 - Concentrations of representative parameters at ST-20

7.1.1.6 ST-18 and ST-25 (Portage and Vault Attenuation Ponds)

7.1.1.6.1 Overview

ST-18 represents regular samples from the Portage Attenuation Pond during early operation. ST-25 will similarly represent the Vault Attenuation Pond. For consistency and clarity, AEM proposes to eliminate stations ST-18 and ST-25. They are redundant as ST-9 has replaced ST-18 and ST-25 is equivalent to ST-10 [o]

[o] Proposed update to the Type A water License.

Table 7-9 - Summary of Attenuation Pond sampling stations

Station	Discharged To	Sampled Parameters	Sampling Frequency	License Criteria
ST-18 (Portage Attenuation Pond)	Third Portage Lake after treatment	Group 2 Group 3	Group 2 - monthly Group 3 – bi-annually	None – sampled as ST-9 prior to discharge
ST-25 (Vault Attenuation Pond)	Wally Lake	Group 2 Group 3 Total Metals	Group 2 - monthly Group 3 – bi-annually Total Metals - annually	None – to be sampled as ST-10 prior to discharge

7.1.1.6.2 Exceedances of Water License Criteria

No criteria are indicated in the Water License for these stations, so trends in parameters that are generally representative of mine activity are assessed below to provide an indication of water quality.

7.1.1.6.3 Trends in Representative Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

Of these parameters, SO_4, TDS, conductivity, NH_3 and Fe are analyzed at ST-18. No clear inter-annual trends are apparent.

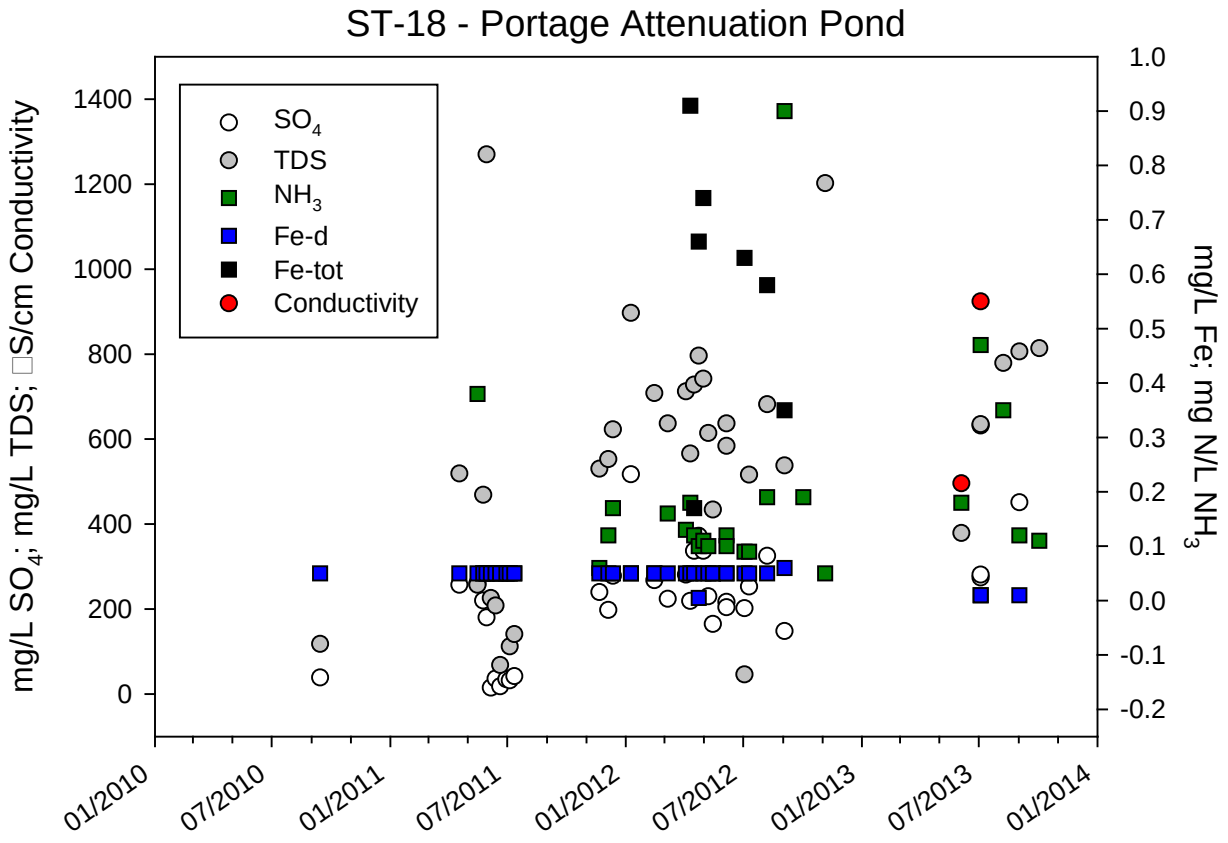


Figure 7-9 - Concentrations of representative parameters at ST-18

7.1.1.7 ST-21 (Tailings Reclaim Pond)

7.1.1.7.1 Overview

ST-21 is the reclaim pond - north of the central dike during early operation and south of the central dike during late operation.

Table 7-10 - Tailings reclaim pond sampling station

Station	Discharged To	Sampled Parameters	Sampling Frequency	License Criteria
ST-21	N/A	Group 3 + CN Total Metals	Group 3 + CN – monthly during early operation; bi-annually during late operation Total Metals - annually	None (no discharge to environment)

7.1.1.7.2 Exceedances of Water License Criteria

No criteria are indicated in the Water License as this water is not discharged to the environment. Trends in parameters that are generally representative of mine activity are assessed below to provide an indication of water quality.

7.1.1.7.3 Trends in Representative Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

Of these parameters, only TSS and conductivity are not assessed at ST-21. AEM proposes to analyze for Group 1 parameters for consistency with ST-17, 19, 20 and 23[p]. No obvious trends in these parameters are occurring year-over-year.

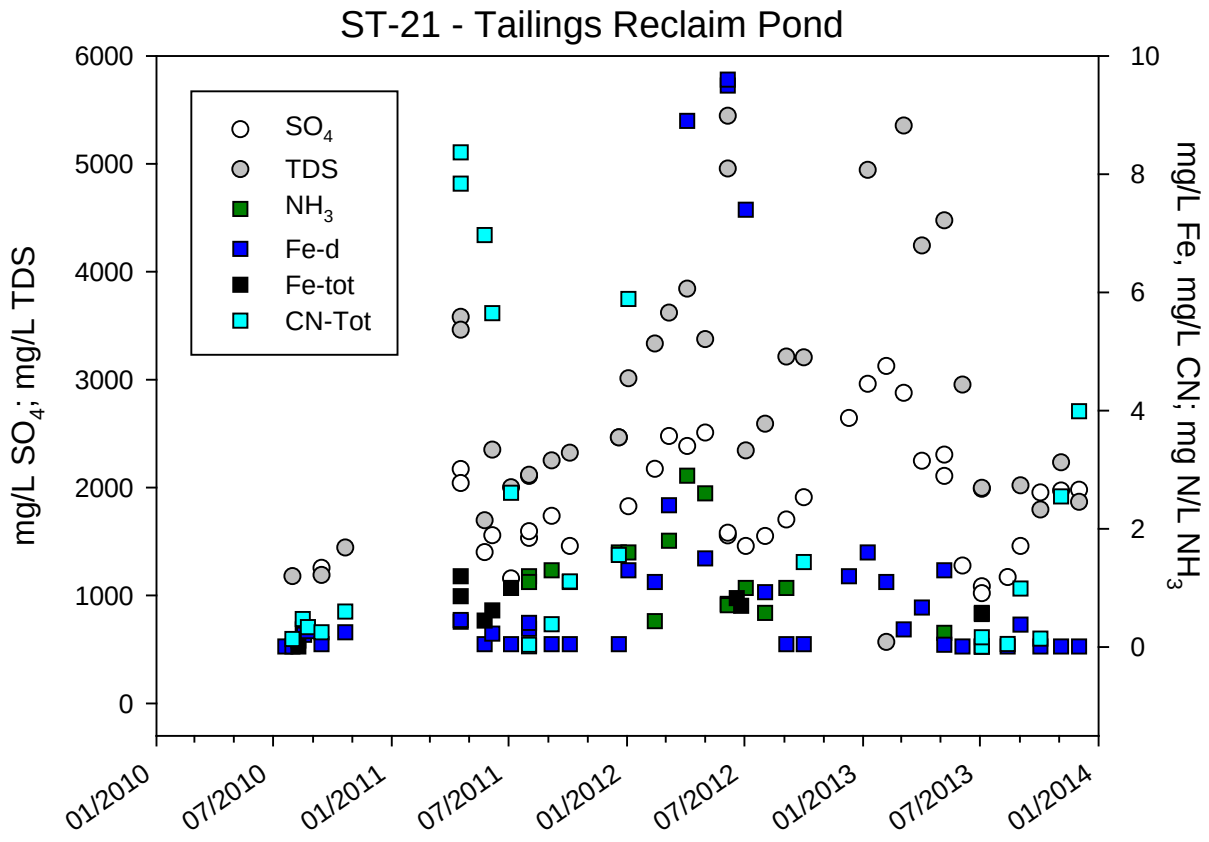


Figure 7-10 - Concentrations of representative parameters at ST-21 (tailings reclaim pond)

[p] Proposed update to Type A Water License

7.1.1.8 ST-8 (previously ST-S-1), ST-S-2, ST-S-3, ST-S-4 (East Dike, Saddle Dam, South-Camp Dike and Bay-Goose Dike Seeps)

7.1.1.8.1 Overview

Meadowbank's Water License has been modified to allow discharge of East Dike seepage (previously ST-S-1) directly to Second Portage Lake. As per the modification, ST-S-1 has been renamed as ST-8, and changes were made to the scope of the criteria for this station to include MMER limits. However, discharge at ST-8 only began in January, 2014 and results of water quality analyses are not included in this review.

If observed, Saddle Dam seeps (ST-S-2) are pumped directly to the TSF. No seeps have been observed at the South-Camp Dike (ST-S-3), and a Bay-Goose Dike seep (ST-S-4) was only observed in 2011.

Table 7-11 - Summary of dike seep sampling stations

Station	Discharged To	Sampled Parameters	Sampling Frequency	License Criteria
ST-8 (previously ST-S-1)	Second Portage Lake (previously TSF)	Full suite	Once prior to discharge. Weekly during discharge.	NWB (multiple) + MMER
ST-S-2	TSF	Group 1	Monthly or as found	None
ST-S-3	TSF	Group 1	Monthly or as found	None
ST-S-4	TSF	Group 1	Monthly or as found	None

7.1.1.8.2 Exceedances of Water License Criteria

For seeps other than ST-8, no criteria are indicated as this water is not discharged into the environment, so trends in parameters that are generally representative of mine activity were assessed (below) to provide an indication of water quality.

7.1.1.8.3 Trends in Representative Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

Of these parameters, sulphate, ammonia, total iron and conductivity are measured in dike seep samples. The only clear trend is an increase in SO_4 concentrations at ST-S-2 over each season (2012 and 2013).

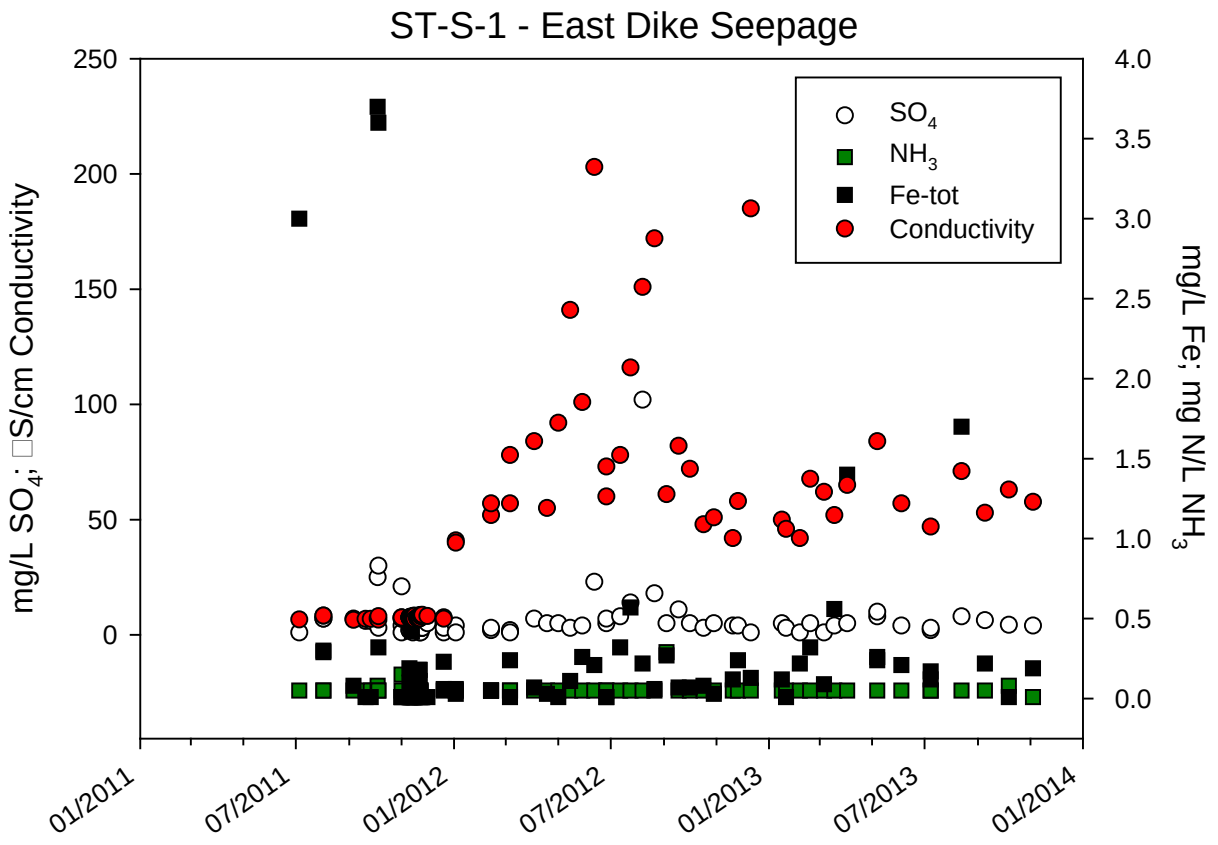


Figure 7-11 - Concentrations of representative parameters at ST-S-1

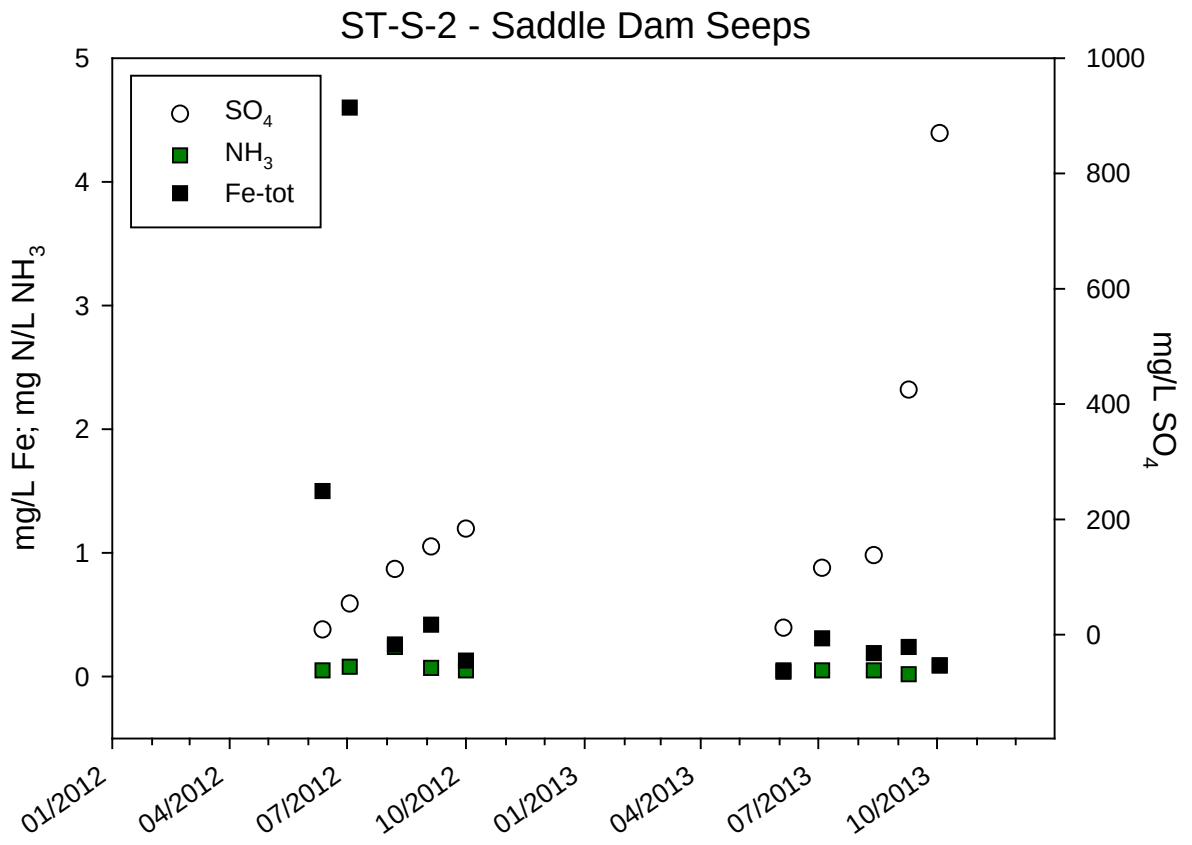


Figure 7-12 - Concentrations of representative parameters at ST-S-2

7.1.1.9 ST-MMER-x (Portage, Vault and East Dike Seepage Effluent Outfall)

AEM continues to monitor these stations under MMER.

7.1.1.10 ST-27 through ST-36 (Various)

These are all pre-development and/or construction related stations and are not applicable. AEM proposes to remove these stations as part of the license renewal[q].

7.1.1.11 ST-37 (Baker Lake)

This is monitored as part of the AEMP (CREMP sample location site BPJ). For consistency and clarity, AEM proposes to include this station as part of the AEMP Water Quality monitoring[r].

[q] Proposed update to the Type A License
[r] Proposed update to the Type A License

7.1.1.12 ST-38 and ST-39 (East/West Contact Water Pond)

These ponds were not built and therefore AEM proposes to remove these stations from the Type A Water License[s].

7.1.1.13 ST-41 and ST-42 (Ammonium nitrate and Explosives Storage Areas)

These storage locations in Baker Lake were previously planned but AEM decided not to store any ammonium nitrate and explosives at Baker Lake. These two sumps were not built. For clarity and consistency, AEM proposes to remove these stations[t].

7.1.2 Summary and Discussion

Between 2010 and 2013, only 13 samples have exceeded NWB Water License limits in Meadowbank's onsite water quality sampling program.

In summary:

- Nine of these were for total Pb (however, because the water quality did not meet limits, this water was not discharged to land from the Meadowbank fuel containment facilities-MB-Fuel, proposed to be renamed ST-38) which has very stringent guidelines (0.001 mg/L which is inconsistent with ST- 40 (0.1 mg/L) and MMER limits 0.4 mg/L) considering the water is not discharged directly to the receiving aquatic environment (rather to land and ultimately in the TSF).
- Three were for total Al in Attenuation Pond discharge to surface water; and
- One was for TSS in a non-contact diversion ditch.

For the magnitude of the Meadowbank Project, AEM believes that this indicates an outstanding record of water management since operations began. In addition, offsite water quality associated with these stations and parameters indicated no significant changes in measured concentrations (above trigger values) in the receiving environment. This comparison indicates that occasional exceedances of water quality limits during dewatering did not lead to impacts in the receiving environment water quality and that the limits in the Type A water license are adequately protective of the aquatic environment, even with occasional exceedances. The next section reviews the receiving environment water quality results in more detail and relates them to the aquatic effects assessment in the nearby lakes.

[s] Proposed update to the Type A License
[t] Proposed update to the Type A License

AEM does suggest a few updates to the site-wide and aquatic monitoring programs to reflect what is occurring on site and to improve transparency and consistency in monitoring parameters. As an example, AEM proposes to revise Schedule I- Conditions Applying to the General and Aquatic Effects Monitoring, Table 1 – Monitoring Groups and Table 2 – Monitoring Program. AEM does not consider these updates significant changes, as their primary objectives are to improve clarity, and reduce redundancies to the current water quality parameters and monitoring schedule. Furthermore, the proposed changes reflect updates to the project (i.e. eliminates stations that do not exist or have not existed) and AEM seeks to provide consistency and clarity for future monitoring as the mine moves towards closure.

7.2 Receiving Water Monitoring (Aquatic Ecosystem Monitoring Program)

Potential effects of mine activity on the surrounding aquatic environment are routinely monitored through the Core Receiving Environment Monitoring Program (CREMP), which occurs annually, and the Environmental Effects Monitoring program (EEM), which occurs every three years as a requirement under MMER. Specific events which require additional monitoring (e.g. release of TSS during dike construction) are examined through targeted studies under the AEMP. The CREMP (a component of the AEMP) receiving environment water quality monitoring under the Type A Water License includes lakes in the Meadowbank study areas (control and impact sites) as well as sites in Baker Lake. Recently, NP2, NP1 and Dogleg lake have been added to the AEMP water quality monitoring during the open water season[u].

The following sections provide an overview of significant mine-related events and measured impacts to nearby water quality. As stated in the previous section, the receiving water quality results in the CREMP and the annual AEMP analysis reflects that offsite water quality at these station have not been significantly impacted (i.e. have not had measured elevated concentrations (above trigger values) in the receiving environment). Despite best management practices in 2008, and improved practices in 2009, TSS releases occurred as a result of in-water dike construction and resulted in occasional exceedances of water quality limits in the receiving environment. However, this did not lead to significant impacts to the receiving environment water quality (measured in multi-year targeted studies), and the current limits in the Type A water license for onsite and receiving environment monitoring are adequately protective of the aquatic environment. The CREMP and AEMP stations will continue to provide as Meadowbank with aquatic receiving water quality monitoring as the mine transitions to late operations and closure.

[u] Proposed update to Type A water license

The following provides a trend analysis of water quality results for the representative mine-related parameters identified in the previous section, with references to figures provided in the 2013 CREMP report (Appendix D of this document). Results of sediment chemistry sampling are briefly identified, and finally, a review of potential impacts to biological components of the receiving aquatic environment as a result of changes to water quality was conducted. The majority of information in this section was taken from the 2012 and 2013 CREMP reports.

7.2.1 Key Activities

Key mine-related activities and resulting impacts to the receiving aquatic environment since the beginning of construction (2008) to the present (2013) are described in the table below.

Table 7-12 Key mine-related activities and measured impacts to the receiving aquatic environment from 2008 – 2013 (from Table 1.4-1 in 2013 CREMP report – see Appendix D).

Year	Mine-related Activities	Impacts to Receiving Environment
2008	Major in-water construction activities occurred, including construction of the East Dike (Second Portage Lake) and the Western Channel Dike (between Second and Third Portage Lakes). Other site-related activities included rock crushing, road building, pit blasting, ground preparation, and infrastructure construction. Barge traffic increases in Baker Lake to support construction.	As described in detail elsewhere (Azimuth, 2009a; 2009b), East Dike construction led to a sedimentation event that extended through Second Portage Lake to Tehek Lake. The potential impact of construction-related sediment releases to the aquatic environment was the focus of the four year (2008 – 2011) EAS study (Azimuth, 2009b, 2010c, 2011a, 2012b). Construction-related sediment inputs were initially found (lasting weeks to months) in the water column (pelagic zone), but settled over time (sedimentation) onto the lake bottom (benthic zone). In both cases, the primary concern was TSS, but nutrients and metals were also present.
2009	Dewatering discharges (i.e., impounded Second Portage Lake water with natural TSS) were directed primarily into the north basin of Third Portage Lake (TPN), but also into Second Portage Lake (March to July and Oct to Dec, 2009). Bay-Goose Dike Phase 1 construction started in late July 2009. Most of the site preparation and road infrastructure was completed in 2009. North Portage Pit was the primary focus of blasting and mine operations. Barge traffic increases in Baker Lake.	Despite a number of precautions and improvements in turbidity curtain installation (ie 2 layers of curtains), extreme storm winds broke the Bay-Goose Dike turbidity barrier containment system, leading to elevated sedimentation entering into TPE in late August. Elevated TSS (and other parameters) was primarily restricted to TPE and to a minor extent into SP and TE. The implications of the release were assessed in the EAS study (see above).
2010	Bay-Goose Dike construction was completed using additional mitigation measures that included in-winter causeway construction, 2 layers of turbidity curtains and a pumping system. Pit development focused on North Portage and South Portage pits. Mine officially opened on 27 Feb 2010, marking the start of the operations period. Waste rock to rock storage facility (RSF). Tailings to impoundment area (TIA). Contact water from operations not	Bay-Goose Dike construction Phase 2 leads to less-pronounced sedimentation event in TPE and extends through SP to TE; EAS studies continue. TPN (dewatering) TSS concentrations generally consistent with baseline conditions.

Year	Mine-related Activities	Impacts to Receiving Environment
	discharged to receiving environment. Dewatering of SP impoundment to TPN continued, with discharge now subject to MMER. Barge traffic increases in Baker Lake.	
2011	Mining operations focus on North Portage and South Portage pits. Waste rock to rock storage facility (RSF). Tailings to impoundment area (TIA). Construction activities limited to mine footprint. Dewatering of SP and TPE to TPN continued, with treatment added to reduce fine sediment and turbidity. Barge traffic stabilizes in Baker Lake.	TPN focus of routine EEM study - no mine-related effects detected (Azimuth, 2012e). TPN TSS concentrations consistent with baseline. The TSS EAS targeting dike construction sedimentation events are completed.
2012	SP and TPE dewatering discharges to TPN finished by spring. Diffuser installed and effluent (mix of residual Bay-Goose water, contact water, East Dike seepage and run-off) discharge to TPN commences; treatment continues. North cell non-contact water diversion completed in August (intercepting run-off prior to contact with tailings and waste rock areas and diverting to TPL, NP2, Dogleg ponds and SPL). Vault access road constructed and site preparation activities for the Vault Pit. Barge traffic remains stable in Baker Lake; 200-L diesel spill occurs, but cleaned up successfully.	TPN TSS concentrations generally consistent with baseline. Minor mine-related trends identified for a number of water chemistry parameters at near-field areas: conductivity, sulphate and total dissolved solids. Spill-related monitoring shows no traces of hydrocarbons in Baker Lake.
2013	Effluent discharge to TPN continued. Vault lake was dewatered into WAL and did not require TSS treatment. Minor construction modifications to north cell diversion ditch completed. Completion of the Airstrip extension (18m) into Third Portage Lake in March. Seepage from Rock Storage Facility (ST-16) through the road into NP2 identified (additional monitoring in NP2 to evaluate near-shore water quality) (Golder, 2014).	Mine-related trends continued for some water quality parameters at one or more near-field (NF) areas (total and bicarbonate alkalinity (SP), conductivity (SP, TPE & TPN), calcium (TPE) and TDS (SP & TPE)). The observed concentrations are still relatively low and unlikely to adversely affect aquatic life. The increasing trend in chromium concentrations in sediment in TPE continued in 2013 and exceeded the trigger value. No mine-related trends were apparent in analyses of biologic components (phytoplankton and benthic invertebrates).

As described in the CREMP reports, changes in water quality observed in the Meadowbank area study lakes to date are largely attributable to dike construction, with no significant effects related to dewatering and/or effluent discharge. While other activities may have introduced contaminants into the receiving environment (e.g., dust from roads or blasting fallout), any related changes were either confounded by the two major activities or negligible, relative to natural variability. As a result, trends in water quality have historically been assessed in the

context of these mine activities. The 2012 CREMP report provides the most up to date trend analysis of this type, and those results are summarized here.

7.2.1.1.1 Dike Construction

In addition to TSS, parameters associated with the East Dike construction (2008) water quality included nitrate, total phosphorus[v], total aluminum*, total chromium*, total copper*, total iron*, total manganese, total nickel, total titanium, and total uranium. Similarly, during Bay-Goose Dike construction (2009) water quality parameters that generally followed the pattern of increased TSS included total aluminum*, total chromium*, total copper*, total iron*, total manganese, total nickel, total titanium, and total uranium. Nitrate is interesting in that it showed a strong association to dike construction (and dewatering), and continues to remain elevated from background concentrations likely due to discharge. It is important to note, however, that these concentrations are well below (by more than 50 times) the current CCME guideline of 2.9 mg/L (for nitrate-N).

The Vault dewatering dike was constructed during the winter with no notable effects on water quality parameters in Wally Lake.

7.2.1.1.2 Dewatering

As previously described, there were only 3 exceedances of license limits Part D Item 16 during dewatering for TSF, Goose pit, Portage Pit and Vault Pit construction. Dewatering discharges (i.e., impounded lake water with natural TSS) were directed primarily into the north basin of Third Portage Lake (TPN; discharging much of the time since March 2009), but also briefly into Second Portage Lake (April 14th to July 9th, 2009) and into Wally Lake (in August, 2013). TSS concentrations in excess of 3 mg/L have never been recorded at TPN and have only rarely been measured above detection limits since dewatering commenced in 2009 due to active TSS treatment. Nitrate also showed some changes associated with dewatering, but concentrations were still 50 times lower than the CCME guideline of 2.9 mg/L. Hardness and conductivity also demonstrate increases relative to baseline concentrations and may have been due to late winter results during dewatering (May 2011 monitoring). Total phosphorus spiked on two occasions (November 2009 and February 2010), but the concentrations were not dissimilar to those seen at the reference area INUG; the upward trend at TPN in 2011 was also similar to that seen in INUG, suggesting a regional trend. No other parameters appeared to show substantial changes in relation to dewatering activities.

[v] The parameters marked with "*" above exceeded CCME guidelines during the event; however, dissolved metals were low, so total concentrations were generally associated with particulates and considered unlikely to be bioavailable (see EAS reports for more details).

Dewatering of Vault Lake into Wally Lake began in August, 2013. TSS treatment of the dewatering discharge was not required, and TSS concentrations in Wally Lake did not exceed MDLs in 2013. As expected, there were no changes at station WAL attributable to the dewatering of Vault Lake.

7.2.1.1.3 Effluent Discharge

Starting in July 2012, effluent from the Attenuation Pond was discharged into the north basin of Third Portage Lake (TPN). Full details regarding the chemistry of effluent (according to MMER protocols), concentrations, volume and loading is presented within the MMER report for 2012 (AEM, 2013). Since that time, while TSS concentrations in TPN have been below the laboratory MDL (1 mg/L), other parameters (e.g., conductivity, sulphate, TDS, TOC, and total and dissolved strontium) have been documented to be slightly elevated relative to baseline concentrations in the CREMP. However, values are still relatively low and have not adversely affected aquatic life.

7.2.1.1.4 General Site Activities

Since 2011, the only major activity occurring at TPN was effluent discharge, providing a good opportunity to look for trends at SP and TPE related to general site-related activities (i.e., in the absence of the direct influence of dike construction, dewatering or mine process effluent discharge). Based on the prevailing winds, both these areas are downwind of the major on-going site-related activities (e.g., crushing, blasting, general dust, road dust). TSS concentrations have been generally below laboratory MDLs at SP and TPE since 2011 (although the MDLs varied between 1 and 2 mg/L), suggesting no major changes attributable to other site-related activities. Subtle changes potentially related to general mining activities were apparent for nitrate (although well below its trigger value), conductivity, and sulphate.

7.2.1.1.5 Increased Barge Activity (Baker Lake)

The major activity with potential to influence water quality in Baker Lake is increased barge activity. Baker Lake was added to the core program in 2008 to ensure that monitoring was also in place to track activities in that area related primarily to barge traffic and shipping.

Apart from local infrastructure (e.g., fuel storage and lay-down area), mine-related activities in Baker Lake are primarily limited to barge traffic, which has increased substantially over the years, but is now stable, and is limited to the open water season. One 200-L spill occurred in 2012 during fuel transfer, but no organic parameters were detected in Baker Lake sediment samples collected two weeks following the spill. Thus, potential impacts to receiving environment would likely be restricted to localized physical disturbance of the bottom as a result of prop wash.

Overall, no apparent mine-related changes to the receiving environment in Baker Lake have been identified. Despite the increase in barge traffic seen over the past four years there have been no obvious changes to water quality that could be attributed to that activity. No changes to current monitoring are proposed.

7.2.2 Meadowbank Study Lakes

7.2.2.1 Trends in Representative Water Quality Parameters (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN)

Trends since 2006 (pre-construction) in parameters that are representative of mine activity (SO_4, TDS, TSS, conductivity, NH_3, Fe, CN) are presented in figures in the 2013 CREMP (Appendix D of this document) and summarized here along with figure references.

Sulphate – In 2012, TPN, TPE, TPS, and TE showed significant increases in sulphate relative to baseline/reference conditions (up to 2.5 times higher). While these changes appear to be mine-related, the absolute concentrations were generally only 3 to 4 mg/L, which is well below BC's aquatic life water quality guideline of 100 mg/L (no CCME guideline is available). Also of note, sulphate concentrations in Baker Lake often naturally exceed 10 mg/L. Thus, these changes were determined not to pose an environmental concern at this time. In addition, a statistically significant trend was not noted in 2013 (although concentrations appear to have remained similar to 2012).

TSS – Elevated concentrations of TSS were associated with dike construction, but measurements have been below trigger values at all Meadowbank study area sites since at least 2010.

Conductivity – In 2012 and 2013, TPN, TPE and/or SP showed a statistically significant increase relative to baseline/reference conditions. Given that conductivity is a composite variable that responds positively to increasing concentrations of ionic compounds (e.g., chlorides, sulphates, carbonates, sodium, magnesium, calcium, potassium and metallic ions), this is an indicator of other changes, such as the modest increase in calcium observed in 2013, which may help increase buffering capacity.

TDS – In 2012, SP showed a statistically significant increase relative to baseline/reference conditions, and this trend occurred again in 2013 at both SP and TPE. Similar to conductivity, TDS is a composite variable based on the combined amount of all inorganic and organic substances contained in a sample. A TDS benchmark of 500 mg/L (WLWB 2013) has recently

been adopted at Diavik. Thus, these changes (TDS concentrations on the order of 15 to 25 mg/L at TPE and SP) were not considered to be a concern at this time.

Fe-total – While slightly increased total iron concentrations apparently occurred in relation to dike construction, no measured concentrations have exceeded trigger values since 2010.

Fe-dissolved – Dissolved iron has only been detected once in SP and once in TE. Both detections were in 2013, and both were well below trigger values.

Ammonia – Concentrations of ammonia appear to have been consistently at or near detection limits, and values measured above MDLs have only approached trigger values at impacted sites in one or two samples each (mostly in 2009).

Cyanide – Not included in the CREMP monitoring suite; total cyanide and free cyanide are proposed as a new parameter to be analyzed in the CREMP as part of the license renewal[w].

7.2.2.2 Biological Monitoring

A review of trends in phytoplankton and benthic invertebrate populations (biomass, abundance, richness) in the study lakes was presented in the 2012 CREMP and summarized here along with results from the 2011 (cycle 1) EEM study (effluent-related effects).

7.2.2.2.1 Phytoplankton

Phytoplankton community metrics were adversely affected for short periods of time in relation to the 2008 East Dike and (to a lesser extent) 2009 Bay-Goose Dike construction events (i.e., likely due to increased TSS concentrations and diminished light penetration during the open water period in SP/TE and TPE/SP, respectively). This caused small and ephemeral diminishment of phytoplankton biomass, abundance and richness in SP in 2008, and reduced biomass and cell density in TPE in 2009. Since major dike construction ended in 2010, there have been no changes in phytoplankton community metrics. The only statistically significant change observed in 2012 was an increase in mean total biomass at the near-field stations TPN and TPE and species richness at TPN. Increased biomass compared to reference conditions also occurred at near-field and mid-field stations in 2013, and species richness was again relatively high at TPN, but these observations were attributed to a decrease at the reference station INUG and are likely not mine-related.

[w] Proposed update to Type A Water License as part of the AEMP monitoring

7.2.2.2.2 Benthic Invertebrates

SP and TE - Overall, while an initial 2008 reduction in benthic community abundance may have been related to the physical effects of the sedimentation event that occurred during East Dike construction, the pattern of results since then (i.e., variability that does not correspond to any known factors) does not appear to be consistent with a recovery or a prolonged impairment of the community. It is possible that the "signal" of the impact is obscured by the "noise" of natural variability; it is also possible that the entire pattern is due to natural variability (i.e., that the initial drop in abundance at SP was natural). Notwithstanding, the 2012 results for SP suggest that the benthic invertebrate community is healthy with a reasonable, but somewhat lower abundance than other project lakes, yet an equivalent species richness. Total abundance in 2013 was higher than ever recorded previously.

TPE - Looking back from 2011, apart from the peak that occurred in 2008, the patterns in benthic community abundance and richness do not appear to have changed much at all relative to baseline, and do not support the presence of a TSS-related impact at TPE. This analysis is supported by the 2012 results which showed the highest total abundance and taxa richness since 2006. In 2013, total abundance and taxa richness at the reference station INUG were much higher than previous years, resulting in apparent "decreases" in relative abundance at most sites, and in taxa richness at mid- and far-field sites (but not at near-field sites which had good years too).

TPN - Abundance and taxa richness increased in 2009, despite the onset of dewatering activities from the attenuation pond to TPN in spring 2009. There was a slight drop in mean abundance in 2010 relative to 2009, however the change was not statistically significant [Azimuth, 2012b]). Taxa richness increased in 2010. AEM started monitoring the dewatering effluent and receiving environment in early 2010 as part of the requirements of the Metal Mines Effluent Regulation (MMER). There was a more pronounced drop in abundance and taxa richness in 2011 (although neither was statistically significant relative to controls [Azimuth,2012b]). Mean abundance dropped two-fold and taxa richness reduced by just over 2 taxa (from about 10.5 in 2010). More detailed analysis conducted as part of the MMER Environmental Effects Monitoring (EEM) study at TPN in 2011 (Azimuth, 2012e) concluded that the observed results were more likely due to differences in physical factors (i.e., coarser substrate) and were not due to dewatering discharge. The 2012 results support the previous statement in that total abundance and taxa richness were within the baseline range. As described above, results in 2013 were heavily influenced by increased abundance at the reference station and differences were apparently not mine-related.

To determine any impacts of mining effluent on the benthic community, the EEM study in 2011 compared total abundance, evenness, and taxa richness at TPN and reference sites (INUG, PDL). No difference in total abundance or evenness was found, but taxa richness was lower in the exposure area (9 taxa average) compared to the reference areas (11.9 taxa average) which represented a significant difference. Cycle 2 study is scheduled for 2013 with a final report scheduled for 2014.

7.2.2.2.3 Fish

The 2011 EEM study examined non-lethal effects of effluent discharge in fish by comparing weight-length conditions factors in a total of 271 lake trout collected from TPN and two reference stations (INUG and PDL). No significant impacts due to mine activity were identified.

7.2.2.3 Sediment Chemistry

CREMP sediment chemistry monitoring includes both grab and core samples. Grab samples, while providing sediment chemistry context for historical deposition patterns, are not ideal for assessing possible subtle changes over time. Consequently, the trend assessment relied primarily on the complete sets of sediment core samples collected in 2012 and in 2008 (i.e., baseline) prior to the onset of East Dike construction.

Statistical analyses of the 2012 sediment core data relative to the 2008 baseline data identified zinc as the only metal at SP with statistically significant temporal changes exceeding the site-specific triggers. There is some uncertainty as to whether the results are due to sedimentation that occurred during dike construction or to spatial heterogeneity (i.e., as similar “elevations” were seen for other metal/area combinations outside the influence of mining).

Notwithstanding, concerns regarding potential metals toxicity in SP related to dike construction were directly tested in 2010 using sediment toxicity tests and sequential extraction analysis (Azimuth, 2011a). Results of amphipod (*Hyalella azteca*) and midge (*Chironomus tentans*) survival and growth endpoints in bioassays showed that surface sediments collected from within or adjacent to the East Dike construction zone (i.e., the zone delineated by the turbidity barriers) were not toxic relative to local reference sediment. The sequential extraction results showed that most of the metals in the sediment are associated with the residual matrix fraction, which is not considered bioavailable. Consequently, the 2010 EAS concluded that metals toxicity is not likely an issue in Second Portage Lake following East Dike construction (Azimuth, 2011a).

7.2.2.4 Summary

Construction activities for the East and Bay-Goose dewatering dikes and to a lesser extent, effluent discharge, have been the major events to impact water quality in the receiving environment. Although TSS, some nutrients (nitrate, phosphorus) and metals (Al, Cr, Cu, Fe, Mn, Ni, Ti) were significantly elevated above background (with some exceeding CCME guidelines) during dike construction, baseline conditions were observed in the spring immediately following the activity. Similarly, any observed impacts to phytoplankton and benthic invertebrate communities associated with increased turbidity were only evident in the short term. No lingering effects of dike construction related changes to water quality at impact areas have been observed since the winter following the activity (i.e., 2009 in SP and 2011 in TPE).

Effluent discharge at TPN began in 2012. Since that time, while TSS concentrations in TPN have been below the laboratory MDL (1 mg/L), other parameters (e.g., conductivity, sulphate, TDS, TOC, and total and dissolved strontium) have remained elevated relative to baseline concentrations at several near-field stations. Values are still relatively low and not expected to adversely affect aquatic life, but trends will continue to be monitored.

Aside from dike construction, no follow-up management actions have been required based on results of the receiving aquatic environment monitoring programs. As previously described, in 2013 onsite sampling location ST-16 was found to seep into nearby NP2 pond. As a result, AEM has added downstream ponds NP2, NP1 and Dogleg Pond to routine open water quality monitoring[x]. Furthermore, total CN and free CN has been added to our AEMP water quality monitoring. No additional changes to receiving monitoring programs for the Meadowbank area study lakes are proposed.

[x] Proposed change to Type A Water License AEMP monitoring

8 COMPLIANCE ASSESSMENT AND STATUS REPORT

8.1 Management Plans

Below is a list of all updated management plan approved by the Board and included as part of this renewal application. All of these plans are included in Appendix B:

- Aquatic Effect Management Program (AEMP), Version 2 (Dec. 2012);
- Core Receiving Environment Monitoring Program (CREMP), Design Document, Version 1 (Dec. 2012);
- Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, Version 4 (April 2010);
- Groundwater Monitoring Plan, Version 4 (Jan. 2014);
- Quality Assurance/Quality Control (QA/QC) Plan, Version 2 (July, 2014);
- Water Quality and Flow Monitoring Plan, Version 3 (July, 2014);
- Emergency Response Plan, Version 6 (Aug. 2013);
- Hazardous Material Management Plan, Version 3 (Oct. 2013);
- Spill contingency Plan, Version 4 (Nov. 2013)
- Operational ARD/ML Testing and Sampling Plan, Version 2 (Nov. 2013);
- Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan, Version 3 (June, 2014);
- Meadowbank Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan, Version 2 (June 2014);
- Incinerator Waste Management Plan, Version 5 (July, 2014);
- Interim Closure and Reclamation Plan, Version 2 (Jan.2014);
- Landfarm Design and Management Plan, Version 3 (Feb. 2013);
- Landfill Design and Management Plan, Version 2 (March. 2013);
- 2013 Water Management Report and Plan, Version 1 (March 2014);
- Ammonia Management Plan, Version1 (Feb. 2013);
- Dewatering Dike : Operation, Maintenance and Surveillance Manual, Version 3 (Sept. 2013);
- Tailings Storage Facility : Operation, Maintenance and Surveillance Manual, Version 3 (Sept. 2013);
- Mine Waste Rock and Tailings Management Plan, Version 1 (March 2014);
- Operation and Maintenance Manual: Sewage Treatment Plan, Version 4 (Apr. 2013);

8.2 Water License Compliance Assessment

AEM is in compliance with all item of the current Type A water license 2AM – MEA0815 except for Part E, Item 3 and Part I, Item 23. For Part E, Item 3, AEM has exceeded the permitted total volume of fresh water for all usage of 700,000 m^3 per year. AEM is presently in the process of seeking an amendment to increase the annual permit for fresh water use. Further information on this amendment application is provided in Section 6. For Part I, Item 23, AEM did not apply to get an accredited laboratory on-site. However, AEM is in compliance with Part I Item 24 which states that all compliance analyses shall be performed by an accredited laboratory (ISO/IEC Standard 17025). You will find in Table 8-1 below the compliance assessment regarding each license term and condition.

Table 8-1 Compliance Assessment with current Type A Water License

PART A SCOPE, DEFINITIONS AND ENFORCEMENT		
Item	**Status**	**Note**
1	Compliant	
2	Compliant	
3	Compliant	
PART B GENERAL CONDITIONS		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Compliant	
4	Compliant	Payment in the amount of $7,000 paid each year by June 9.
5	Compliant	
6	Compliant	
7	Compliant	
8	Compliant	
9	Compliant	
10	Compliant	Annual report including all the reports and studies always submit in electronic and paper copy.
11	Compliant	
12	Compliant	
13	Compliant	
14	Compliant	
15	Compliant	
16	Compliant	
17	Compliant	
18	Compliant	
19	Compliant	
20	Compliant	
21	Compliant	
PART C CONDITIONS APPLYING TO SECURITY		
Item	**Status**	

1	Compliant	Letter of Credit amended to $43,9 Million in January 9, 2014
2	Compliant	
3	Compliant	
4	Compliant	
PART D CONDITIONS APPLYING TO CONSTRUCTION		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Compliant	
4	Compliant	
5	Compliant	
6	Compliant	
7	Compliant	
8	Compliant	
9	Compliant	
10	Compliant	
11	Compliant	
12	Compliant	
13	Compliant	
14	Compliant	
15	Compliant	
16	Compliant	
17	Compliant	
18	Compliant	
19	Compliant	
20	Compliant	
21	Compliant	
22	Compliant	
23	Compliant	
24	Compliant	
25	Compliant	
26	Compliant	
27	Compliant	As-built submitted on August 8, 2013
28	Compliant	
29	Compliant	
30	Compliant	
31	Compliant	
32	Compliant	
33	Compliant	
34	Compliant	
35	Compliant	
36	Compliant	
PART E CONDITIONS APPLYING TO WATER USE AND MANAGEMENT		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Non- Compliant	See Section 6 :Review of the Freshwater use
4	Compliant	

5	Compliant	
6	Compliant	
7	Compliant	
8	Compliant	
9	Compliant	
10	Compliant	
PART F CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Compliant	
4	Compliant	
5	Compliant	
6	Compliant	
7	Compliant	
8	Compliant	
9	Compliant	
10	Compliant	
11	Compliant	Design of the landfill has changed
12	Compliant	
13	Compliant	
14	Compliant	
15	Compliant	
16	Compliant	
17	Compliant	
18	Compliant	
19	Compliant	
20	Compliant	
21	Compliant	
22	Compliant	
23	Compliant	
24	Compliant	
PART G CONDITIONS APPLYING TO MODIFICATIONS		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Compliant	
4	Compliant	
PART H CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Compliant	
4	Compliant	
5	Compliant	
6	Compliant	
7	Compliant	
8	Compliant	
9	Compliant	

PART I CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Compliant	
4	Compliant	
5	Compliant	
6	Compliant	
7	Compliant	
8	Compliant	
9	Compliant	
10	Compliant	
11	Compliant	
12	Compliant	
13	Compliant	
14	Compliant	
15	Compliant	
16	Compliant	
17	Compliant	
18	Compliant	
19	Compliant	
20	Compliant	
21	Compliant	
22	Compliant	
23	Non- Compliant	AEM does not have an accredited laboratory on-site. However, all regulatory samples are sent to an accredited lab in accordance with Part I, Item 24.
24	Compliant	
25	Compliant	
26	Compliant	
27	Compliant	
PART J CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE		
Item	**Status**	
1	Compliant	
2	Compliant	
3	Compliant	
4	Compliant	
5	Compliant	
6	Compliant	

8.3 Compliance Status with AANDC Inspection

The Water Resources Officer from Aboriginal Affairs and Northern Development Canada (AANDC) visited the Meadowbank site from June 4 to June 6, 2013. A draft inspection report has been received indicating minor issues. Actions were taken to address concerns made by

the inspector. On July 14, 2013 AEM sent a written response to the inspector. The Inspection Report and AEM's response can be found in Appendix E.

AANDC Water Resource Officer conducted a general site inspection on July 29-30, 2013. AEM received the inspection report from AANDC Water Resource Officer on September 26, 2013 and sent a response on November 12, 2013. These documents are found in Appendix E. On November 8, 2013, AEM received an AANDC Inspector's Direction in regard to the Portage Waste Rock Storage Facility Seepage that was found by AANDC during the July 29-30 Inspection. AEM responded to this Inspector's Direction on November 20. On November 15, AEM received an email advising that AANDC Field Operations Division has initiated an investigation in regard to the incident that was discovered during the AANDC July 29 – 30 Inspection. The investigation has been initiated for the purpose of gathering additional information in regard to alleged violations under subsection 12 (1) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act. AEM also received, on November 15, an email advising that Environment Canada Environmental Enforcement Division has initiated an investigation. The investigation has been initiated for the purposes of gathering additional information in regard to alleged violations under subsection 36(3) of the Fisheries Act. The investigation is still ongoing and AEM did not receive other communication from both regulators since November 15. Please refer to Appendix E (Inspector's direction and AEM response) for more details on RSF Seepage. It is important to note that AEM has met the conditions of the Inspectors Direction, provided EC with all of the information that has been requested and that seepage has not been detected into NP2 pond since August 4, 2013. Therefore AEM believes we are in compliance with the water license.

9 PROPOSED WATER LICENSE AND RATIONALE FOR CHANGES

A revised Type A license is provided in track changes to provide the reviewers with clarity on changes that are proposed. Additionally, comment boxes with explanations for the changes have been kept in the updated Type A license to provide a rationale for changes proposed by AEM in this application. It is AEM's opinion that the updates in the license are not significant changes (i.e. are not amendments nor is a new license), rather are mostly updates to reflect operational changes and to reflect updated closure plans.

In summary, AEM proposes updates to certain items or conditions of the license that are *administrative* in nature. In many cases, AEM proposes to remove these items. Examples of these proposed changes include:

- removal of items which are no longer applicable due to changes in site plans;
- removal of items that were originally made as "conditions to update plans"; all of the plans have been updated and since approved by the board, and thus are completed;
- removal of conditions related to construction or early operations;
- removal of items that never existed or are not anticipated to exist (i.e. certain monitoring stations in Schedule I - Table 2); and
- changes that reflect recent amendments or modifications, or discussions during recent workshops with regulators (i.e. Part E Item 6 and 7).

Many of the updates proposed will improve clarity and consistency. An example of this includes removing Part F Item 6 related to fuel containment discharge to land. AEM is proposing to have identical discharge limits for all fuel storage areas and proposes to adopt Part F Item 23 for the Baker Lake and Meadowbank fuel containment areas. AEM also proposes a consistent effluent limit for lead (Pb) of 0.1 mg/L. During the original license, discharge was planned to be collected and discharged directly into Baker Lake. However this is not occurring and all of the containment areas are discharged to land. As a result, the current limit of 0.001 mg/L is considered to be overly conservative, especially given the MMER discharge limit is 0.4 mg/L.

Another example of improvements related to consistency proposed in the updates to the site wide and aquatic monitoring programs. These updates reflect what is actually occurring on site for monitoring (i.e. locations of sumps and updates to receiving water quality monitoring plans) and will improve transparency and consistency in regulating monitoring. More specifically, AEM is proposing updates to Schedule I- Conditions Applying to the General and Aquatic Effects

Monitoring, Table 1 – Monitoring Groups that will simplify them and reduce the numerous redundancies in the parameters list. As an example, in the original license, Group 1 encompasses the list of parameters listed in Group 2 (with the exception of TDS) and most of the parameters in Group 3 (with the exception of dissolved metals). Group 3 includes dissolved metals which are also included in Group 4 which is an even more extensive parameter list. Section 9.1 presents an updated License in track changes with comments that provide a rationale for the proposed changes specific to Schedule I.

In summary, AEM proposes to have 4 groups of parameters in Schedule I Table 1. These include:

- Group 1 – mine site monitoring parameters that is inclusive of parameters that were included in Group 2 and 3 and inclusive of all parameters identified in SNC (2014) water quality predictions for contaminants that may require treatment including total cyanide, copper and ammonia;
- Group 2 – are receiving environment parameters consistent with the CREMP and applied to all AEMP stations (including ground water monitoring) and includes dissolved metals to be protective of the aquatic environment;
- Group 3 – sampling prior to discharge and include MMER parameters plus sulphate, turbidity and Al;
- Group 4- sampling prior to discharge at secondary containment fuel storage areas in Baker Lake and Meadowbank;
- MMER – unchanged; and
- Full Suite – Group 2, plus total petroleum hydrocarbons and Turbidity.

Furthermore AEM has suggested changes to Schedule I Table 2– Monitoring Program. Most of the proposed changes are administrative and reflect updates to the mine plan and the removal of stations that are no longer applicable.

AEM does not consider these updates significant changes, and are consistent with the objectives of improving clarity, consistency and reducing redundancies for future monitoring as the mine moves towards closure. This will ultimately improve the regulation and enforcement of monitoring for AEM and NWB, ensuring waste material is controlled and the protection of surrounding aquatic receiving environment at Meadowbank.

9.1 AEM Water License with modification in track change

Below you will find an updated water license that integrates the updates discussed previously in the preceding text. In RED are the deletions and in BLUE are updates to the text.

WATER LICENCE NO: 2AM-MEA0815

NUNAVUT WATER BOARD WATER LICENCE

LICENCE NO: 2AM-MEA0815

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NUNAVUT WATER BOARD WATER LICENCE

Pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

AGNICO- EAGLE MINES LTD.

(Licensee)

145, King Street East, Suite 400
Toronto, Ontario
M5C 2Y7
~~555 BURRARD, SUITE 375, BOX 209,~~
~~TWO BENTALL CENTRE~~
~~VANCOUVER, BRITISH COLUMBIA~~
~~V7X 1M~~8

(Mailing Address)

H~~h~~erein after called the Licensee, the right to alter, divert or otherwise use water or dispose of waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type:	2AM-MEA0815 Type "A"
Water Management Area:	06 and 07
Location:	MEADOWBANK GOLD PROJECT KIVALLIQ REGION, NUNAVUT
Purpose:	MINING AND MILLING AND ASSOCIATED USES
Description:	MINING AND PROCESSING
Quantity of Water not to be Exceeded:	9,119,652~~700,000~~ CUBIC METRES ANNUALLY[1]
Date Licence Issuance:	June 1, 2015~~June 9, 2008~~
Expiry of Licence:	June 1, 2025~~May31,2015~~

Comment [MM1]: This amount include the highest volume of water that AEM will need for mill, camp, emulsion plan and the Portage, Goose and Vault Pits reflooding.

This Licence issued and recorded at Qikiqtarjuaq, Nunavut includes and is subject to the annexed conditions.

[1] Portage and GoosePit reflooding requires 450,000m^3/yr in 2015, 1.2 Mm^3/yr in 2016-2017, 4.88Mm^3/yr 2018-2025. Vault Pit reflooding requires 4.18Mm^3/yr from 2018-2023 and 4.05 Mm^3/yr in 2024.

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. SCOPE

a. This Licence authorizes Agnico- Eagle Mines Ltd. ("AEM" or "Licensee") to use Water and dispose of Waste associated with the Mining and Milling undertakings at the Meadowbank Gold Project as outlined in the Water Licence Application, submitted to the Board throughout the regulatory process.

AEM may conduct mining, milling and associated activities at the Meadowbank Gold Project in the Kivalliq Region of Nunavut, (65°01'33''N, 96°04'01''W~~67°0'75" N, 96°4'39" W~~) including, in general, as follows:

- Use of Water from Third Portage Lake for mining and milling, associated activities and domestic purposes;
- Withdrawal and use of Water from unnamed lake approximately 250 metres from the Emulsion Plant for use in explosives mixing;
- Quarrying of materials from specified locations;
- ~~Construction and o~~Operation of mine site facilities including bulk fuel storage, mill, shops, offices, laboratory, warehouse, camp, and explosives mixing;
- ~~Construction and o~~Operation of a camp at the Meaodwbank Project site;
- ~~Construction and o~~Operation of the Baker Lake Marshalling Facility;
- ~~Construction and o~~Operation of the All Weather Private Access Road, site roads, airstrip, and Water crossings;
- Construction and operation of the Portage Waste Rock Storage Facility and the Vault Waste Rock Storage Facility;
- ~~Construction and o~~Operation of a Sewage Treatment Plant and controlled discharge during ~~Construction and O~~operations;
- Set-up and operation of a diesel fired equipment including the waste Incinerator;
- Construction and operation of Contact and Non-Contact Water management systems;
- Construction and operation of ~~a Construction and~~ an Operations Landfill and a Demolition Landfill in the Portage Waste Rock Storage Facility;

Comment [MM2]: AEM proposes to update this wording throughout the license renewal by eliminating terms such as "construction" and "early operation" if they no longer apply.

- ~~Construction and o~~Operation of a Landfarm;
- ~~Construction and o~~Operation of the Portage Attenuation Ponds and the Vault Attenuation pond;
- Management and disposal of Wastes associated with the Sewage Treatment Plant, the Portage Waste Rock Storage Facility, Vault Waste Rock Storage Facility, Portage Attenuation Pond, Vault Attenuation Pond, Reclaim Pond, ~~Construction and~~ Operations Landfill, Demolition Landfill, Landfarm, Incinerator, and other wastes as described in the Water Licence Application;
- Handling and storage of petroleum products and hazardous materials;
- Construction of a Central Dike, Stormwater Dike, Saddle Dams, Portage Attenuation Pond and Reclaim Pond needed for the operation of the northwest arm of Second Portage Lake as a Tailings Storage Facility;
- Deposition of tailings into the Tailings Storage Facilities~~y~~;
- ~~Partial dewatering of the northwest arm of Second Portage Lake to allow construction of the Tailings Storage Facility;~~
- ~~Construction of the East Dewatering Dike and Bay Zone Dewatering Dike to allow open pit mining at the Portage deposit;~~
- ~~Dewatering of the northwest arm of Second Portage Lake to allow open pit mining of the Portage deposit;~~
- ~~Construction of the Goose Island Dewatering Dike and South Camp Dike to allow open pit mining at the Goose Island deposit;~~
- ~~Dewatering of Third Portage Lake to allow open pit mining of the Goose Island deposit;~~
- ~~Construction of the Vault Dewatering Dike to allow open pit mining at the Vault deposit;~~
- ~~Dewatering of Vault Lake to allow open pit mining of the Vault deposit;~~
- Controlled and regulated Discharge of effluent to Third Portage Lake from the Portage Attenuation Pond
- Controlled and regulated Discharge of effluent to Wally Lake from the Vault Attenuation Pond;

- ~~Construction of fish habitat compensation measures in Second and Third Portage Lakes;~~

- Reflooding~~Rewatering~~ of Portage, Goose Island, and Vault open pits following pit development; and

- Progressive Reclamation and Abandonment planning of site facilities and infrastructure.

b. This Licence is issued subject to conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Act, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed to be subject to such requirements.

c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives.

2. DEFINITIONS

The Licensee shall refer to Schedule A for definitions of terms used in this Licence.

3. ENFORCEMENT

a. Failure to comply with this Licence will be a violation of the Act, subjecting the Licensee to the enforcement measures and the penalties provided for in the Act.

b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the Act.

c. For the purpose of enforcing this Licence and with respect to the use of Water and deposit or Discharge of Waste by the Licensee, Inspectors appointed under the Act, hold all powers, privileges and protections that are conferred upon them by the Act or by other applicable law.

PART B: GENERAL CONDITIONS

1. This Licence incorporates two previously issued Type B licences, 8BC-TEH0809 for the All Weather Private Access Road and 8BC-MEA0709 for the Baker Lake Marshalling Facility. To the extent that any reports, studies and plans pursuant to the Type B licences are not yet received or approved by the Board, the requirement(s) becomes part of this Licence.

Comment [MM3]: AEM proposes to remove this as it is authorized by DFO and is therefore redundant.

~~2. In the event of a conflict between the previously issued Type B licences and this Type A Licence, the condition of this Type A Licence prevail.~~

3. The amount of Water use fees shall be determined in accordance with the section 12(1)(b)~~9(b)~~ of the *Regulations*.

4. Payment of fees shall be made in accordance with section 12(2)(b) and 12(7)(b)~~9(6)(b)~~ of the *Regulations.*

5. The Licensee shall file an Annual Report with the Board no later than April 30~~March 31~~ in the year following the calendar year being reported. The Annual Report shall be developed in accordance with Schedule B.

6. The Licensee shall ensure a copy of this Licence is maintained at the sites of operation at all times in English, Inuktitut and French.

7. Any communication with respect to this Licence shall be made in writing to the attention of:

Manager of Licensing
Nunavut Water Board
P. O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunavutwaterboard.org

8. Any notice made to an Inspector shall be made in writing to the attention of:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

9. Any notice made to an Analyst shall be made in writing to the attention of:

Taiga Laboratories
Department of Indian and Northern Affairs
4601 – 52 Avenue, P.O. Box 1500
Yellowknife, NT X1A 2R3
Telephone: (867) 669-2781
Fax: (867) 669-2718

10. The Licensee shall submit one (1) paper copy and one (1) electronic copy of all reports, studies, and plans to the Board or as otherwise requested by the Board. Reports or studies

submitted to the Board by the Licensee shall include an executive summary in English and Inuktitut.

11. This Licence is assignable as provided in section 44 of the Act.

12. ~~The Licensee shall provide to the Board, notification in writing at least ten (10) days prior to the planned use of Water for the purpose of ore processing.~~

Comment [MM4]: AEM proposes to eliminate this condition as it no longer applies.

13. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.

14. The Licensee shall notify the NWB of any changes in development plans or conditions associated with this project~~, including the intent to begin Operations,~~ at least sixty (60) days prior to any such change.

15. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Water Supply Facilities and the Waste Disposal Facilities. All signs must be in English, Inuktitut and French.

16. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.

17. In the event that a Plan is not found acceptable to the Board, the Licensee shall provide a revised version to the Board for review within thirty (30) days of notification by the Board.

18. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board. The Licensee shall comply with the plans. Any changes to the plans deemed significant shall be considered as an amendment or as a modification and must be approved by the board. The Board has approved the following Plans:

~~a. Mine Waste and Water Management (August 2007);~~
~~b. Landfill Design and Management Plan (August 2007);~~
~~c. Hazardous Materials Management Plan (August 2007);~~
~~d. Emergency Response Plan (August 2007);~~
~~e. Spill Contingency Plan (March 2008) 8BC-TEH0809;~~
~~f. Spill Contingency Plan (August 2007);~~
~~g. Water Quality and Flow Monitoring Plan (August 2007);~~
~~h. Aquatic Effects Management Program (October 2005); and~~
~~i. Fault Testing and Monitoring Plan (August 2007).~~

a) Aquatic Effect Management Program (AEMP), Version 2 (Dec. 2012);
b) Core Receiving Environment Monitoring Program (CREMP), Design Document, Version 1 (Dec. 2012);

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c) Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, Version 4 (April 2010);
d) Groundwater Monitoring Plan, Version 4 (Jan. 2014);
e) Quality Assurance/Quality Control (QA/QC) Plan, Version 2 (June, 2014);
f) Water Quality and Flow Monitoring Plan, Version 3 (June 2014);
g) Emergency Response Plan, Version 6 (Aug. 2013);
h) Hazardous Material Management Plan, Version 3 (Oct. 2013);
i) Spill contingency Plan, Version 4 (Nov. 2013)
j) Operational ARD/ML Testing and Sampling Plan, Version 2 (Nov. 2013);
k) Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan, Version 3 (June 2014);
l) Meadowbank Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan, Version 2 (June 2014);
m) Incinerator Waste Management Plan, Version 5 (June 2014);
n) Interim Closure and Reclamation Plan, Version 2 (Jan.2014);
o) Landfarm Design and Management Plan, Version 3 (Feb. 2013);
p) Landfill Design and Management Plan, Version 2 (March. 2013);
q) 2013 Water Management Report and Plan, Version 1 (March 2014);
r) Ammonia Management Plan, Version1 (Feb. 2013);
s) Dewatering Dike : Operation, Maintenance and Surveillance Manual, Version 3 (Sept. 2013);
t) Tailings Storage Facility : Operation, Maintenance and Surveillance Manual, Version 3 (Sept. 2013);
u) Mine Waste Rock and Tailings Management Plan, Version 1 (March 2014);
v) Operation and Maintenance Manual: Sewage Treatment Plan, Version 4 (Apr. 2013);

19. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and condition imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

20. The Licensee shall review the Plans or Manuals referred to in this Licence as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 5, complete with a revisions list detailing where significant content changes are made.

21. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee shall furnish and maintain security with the Minister in the form that is satisfactory to the Minister ~~, in the prescribed amounts:~~

~~a. within thirty (30) days of approval of this licence, an amount of twenty six (26) million $26,000,000 dollars;~~

~~b. an additional amount of four (4) million on January 1, 2010;~~

~~c. an additional amount of four (4) million on January 1, 2011;~~

~~d. an additional amount of four (4) million on January 1, 2012;~~

~~e. an additional amount of four (4) million on January 1, 2013; and~~

~~f. an additional amount of one million nine hundred thousand (1.9) at January 1, 2014;~~

for a total of seventy three~~forty three~~ (~~43~~73) million and six hundred seven~~nine hundred~~ (~~900~~667) thousand dollars.

2. The Licensee shall furnish and maintain such further or other amounts as may be required by the Board based on annual estimates of current mine restoration liability.

3. The Licensee may submit to the Board for approval, a request for a reduction to the amount of security. The submission shall include supporting evidence to justify the request.

4. The security referred to in Part C, Item 1 shall be maintained until such time as it is fully or in part refunded by the Minister pursuant to section 76(5) of the Act. This clause shall survive the expiry of this Licence or renewals thereof and until full and final reclamation has been completed to the satisfaction of the Minister.

PART D: CONDITIONS APPLYING TO NEW CONSTRUCTION

1. All final design and construction drawings shall be stamped and signed by a Professional Engineer.

2. The Licensee shall submit to the Board for approval, at least six (6) months prior to Construction of the Saddle Dams, or new dikes~~Goose Island Dewatering Dike and Vault Dewatering Dike~~, final design and construction drawings accompanied by a detailed assessment report from the Independent Geotechnical Expert Review Panel.

~~3. The Licensee shall submit to the Board for approval, at least one (1) year prior to Construction, final design and construction drawings of the Vault Haul Road Crossing.~~

~~4. The Licensee shall submit to the Board for review, at least three (3) months prior to Construction, final design and construction drawings of the Water intake pipe required for the Emulsion Plant.~~

~~5. The Licensee shall submit to the Board for review, at least three (3) months prior to Construction, final design and construction drawings of the Landfarm.~~

6. The Licence shall submit to the Board for review, at least one (1) year prior to commissioning, final design and construction drawings of the Demolition Landfill.

7. If it is determined that the easternmost channel of Third Portage Lake requires capacity upgrading, the Licensee shall submit to the Board and DFO for review, at least six (6) months prior to construction, a management plan including final design and construction drawings of the channel modification.

8. The Licensee shall use fill material for construction from an approved source, which has been demonstrated not to produce Acid Rock Drainage and to be non-Metal Leaching.

~~9. The Licensee shall direct Contact Water as required from the Pre-Development starter pits to the Contact Water Collection System.~~

~~10. All Effluent from the Contact Water Collection System at monitoring stations at ST-35 and ST-36 shall be directed to the northwest arm of Second Portage Lake and not exceed the following Effluent quality limits:~~

Comment [MM5]: AEM proposes to remove these conditions as these stations no longer exist

~~**Parameter**~~	~~**Maximum Average Concentration**~~	~~**Maximum Allowable Grab Sample Concentration**~~
~~Arsenic (mg/L)~~	~~0.5~~	~~1.0~~
~~Copper (mg/L)~~	~~0.3~~	~~0.6~~
~~Cyanide (mg/L)~~	~~1.0~~	~~2.0~~
~~Lead (mg/L)~~	~~0.2~~	~~0.4~~
~~Nickel (mg/L)~~	~~0.5~~	~~1.0~~
~~Zinc (mg/L)~~	~~0.5~~	~~1.0~~
~~pH~~	~~6.0 to 9.0~~	~~6.0 to 9.0~~
~~Radium-226 (Bq/L)~~	~~0.37~~	~~1.11~~
~~TSS (mg/L)~~	~~15.0~~	~~30.0~~

11. The Licensee shall submit for approval, at least thirty (30) days prior to new ~~C~~construction, a Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering. The Plan shall include a protocol to monitor and maintain Water levels ~~in Third Portage Lake, Second Portage Lake and Wally Lake~~nearby Lake within natural variation.

12. During new dike construction, the Licensee shall implement the action plan outlined in the Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering if TSS levels in a single sample exceed the Short Term Maximum Total Suspended Solids (TSS) concentration defined in Part D Item 15.

13. During new dike construction, the Licensee shall implement the action plan outlined in the Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering if the moving 24 hour average TSS concentration exceeds the Short Term Maximum TSS concentration defined in Part D Item 15.

~~14. During dike construction, the Licensee shall implement the action plan outlined in the Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering if the 7 day moving average TSS concentration exceeds the Maximum Monthly Mean TSS concentration defined in Part D Item 15.~~

15. The Licensee shall compare TSS levels as required in Part D Items 12, 13, and 14 to the following Maximum Monthly Mean and Short Term Maximum concentrations:

Parameter	Maximum Monthly Mean (mg/L)	Short Term Maximum (mg/L)
TSS in areas where there is spawning habitat and at times when eggs or larvae are expected to be present (applied at monitoring stations located closest to the high value shoal areas starting Sept 1, 2008)	6	25
TSS in all other areas and at times when eggs/larvae are not present	15	50
TSS in impounded areas (e.g. northwest arm of second portage lake) at all times in all areas.	15	50

16. Effluent from ~~pit~~new dewatering activities should be ~~at~~monitored ~~monitoring.~~ ~~s~~Stations ST-DD-1 to ST-DD-TBD, shall not exceed the following Effluent quality limits:

Parameter	Maximum Monthly Mean	Short Term Maximum
Total Suspended Solids	15.0 mg/L	22.5 mg/L
Turbidity	15 NTU	30 NTU
pH	6.0 to 9.0	6.0 to 9.0
Total Aluminium	1.5 mg/L	3.0 mg/L

~~17. The Licensee shall, for the construction of the dewatering dikes, close the rockfill embankments by connecting them from shore to shore prior to placing core material.~~

18. ~~The Licensee shall, prior to the commissioning of the Tailings Storage Facility, direct a~~All Effluent from the Sewage Treatment Plant shall be directed to the Stormwater Management Pond. Any discharge of the SWP shall be directed to the Tailings Storage Facility.

~~19. The Licensee shall submit to the Board for approval, within ninety (90) days of the approval of this Licence, an Operation and Maintenance Manual for the Sewage Treatment Plant prepared in accordance with the *"Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996"* and adapted for the use of a mechanical sewage treatment facility. This Manual shall include contingency measures in the event of plant malfunction, disposal of sludge, and incorporate the Operation and Maintenance Manual requirements of 8BC-TEH0809, Part D Item 10.~~

Comment [MM6]: AEM proposes to remove this item as it was completed.

20. The Licensee shall~~, prior to the commissioning of the Tailings Storage Facility or in the absence of an approved Manual as per Part D Item 19,~~ direct all sludge removed from the Sewage Treatment Plant to the Tailings Storage Facility or Landfarm as a nutrient amendment~~Incinerator~~.

~~21. The Licensee shall, prior to the construction of the Tailings Storage Facility, direct Effluent from the Stormwater Management Pond at monitoring station ST-35 to the northwest arm of Second Portage Lake and not exceed the following Effluent quality limits:~~

Comment [MM7]: AEM proposes to remove this item as it no longer exists.

~~Parameter~~	~~Maximum Average Concentration~~	~~Maximum Allowable Grab Sample Concentration~~
~~pH~~	~~6.0 to 9.5~~	~~6.0 to 9.5~~
~~TSS~~	~~25 mg/L~~	~~50 mg/L~~
~~BOD_5~~	~~25 mg/L~~	~~50 mg/L~~
~~Faecal Coliforms~~	~~1000 CFU/dl~~	~~2000 CFU/dl~~
~~Oil and Grease*~~	~~15 mg/L and no visible sheen~~	~~15 mg/L and no visible sheen~~
~~Benzene*~~	~~370 µg/L~~	~~370 µg/L~~
~~Toluene*~~	~~2 µg/L~~	~~2 µg/L~~
~~Ethylbenzene*~~	~~90 µg/L~~	~~90 µg/L~~
~~Lead*~~	~~1 µg/L~~	~~1 µg/L~~

~~Al~~	~~1.5 mg/L~~	~~3.0 mg/L~~

~~*Only if discharge from the Mine Site Bulk Fuel Storage Facility is directed to the Stormwater Management Pond~~

22. The Licensee shall implement sediment and erosion control measures prior to and during Construction, and Operations where necessary, to prevent entry of sediment into Water.

23. The Licensee shall inspect daily, all construction activities for signs of erosion that may affect surface water discharging to TPL, SPL and Wally Lake.

24. All surface runoff during the construction of any facilities, where flow may directly or indirectly enter a Water body, shall be sampled Weekly and not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids	50.0	100.0

25. The construction of engineered earthworks shall be supervised and field checked by a qualified Engineer. Construction records shall be maintained and available at the request of the Board.

26. The Licensee shall submit a Construction Summary Report to the Board, within ninety (90) days following the completion of each structure designed to contain, withhold, divert or retain Waters or Wastes. The Construction Summary Report shall be prepared by a qualified Engineer(s) in accordance with Schedule D, Item 1.

~~27. The Licensee shall submit to the Board, within ninety (90) days following the completion of Portage Lake and Wally Lake Outfall Diffusers, as built drawings, final configuration and location.~~

Comment [MM8]: AEM proposes to remove this item as it was completed

~~28. The Licensee shall submit, within ninety (90) days of completion of construction, as-built drawings of the All Weather Private Access Road and all details of Water crossings and structures, stamped by an appropriately qualified Engineer.~~

Comment [MM9]: AEM proposes to remove this item as it was completed.

29. The Licensee shall prevent any chemicals, fuel or wastes associated with the undertaking from entering any Water body.

30. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during construction activities.

31. The Licensee shall not store material on the surface of frozen streams or lakes except what is for immediate use.

32. The Licensee shall locate equipment storage areas shall on gravel, sand or other durable land, a distance of at least thirty (30) metres above the ordinary high Water mark of any Water body in order to minimize impacts on surface drainage and Water quality.

33. The Licensee shall undertake necessary corrective measures to mitigate impacts on surface drainage resulting from the Licensee's activities.

34. The Licensee shall limit any in-stream activity to low Water periods. In-stream activity is prohibited during fish migration.

35. For the purposes of culvert and bridge installations, the Licensee shall not encroach on the natural channel width by the placement of abutments, footings or armouring below the ordinary high Water mark.

36. The Licensee shall construct and operate the Mine Site and Marshalling Area Bulk Fuel Storage Facilities in accordance with all applicable legislation and industry standards, including:

    a. *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Containing Petroleum and Allied Petroleum Products, 2003; CCME;* and
    b. *National Fire Code, 1995*.

PART E: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

1. The Licensee shall obtain fresh Water from Third Portage Lake at monitoring station ST-1 using the Fresh Water Intake Barge for domestic camp use, mining and milling and associated uses, or as otherwise approved by the Board in writing.

2. The Licensee shall obtain fresh Water from the unnamed lake at monitoring station ST-3 for purposes of explosives mixing, not to exceed a maximum of 2,400 cubic metres per year, or as otherwise approved by the Board in writing.

3. The total volume of fresh Water for all uses shall not exceed 9,119,652~~700,000~~ cubic metres per year.

4. The Licensee shall to the greatest practical extent recycle water and the use of reclaim water from the Tailings Storage Facility.

5. The Licensee shall equip all Water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw Water at a rate such that fish do not become impinged on the screen.

6. The Licensee shall submit a Water Management Plan on an annual basis~~Balance and Water Quality Modelling Report~~ to the Board for review~~, Biannually for a period of two (2) years~~ following the commencement of Operations~~. and annually thereafter. The Report shall include a comparison of predicted and measured parameters.~~ The plan must include an

updated water balance. The Water Management Plans shall include an action plan if predicted reflooded pit water quality indicates treatment is necessary. The dike will not be breached until the water quality in the reflooded area meets CCME Water Quality Guidelines for the Protection of Aquatic Life or baseline concentration. Subject to board approval, if water quality parameters are above CCME guidelines, a site specific risk assessment must be conducted to ensure the protection of the aquatic environment.

7. The Licensee shall submit a~~Water Balance and~~ Water Quality Model for pit reflooding as part of the Water Management Plan which shall be re-calibrated as necessary~~ in accordance with the action plan outlined in section 3.2.5.2 of the Water Quality and Flow Monitoring Plan (August 2007~~), and at a minimum of once every two (2) years following the commencement of Operations. The results and implications of the predictive~~re-calibrated~~ model shall be reported to the Board.

~~8. The Licensee shall, on an annual basis during Operations, compare the predicted water quantity and quality within the pits, to the measured water quantity and quality. Should the difference between the predicted and measured values be 20% or greater, then the cause(s) of the difference(s) shall be identified and the implications of the difference shall be assessed and reported to the Board.~~

Comment [MM10]: These proposed changes were discussed with NWB, KIA, AANDC and EC during a WebEx workshop held on November 28, 2013.

9. The Licensee shall carry out weekly inspections of all water management structures during periods of flow and maintain records of the inspections and findings. This information is to be included in the annual Water Management Plan.~~, for review upon the request of the Board.~~

10. The Licensee shall implement measures to minimize~~prevent~~ the generation and deposition of dust and/or sediment into Water arising from road use.

PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. The Licensee shall direct all Sewage and Greywater to the Sewage Treatment Plant as described in the Sewage Treatment Operations Manual~~application~~, or as otherwise approved by the Board in writing.

2. Effluent being discharged from the Portage Attenuation Pond at monitoring station ST-9 shall be directed to Third Portage Lake through the Third Portage Lake Outfall Diffuser and not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
pH	6.0 to 9.0	6.0 to 9.0
TSS (mg/L)	15	30
Turbidity (NTU)	15	15
Total (T)-Al (mg/L)	1.5	1.5
Dissolved (D)-Al (mg/L)	1.0	1.0
T-As (mg/L)	0.30	0.60

T-Cd (mg/L)	0.002	0.004
T-CN	0.5	1.0
T-Cu (mg/L)	0.1	0.2
T-Hg (mg/L)	0.0004	0.0008
NH_3-N (mg/L)	16	32
T-Ni (mg/L)	0.2	0.4
T-NO_3-N (mg/L)	20	40
T-Pb (mg/L)	0.10	0.20
T-P (mg/L)	1.0	2.0
T-Zn (mg/L)	0.4	0.8
T-Cl^- (mg/L)	1000	2000
Total Petroleum Hydrocarbons (TPH) (mg/L)	3	6

3. Effluent being discharged from the Vault Attenuation Pond at monitoring station ST-10 shall be directed to Wally Lake through the Wally Lake Outfall Diffuser and not exceed the following Effluent quality limits:

Parameter	**Maximum Average Concentration**	**Maximum Allowable Grab Sample Concentration**
pH	6.0 to 9.0	6.0 to 9.0
TSS (mg/L)	15	30
Turbidity (NTU)	15	15
Total (T)-Al (mg/L)	1.5	3.0
Dissolved (D)-Al (mg/L)	1.0	2.0
T-As (mg/L)	0.1	0.2
T-Cd (mg/L)	0.002	0.004
T-Cu (mg/L)	0.1	0.2
T-Hg (mg/L)	0.004	0.008
NH_3-N (mg/L)	20	40
T-Ni (mg/L)	0.2	0.4
T-NO_3-N (mg/L)	50	100
T-Pb (mg/L)	0.10	0.20
T-P (mg/L)	1.5	3.0
T-Zn (mg/L)	0.2	0.4
T-Cl^- (mg/L)	500	1000

4. ~~Prior to discharge, a~~All water collected prior to discharge from~~within~~ the Non-Contact Water diversions (monitoring station ST-6 and ST-6) and East Dike Seepage (ST-8) during Operations~~ at monitoring stations ST-5, ST-6, and ST-7~~, shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Allowable Grab Sample Concentration (mg/L)
TSS	15	30

5. Effluent from the Mine Site Bulk Fuel Storage Facility and other fuel containment facilities that are within proximity of the Stormwater Management Pond shall be directed to the Stormwater Management Pond.

~~6. Effluent from fuel containment facilities that require Discharge to land, shall not exceed the following Effluent quality limits:~~

Comment [MM11]: AEM is proposing to have consistent discharge limits required for discharge from fuel containment facilities to land – see Part F Item 23.

~~Parameter~~	~~Maximum Average Concentration~~
~~Benzene(µg/L)~~	~~370~~
~~Toluene(µg/L)~~	~~2~~
~~Ethylbenzene(µg/L)~~	~~90~~
~~Lead(ug/L)~~	~~1~~
~~Oil and Grease(mg/L)~~	~~15 and no visible sheen~~

7. The Licensee shall confirm compliance with Effluent quality limits in Part F, Items 2 and~~,~~ 3~~,~~ and 23~~6~~ prior to Discharge.

8. The Licensee shall provide at least ten (10) days notice to the Inspector prior to any planned Discharges from any facilities. The notice shall include an estimated volume proposed for Discharge and the receiving location.

9. The Licensee shall, under Part F Item 23~~6~~, discharge effluent in such a manner as to minimize surface erosion at a distance of at least thirty (30) metres above the ordinary high water mark of any Water body, where direct flow into a Water body is not possible and no additional impacts are created, or as otherwise approved by the Board in writing.

~~10. The Licensee shall submit to the Board for approval, within three (3) months of Licence approval, a revised Incineration Management Plan. The Plan shall consider best management practices for ash disposal.~~

Comment [MM12]: AEM proposes to remove this item as it was completed.

~~11. The Licensee shall submit to the Board for review, within three (3) months of Licence approval, a revised Landfill Design and Management Plan to include:~~

Comment [MM13]: AEM proposes to remove this item as it was completed.

~~a. Testing protocol and criteria for the disposal of incinerator ash in Landfill #1 and Landfill #2;~~
~~b. The Government of Nunavut guidelines and policy documents regarding disposal of asbestos, equipment containing ozone depleting substances and fluorescent lamp tubes;~~
~~c. The protocol for the placement of materials in the Construction/Operation Landfill and the Demolition Landfill; and~~
~~d. An update to the planned design of Landfill #1 and Landfill #2.~~

~~12. The Licensee shall submit to the Board for review, within three (3) months of~~

~~Licence approval, a revised Landfarm Design and Management Plan to include:~~

~~a. The remediation guidelines used for hydrocarbon contaminated soil, how the guidelines will be used and what parameters will be measured;~~
~~b. Details on storage and treatment options for metals, solvent, glycol, and heavy oils that may find their way into the Landfarm;~~
~~c. Contingency plans, should contaminated soil and/or snow/ice exceed expected volumes;~~
~~d. Details describing the design components/specifications of the spillway;~~
~~e. Contingency planning and monitoring to ensure sump volumes are not exceeded during the snow melt period; and~~
~~f. Measures to prevent damage to the liner during mechanical operation of the Landfarm.~~

Comment [MM14]: AEM proposes to remove this item as it was completed.

13. The Licensee is authorized to dispose of and contain all non-hazardous solid Wastes at the on-site Landfill ~~Landfill #1 and Landfill #2~~ or as otherwise approved by the Board in writing.

14. The Licensee shall remove from the project site, all hazardous and liquid Wastes generated through the course of the Operation, for disposal at an approved hazardous waste disposal facility.

15. The Licensee shall maintain records of all Waste backhauled and confirmation of proper disposal through the use of Waste manifest tracking systems and registration with the Government of Nunavut, Department of Environment.

~~16. The Licensee shall submit to the Board for approval, within six (6) months of Licence approval, a revised Mine Waste and Water Management Plan to include:~~

~~a. Detailed Ammonia Management Plan;~~
~~b. Integration of the Waste and Water Management Plan submitted under Water Licence 8BC-TEH0809, Part D Item 1;~~
~~c. Field testing program for closure cover depth of the Tailings Storage Facility and Waste Rock Storage Facilities with consideration for climate change; and~~
~~d. A protocol for distinguishing Seepage through facilities.~~

Comment [MM15]: AEM proposes to remove this item as it was completed.

17. The Licensee shall dispose of tailings and operate the Tailings Storage Facility in accordance with the revised Mine Waste Rock and Tailings Management Plan ~~and Water Management Plan in Part F Item 16~~ and *Guide to the Management of Tailings Facilities* (Mining Association of Canada September 1998). The tailings solids fraction shall be permanently contained within the Tailings Storage Facility.

18. The Licensee shall incorporate Seepage management at Quarries using best management practices including ditches, diversions, sumps and berms where necessary.

19. The Licensee shall locate areas designated for Waste disposal at a minimum distance of thirty (30) metres from the ordinary high water mark of any Water body such that the quality, quantity or flow of Water is not impaired, or as otherwise approved by the Board

in writing.

20. The Licensee shall provide to the Board, thirty (30) days prior to any planned disposal of Waste in a facility operated by the Hamlet of Baker Lake, documented authorization from the Hamlet for the use of any waste disposal facility operated by the Hamlet.

~~21. The Licensee shall direct all Sewage generated at the Baker Lake Marshalling Facility to an approved sewage disposal facility, or as otherwise approved by the Board in writing.~~

Comment [MM16]: AEM proposes to remove these conditions as there is no sewage generated at the Baker Lake Marshalling Facility.

22. The Licensee shall direct all solid waste generated at the Baker Lake Marshalling Facility to the approved Landfill at Meadowbank.~~an approved solid waste disposal facility, or as otherwise approved by the Board in writing.~~

23. All Effluent from fuel containment facilities that require discharge to land, at Baker Lake Bulk Fuel Storage Facility and Meadowbank Fuel Storage Facility (ST-37 through ST-40)~~being discharged from the constructed facilities at the Baker Lake Marshalling Facility, including the Marshalling Area Bulk Fuel Storage Facility, ammonia storage and explosives storage and general marshalling area at Monitoring Stations ST-38 through ST-42 respectively~~, shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (MAC)	Maximum Concentration of any single Grab Sample
pH	6.0 – 9.5	6.0 – 9.5
Total Arsenic (mg/L)	**0.5	1.00
Total Copper (mg/L)	**0.30	0.60
~~Total Lead (mg/L)~~	~~*0.05~~	~~0.10~~
Total Nickel (mg/L)	**0.50	1.00
Total Zinc (mg/L)	*0.50	1.00
Total Suspended Solids (mg/L)	*15.0	30.0
~~Ammonia (mg/L)~~	~~6.0~~	~~6.0~~
Total Cyanide	*0.1	0.2
Benzene (ug/L)	370	370
Toluene (ug/l)	2	2
Ethylbenzene (ug/L)	90	90
Lead (m~~u~~g/L)	0.1	0.1
Oil and Grease (mg/L)	5.0 and no visible sheen	5.0 and no visible sheen

*Environmental Guideline for Industrial Waste Discharges, 2004
**Metal Mines Effluent Regulations (MMER)

24. All Effluent discharged from a Final Discharge Point at monitoring stations ST-9, ST-10, ST-35, and ST-36, shall be demonstrated to be non-Acutely Lethal Effluent under the following tests:

    a. Acute lethality to Rainbow Trout, Oncorhynchus mykiss (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and

b. Acute lethality to the crustacean, Daphnia magna (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

   a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications to include requirements of Part G, Item 3;
   b. Such Modifications do not place the Licensee in contravention of the Licence or the Act;
   c. Such Modifications are consistent with the NIRB Project Certificate;
   d. The Board has not, within sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
   e. The Board has not rejected the proposed Modifications.

2. Modifications for which any of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.

3. Applications for modifications shall contain:

   a. A description of the facilities and/or works to be constructed;
   b. The proposed location of the structure(s);
   c. Identification of any potential impacts to the receiving environment;
   d. A description of any monitoring required, including sampling locations, parameters measured and frequencies of sampling;
   e. Schedule for construction;
   f. Drawings of engineered structures stamped by a Professional Engineer; and
   g. Proposed sediment and erosion control measures.

4. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING

1. AEM shall implement and maintain an updated Emergency Response Plan and Spill Contingency Plan that has been approved by the Board. The Licensee shall comply with the plan and any changes deemed significant shall be approved by the Board. ~~The Licensee shall submit to the Board for review, at least ninety (90) days prior to the commencement of Operations, a revised and consolidated Emergency Response Plan. The~~

~~revised Plan shall cover the activities included in the scope of the Licence taking into account as-built designs and emergency preparedness to include the consequences of failure of any dikes.~~

~~2. The Licensee shall submit to the Board for review, within thirty (30) days of the approval of this Licence, a revised and consolidated Spill Contingency Plan in accordance with the *Spill Contingency Planning and Reporting Regulations* developed under the *Environmental Protection Act (Nunavut)*. The revised Plan shall cover mine related activities and consolidate the existing plans for the mine site, All Weather Private Access Road, and Baker Lake Marshalling Facility taking into account the issues raised during its review.~~

~~3. The Licensee shall prevent any chemicals, petroleum products or unauthorized Wastes associated with the project from entering Water.~~

Comment [MM17]: AEM proposes to remove this condition as it is stated in Part D, Item 29

4. The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.

5. The Licensee shall perform weekly inspections of fuel containment facilities for leaks and settlement and shall keep a written log of inspections to be made available to an Inspector upon request.

6. If the Licensee provides notification under Part J Item 4, the Licensee shall submit to the Board, an Addendum to the Emergency Response Plan and the Spill Contingency Plan, detailing the changes in operations, personnel, responsibilities, availability of equipment and access to the site for assistance.

7. The Licensee shall keep a copy of the Emergency Response Plan and the Spill Contingency Plan at each site of operation.

8. The Licensee shall conduct emergency maintenance and servicing on equipment, in designated areas, and shall implement measures to collect motor fluids and other Waste and prevent and contain spills.

9. If, during the period of this Licence, an unauthorized Discharge of Waste and or Effluent occurs, or if such Discharge is foreseeable, the Licensee shall:

   a. Employ as required, the Emergency Response Plan and the Spill Contingency Plan;
   b. Report the incident immediately via the 24-Hour Spill Reporting Line (867) 920-8130 and to the Inspector at (867) 975-4295; and
   c. For each spill occurrence, submit a detailed report to the Inspector, no later than thirty (30) days after initially reporting the event, which includes the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain, clean up and restore the spill site.

PART I: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING

1. The Licensee shall comply with Aquatic Effects Management Plan (AEMP) and Core

Receiving Environmental Monitoring Programm (CREMP)~~submit to the Board for approval by March 31, 2009, a revised Aquatic Effects Management Program (AEMP)~~ prepared in consultation with Department of Fisheries and Oceans, Environment Canada, and Aboriginal Affairs and Northern Development Canada~~Indian and Northern Affairs Canada~~. The ~~revised~~ AEMP ~~shall~~ include:

a. A detailed monitoring protocol to verify that the Canadian Council of Ministers of Environment Fresh Water Aquatic Life guidelines are met thirty (30) metres from the outfall diffusers;
b. Annual reporting for more immediate adaptive management;
c. Mechanisms to measure changes to productivity in the lake as a result of the mine adding nutrients;
d. Sampling and Analysis Plans; and
e. Monitoring under Fisheries Authorizations, NWB Licence Compliance Monitoring, Environmental Effects Monitoring, and Groundwater Monitoring.

~~2. The Licensee shall submit to the Board for approval, within thirty (30) days following approval of the Licence, a revised and consolidated Water Quality and Flow Monitoring Plan. Revisions to the Plan shall consolidate the Monitoring Plan submitted under Licence 8BC-TEH0809, Part I Item 1.~~

~~3. The Licensee shall submit to the Board for approval, within thirty (30) days of Licence approval, a Ground Water Monitoring Plan.~~

~~4. The Licensee shall submit to the Board for approval, within thirty (30) days of Licence approval, a revised Operational ARD and ML Sampling and Testing Plan. The Plan shall include:~~

~~a. A detailed sampling, analysis and segregation system for rock and till that incorporates conservative criteria where there is uncertainty as to the character of material to ensure that problematic material is not incorporated into environmentally sensitive structures planned for construction;~~
~~b. Analyses to establish a correlation between metal concentration and leach rates; and~~
~~c. A plan or schedule for periodic auditing of the segregation system.~~

Comment [MM18]: AEM proposes this changes as these plans have been approved and are added to the list of plans in Part B, Item 18.

5. The Licensee shall install and maintain flow metres or other such devices to measure Water use and Effluent Discharge volumes.

6. The Licensee shall undertake the Monitoring Program provided in the Tables 1 and 2 of Schedule I.

7. The Licensee shall confirm the locations and GPS coordinates for all monitoring stations referred to in Schedule I ~~with an Inspector~~.

8. The Licensee shall establish the locations for the proposed compliance and internal monitoring locations as they relate to existing drainage courses beneath the Portage and Vault Waste Rock Storage Facilities and Tailing Storage Facility dikes to ensure potential seep locations are adequately identified.

9. The Licensee shall install and maintain signs that identify monitoring stations. The signs shall be posted in English, Inuktitut and French.

10. The Licensee shall measure and record the following on a Monthly basis in cubic metres or as otherwise stated:

    a. The volume of fresh Water obtained from Third Portage Lake;
    b. The volume of reclaim water obtained from the Tailings Storage Facility for process water;
    c. The volume of Effluent transferred to the pit lakes;
    d. The flow during periods of discharge from the Landfarm, Landfills, Waste Rock Storage Facilities, Sewage Treatment Plant, Contact Water Collection System, and area Sumps collecting Contact Water;
    e. The volume of water transferred from the Marshalling Area Bulk Fuel Storage Facility ~~to the East Contact Water Pond~~;
    f. The volume of Sewage sludge removed from the Sewage Treatment Plant;
    g. Quantity of mill tailings placed within the Tailings Storage Facility;
    h. Tonnes of mineralized and un-mineralized waste rock stored; and
    i. Tonnes of ore processed through the mill.

11. The Licensee shall undertake the Thermal Monitoring Program detailed in the following documents "Mine Waste Rock and Tailings Management Plan (2014).~~:~~

    ~~a. Mine Waste and Water Management Plan (August 2007);~~
    ~~b. Detailed Design of the Central Dike (March 2007);~~
    ~~c. Detailed Design of Dewatering Dike (March 2007); and~~
    ~~d. Report Addendum: Detailed Design of Dewatering Dike (July 2007).~~

12. The Licensee shall undertake a geotechnical inspection, to be carried out Annually by a Geotechnical Engineer, between the months of July and September. The inspection shall be conducted in accordance with the *Canadian Dam Safety Guidelines* where applicable and take into account all major earthworks, including:

    a. Dewatering Dikes;
    b. Stormwater Dikes;
    c. Saddle Dams;
    d. Pit walls;
    e. Tailings Storage Facility;
    f. Shoreline protection at the location of the Wally Lake and Portage Lake Outfall Diffusers;
    g. Geotechnical instrumentation;
    h. All Weather Private Access Road and site roads, in particular water course crossings;
    i. Quarries;
    j. Landfill;
    k. Landfarm;
    l. Bulk Fuel Storage Facilities at both the mine site and marshalling area;

m. Attenuation Ponds;
n. Reclaim Pond; and
o. Sumps.

13. The Licensee shall submit, as part of the Annual Report, ~~to the Board within sixty (60) days of completion of the geotechnical inspection,~~ the Geotechnical Engineer's inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.

14. The Licensee shall submit to the Board as part of the Annual Report required under Part B Item 5, all reports and performance evaluations prepared by the Independent Geotechnical Expert Review Panel.

15. The Licensee shall monitor Seepage observations pursuant to Part I Item 8 according to the following:

Characterization of seepage including: precise location; discharge rates and volumes; respective hazard(s) and consequences and prescribed mitigative measure	**Minimum Frequency of Observation**
Lake water Seepage Through Dewatering Dikes	Monthly
Seepage (of any kind) Through Central Dike	Monthly
Seepage and Runoff from the Landfill(s)	Quarterly
Subsurface Seepage and Surface Runoff from Waste Rock Piles	Quarterly
Seepage at Pit Wall and Pit Wall Freeze/Thaw and Permafrost Aggradation	Quarterly

16. The Licensee shall submit the results and interpretation of the Seepage monitoring required in Part I Item 15 in the Annual Report required under Part B Item 5.

~~17. The Licensee shall submit to the Board for approval, within six (6) months following construction of each the Mine Site Bulk Fuel Storage Facility and Marshalling Area Bulk Fuel Storage Facility, a plan for the environmental and performance monitoring of each Facility. The Plans are to include:~~

~~a. An assessment of performance;~~
~~b. Location, environmental setting and the potential for leaks or Seepage that could impact Water;~~
~~c. An assessment of the need for, and if required, the design for installation, monitoring, and maintenance of vertical Ground Water monitoring wells to be installed in accordance with the *Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products, 2003; CCME*; and~~
~~d. Recommended sampling for ongoing monitoring of the integrity of the secondary containment.~~

Comment [MM19]: AEM proposes to remove this item as it was completed.

~~18. The Licensee shall obtain a digital photographic record of all the watercourse crossings before, during, and after construction has been completed.~~

Comment [MM20]: AEM proposes to remove this item as it was completed.

19. The Licensee shall submit maintain~~within six (6) months of Licence approval to an Analyst for approval,~~ an approved Quality Assurance/ Quality Control Plan that includes requirements for independent third party sampling and analysis. This Plan shall be developed in accordance with the *1996 Quality Assurance (QA) and Quality Control (QC) Guidelines for Use by Class "A" (INAC)*.

~~20. If the Analyst does not approve the Plan referred to in Part I, Item 19, the Licensee shall revise the Plan and resubmit to the Analyst for approval within thirty (30) days of notification by the Analyst.~~

~~21. The Analyst shall notify the Board of its decision with respect to the QA/QC Plan referred to in Part I Items 19 and 20.~~

22. All analyses shall be conducted as described in the most recent edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Analyst.

~~23. The Licensee shall file a letter with the Board confirming application for accreditation for the on-site environmental laboratory prior to commencing Operations.~~

Comment [MM21]: AEM proposes to remove this item as AEM uses an accredited laboratory as per Part I Item 24.

24. All compliance analyses shall be performed in an accredited laboratory according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

25. The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly monitoring Report. The Report shall include:

    a. All data and information required by this Part and generated by the Monitoring Program in the Tables of Schedule I;
    b. An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in Parts D and F;

~~26. The Licensee shall confirm bathymetric survey at the Baker Lake Marshalling Facility.~~

Comment [MM22]: AEM proposes to remove this item as it was completed.

27. The NWB can modify the Monitoring Program without a public hearing. Requests for changes to the Program should be forwarded to the NWB in writing, and should include the justification for the change.

PART J: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

~~1. The Licensee shall submit to the Board for approval, within six (6) months of the start of Operations, an Interim Closure and Reclamation Plan prepared in accordance with the~~

~~*Mine Site Reclamation Guidelines for the Northwest Territories, 2007* and consistent with the INAC *Mine Site Reclamation Policy for Nunavut, 2002*. The Plan shall cover mine related components, the All Weather Private Access Road and the Baker Lake Facilities. The Plan shall include:~~

~~a. Detailed description, including maps and other visual representations, of the pre-construction conditions for each site, accompanied by a detailed description of the proposed final landscape, with emphasis on the reclamation of surface drainage over the restored area;~~
~~b. A description of how progressive reclamation will be employed and monitored throughout the life of the mine, plus reclamation scheduling and coordination of activities with the overall sequence of the project; details of reclamation scheduling and procedures for coordinating reclamation activities within the overall mining sequence and materials balance;~~
~~c. Implications of any updated water balance and water quality model prediction results and any adaptive management measures that may be required;~~
~~d. An evaluation of closure and reclamation measures for each mine component, including the goals, objectives, closure criteria and the rationale for selection of the preferred measures;~~
~~e. A comprehensive assessment of materials suitability, including geochemical and physical characterization and a schedule of availability for reclamation needs. Particular attention on to cover materials, including maps showing sources and stockpile locations of all reclamation construction materials;~~
~~f. An assessment and description of any required post closure treatment for pit water that is not acceptable for discharge;~~
~~g. Contingency measures for all reclamation components including action thresholds that are linked to the monitoring programs;~~
~~h. Monitoring programs to assess reclamation performance and environmental conditions including monitoring locations for surface water and Ground Water, parameters;~~
~~i. Monitoring schedules and overall timeframes;~~
~~j. QA/QC procedures for managing the demolition landfill and other waste disposal areas;~~
~~k. A list of non-salvageable materials and disposal locations;~~
~~l. Rock storage facility closure design plans and sections including the types of material placed and volumes;~~
~~m. Protocol for the disposal of any contaminated soil;~~
~~n. An assessment of the long term physical stability of all remaining project components including the central and east dike;~~
~~o. Detailed criteria for the final breaching of dikes;~~
~~p. A revised closure and reclamation cost estimate; and~~
~~q. A detailed implementation schedule for completion of reclamation work~~

Comment [MM23]: AEM proposes to delete this item as it was completed.

2. The Licensee shall notify the Board in writing, at least sixty (60) days prior to any intent to achieve Recognized Closed Mine status.

3. The Licensee shall submit to the Board for approval, a Final Closure and Reclamation Plan

at least twelve (12) months prior to the expected end of mining. The Final Plan shall incorporate revisions, which reflect the pending closed status of the mine, and include:

a. Soil Quality Remediation Objectives along with CCME Guidelines and the Government of Nunavut *Environmental Guideline for Site Remediation*;
b. Environmental Site Assessment plans in accordance Canadian Standards Association (CSA) criteria; and
c. An evaluation of the Human Health and Ecological Risk associated with closure options.

4. The Licensee shall notify the Board in writing, a soon as practically possible, of any intent to enter into a Care and Maintenance Phase. The notification shall include plans for maintaining compliance with the Terms and Conditions of the Licence.

5. The Licensee shall review the Plans referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan should incorporate design changes and adaptive engineering required and implemented during Construction and on the basis of actual site conditions and monitoring results over the life of the project.

6. The Licensee shall implement progressive reclamation, including progressive covering of the tailings and if possible revegetation as soon as practically possible.

Schedules are provided for:

A – Scope, Definitions and Enforcement
B – General Conditions
D – Conditions Applying to Construction
I – Conditions Applying to General and Aquatic Effects Monitoring

Schedule A – Scope, Definitions, and Enforcement

In this Licence: 2AM-MEA0815

"**Abandonment**" means the permanent dismantlement of a facility so it is permanently incapable of its intended use. This includes the removal of associated equipment and structures;

"**Act**" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

"**Acid Rock Drainage (ARD)**" means the production of acidic leachate, seepage or drainage from underground workings, open pits, ore piles, waste rock, construction rock that can lead to the release of metals to groundwater or surface water during the life of the Project and beyond closure;

"**Acutely Lethal Effluent**" means effluent as defined in the *Metal Mining Effluent Regulations* SOR/2002-222 dated 6 June 2002;

"**Adaptive Management**" means a management plan that describes a way of managing risks associated with uncertainty and provides a flexible framework for mitigation measures to be implemented and actions to be taken when specified thresholds are exceeded;

"**Addendum**" means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report. Also considered to be an appendix or supplement;

"**All Weather Private Access Road**" means the 115 kilometre all weather access road and associated water crossings between the Hamlet of Baker Lake and the Meadowbank Gold Project site as described in the application dated, October 26, 2006;

"**Amendment**" means a change to any terms and conditions of this Licence, through application to the NWB, requiring a change, addition, or deletion of specific terms and conditions of the Licence;

"**Analyst**" means an Analyst designated by the Minister under section 85 (1) of the *Act*;

"**Annually**" means, in the context of monitoring frequency, one sampling event occurring every 365 days with a minimum of 200 days between sampling events;

"**Aquatic Effects Monitoring Plan (AEMP)**" means a monitoring program designed to determine the short and long-term effects in the aquatic environment resulting from the Project, to evaluate the accuracy of impact predictions, to assess the effectiveness of planned impact mitigation measures and to identify additional impact mitigation measures to avert or reduce environmental effects;

"**Attenuation Pond #1**" means the facility designed as part of the Contact Water Collection System, implemented during the Pre-development phase, to retain contact water for water quality monitoring and treatment, if necessary, prior to discharge to Second Portage Lake as described in the Water Licence Application document entitled "*Waste and Water Management Plan for Mine Pre-Development Work, Spring 2008*" dated March 2008.;

"**Baker Lake Marshalling Facility**" means the facilities associated with the Meadowbank Project, located within the Hamlet of Baker Lake, that includes the barge unloading facilities, a lay-down, storage and marshalling area, a fuel tank farm, ammonium nitrate and explosive storage areas, and associated access roads, described in the Application filed with the NWB on April 8, 2007;

"**Batch Concrete Plant**" means the plant used to mix cement, aggregate, and water to produce concrete for footings, foundations and floors during construction as described in the Water Licence Application document entitled "*Pre-Development Batch Concrete Plant Description Agnico-Eagle Meadowbank Project*" dated January 9, 2008;

"**Bayzone Dewatering Dike**" means the structure designed to isolate the Portage open pit mining area from Third Portage Lake, for the purpose of dewatering and development of the Third Portage Open Pit, as described in the Water Licence Application document entitled "*Final Report – Detailed Design of Dewatering Dikes Meadowbank Gold Project*" Volumes 1, 2 and 3, dated March 13, 2007 and "*Report Addendum Detailed Dewatering Dikes Meadowbank Gold Project*" dated July 12, 2007, and illustrated in DWGs 6000-4, and 6000-24 to 6000-27, dated March 13, 2007, Golder Associates Project Number 06-1413-081;

"**Biannual**" means, in the context of monitoring frequency, one sampling event occurring every six months with a minimum of one hundred eighty days between sampling events;

"**Board**" means the Nunavut Water Board established under Article 13 of the *Nunavut Land Claims Agreement* and under section 14 of the Act;

"**Canadian Council of the Minister of Environment (CCME)**" means the organizations of Canadian Ministers of Environment that sets guidelines for environmental protection across Canada such as the Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life;

"**Care and Maintenance**" in respect of a mine, means the status of the facility when the Licensee ceases production or commercial operation temporarily for an undefined period of time;

"Central Dike" means the structure, designed to isolate the Tailings Storage Facility from Second Portage Lake for the purpose of retaining tailings as described in the Water Licence Application documents entitled "*Final Report – Detailed Design of Central Dike Meadowbank Gold Project*" dated March 16, 2007, Volumes 1,2 and 3 and as illustrated in DWGs 4000-7 and 4000-17, dated January 10, 2007, Golder Associates Project Number 06-1413-089;

"**Chief Administrative Officer**" means the Executive Director of the Nunavut Water Board;

"**Closure**" means when an Operator ceases operations at a facility without the intent to resume mining activities in the future;

"**Commercial Operation**" in respect of a mine, means an average rate of production that is equal to or greater than 25% of the design capacity of the mine over a period of ninety consecutive days;

"**Construction**" means any activities undertaken to construct or build any component of, or associated with, the development of the Meadowbank Gold Project, as described in the Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted to the Board throughout the regulatory process;

"**Contact Water**" means any water that may be physically or chemically affected by mining activities;

"**Contact Water Collection System**" means the system of trenches, attenuation ponds #1 and #2, lakes #1 and #2 designed to manage water that may be affected physically or chemically by mine pre-development activities as described in the Water Licence Application document entitled "*Waste and Water Management Plan for Mine Pre-Development Work Spring 2008 Agnico-Eagle Meadowbank Project*" dated March 2008;

"CREMP" means Core Receiving Environmental Monitoring Program;

"**Dam Safety Guidelines**" means the *Canadian Dam Association (CDA) Dam Safety Guidelines (DSG), January 1999* or subsequent approved editions;

"**Deleterious Substances**" means a substance as defined in section 34(1) of the *Fisheries Act;*

"**Deposit**" means the placement of waste rock, tailings or other solids materials on land or in water;

"**Discharge**" means the release of any water or waste to the receiving environment;

"**Dissolved Metals**" means the suite of metals referred to in Group 4 of Table 1 – Monitoring Groups located in Schedule J of this Licence. Dissolved metals shall be analyzed on a filtered sample;

"**Domestic Waste**" means all solid waste generated form the accommodations, kitchen facilities and all other site facilities, excluding those hazardous wastes associated with the mining and processing of ore;

"**East Contact Water Pond**" means the storage pond located in the southeast corner of the Baker Lake Marshalling Facility that receives contact water as described in the Water Licence Application document for 8BC-MEA0709 entitled "*Water Use and Management Plan Baker Lake Marshalling Area Meadowbank Gold Project*" dated March 8, 2007;

"**East Dewatering Dike (Second Portage Dewatering Dike)**" means the structure designed to

isolate the a portion of the northwest arm of Second Portage Lake, for the purpose of dewatering and development of the North Portage Open Pit, as described in the Water Licence Application documents entitled "*Final Report – Detailed Design of Dewatering Dikes Meadowbank Gold Project*" Volumes 1, 2 and 3, dated March 13, 2007; and "*Report Addendum Detailed Dewatering Dikes Meadowbank Gold Project*" dated July 12, 2007, and illustrated in DWGs 6000-5, 6000-28, and 6000-29, dated March 13, 2007, Golder Associates Project Number 06-1413-081;

"**Effluent**" means the liquid discharge from all site water management facilities;

"**Emulsion Plant (Explosives Mixing Facility)**" means the facility designed for storage of Ammonium Nitrate, detonators, and explosives; and designed for the mixing and storage of Ammonium Nitrate Fuel Oil (ANFO), as illustrated in Appendix F of the Water Licence Application Supplemental document entitled "*AEM's Response to Pre-Hearing Commitments*" dated March 7, 2008, DWG. Number 600-C-0130 entitled "Plantsite Infrastructure Emulsion Plant Location and Finish Grading – Plan" dated March 2007, Hatch Project Number 3251744;

"**Engineer**" means a professional engineer registered to practice in Nunavut in accordance with the *Engineering, Geological and Geophysical Act (Nunavut)* S.N.W.T. 1998, c.38, s.5;

"**Engineering Geologist**" means a professional geologist registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization is the investigation and interpretation of geological conditions for civil engineering purposes;

"**Engineered Structure**" means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

"**Final Discharge Point**" in respect of an effluent, means an identifiable discharge point of a mine beyond which the operator of the mine no longer exercises control over the quality of the effluent (Metal Mining Effluent Regulations, SOR/2002-222, 6 June, 2002);

"**Fresh Water Intake Barge**" means the pre-packaged floating water pump barge fabricated and supplied by Chamco Industries Ltd. of Vancouver, for the purpose of supplying freshwater to the Meadowbank Project as illustrated in Appendix A of the Water Licence Application document entitled "*Meadowbank Gold Project Type A Water Licence Application*" dated August 2007, DWG Numbers C1011158-21, C1011158-22, and C1011158-23, dated 27.06.05, Chamco Job No. 1011160ABS;

"**Geotechnical Engineer**" means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization with the engineering properties of earth materials in dealing with man-made structures and earthworks that will be built on a site. These can include shallow and deep foundations, retaining walls, dams, and embankments;

"**Goose Island Dewatering Dike**" means the structure designed to isolate the Goose Island area

from Third Portage Lake for the purpose of dewatering and development of the Goose Island Pit, as described in the Water Licence Application document entitled "*Final Report – Detailed Design of Dewatering Dikes Meadowbank Gold Project*" Volumes 1, 2 and 3, dated March 13, 2007 and "*Report Addendum Detailed Dewatering Dikes Meadowbank Gold Project*" dated July 12, 2007, and illustrated in DWGs 6000-3, and 6000-19 to 6000-23, dated March 13, 2007, Golder Associates Project Number 06-1413-081;

"**Grab Sample**" means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

"**Greywater**" means the component of effluent produced from domestic use (i.e. washing, bathing, food preparation and laundering), excluding sewage;

"**Ground Water**" means water that occupies pores and fractures in rock and soil below the ground surface in a liquid or frozen state;

"**Hazardous Materials**" means a contaminant which is a dangerous good that is no longer used for its original purpose and is intended for recycling, treatment, disposal or storage;

"**ICP Metals Scan**" means, for the purpose of the Licence, elements detected in an inductively coupled plasma (ICP) mass spectrometer. Metal parameters should be consistent with baseline data previously collected and include any other metals of concern or interest;

"**Incinerator**" means the dual chamber, high temperature facility designed with the capacity to service the camp as described in the Water Licence Application document entitled "*Incineration Waste Management Plan, Meadowbank Gold Project*" dated December 19, 2007 and the Hatch Specification dated April, 2008 Inquiry MDB-S-M-268, REV.OC;

"**Independent Geotechnical Expert Review Panel**" means the panel of geotechnical specialists established by AEM to review the designs and performance of the dikes and dams;

"**Inspector**" means an Inspector designated by the Minister under section 85 (1) of the Act;

"**Interim Closure and Reclamation Plan**" means a conceptual detailed plan on the reclamation of mine components which will not be closed until the end of the mining operations, and operational detail for components which are to be progressively reclaimed throughout the mine life;

"**Landfill ~~#1~~ (Construction and Operations Landfill)**" means the facility to be constructed and operated until year 9 of the mine life and designed to contain non-salvageable, non-organic, non-hazardous, solid wastes from mining activities that cannot be incinerated, as described in the Water Licence Application document entitled "*Landfill Design and Management Plan*" dated April 27, 2007 and the letter from Agnico-Eagle Mines Ltd. to Larry Connell regarding "*Landfill*

Design and Management Plan Supplementary Information Meadowbank Gold Project, Nunavut" containing DWGS 2 and 3 dated November 27, 2007. Golder Associates Project Number 06-1413-089;

"**Landfill ~~#2~~ (Demolition Landfill)**" means the facility to be developed on top of the Portage Waste Rock Storage Facility later in mine life as described in the Water Licence Application document entitled "*Landfill Design and Management Plan*" dated April 27, 2007 and the letter from Agnico-Eagle Mines Ltd. to Larry Connell regarding "*Landfill Design and Management Plan Supplementary Information Meadowbank Gold Project, Nunavut*" containing DWGS 2 and 3 dated November 27, 2007, Golder Associates Project Number 06-1413-089;

"**Landfarm**" means the lined, engineered facility designed to treat petroleum hydrocarbon contaminated snow and soil that may be generated during mining activities using bioremediation as described in the Water Licence Application document entitled "*Landfarm Design and Management Plan Meadowbank Gold Project*" containing DWGS 2, 3, 4 and 5 dated November 27, 2007, Golder Associates Project Number 07-1413-0047;

"**Licence**" means this Type "A" Water Licence 2AM-MEA0815, issued by the Nunavut Water Board in accordance with the *Act*, to Agnico-Eagle Mines Ltd. (AEM) for the Meadowbank Project;

"**Licensee**" means to whom Licence 2AM-MEA0815 is issued to or assigned;

"**Marshalling Area Bulk Fuel Storage Facility**" means the facility, constructed to contain a nominal capacity of approximately twenty (20) million litres of diesel fuel and all associated infrastructure, as described in the Application dated April 8, 2007 and all supporting documentation;

"**Maximum Average Concentration**" means the average concentration of any four consecutively collected samples taken from the identical sampling location and taken during any given timeframe;

"**Maximum Monthly Mean**" means the average concentration of all samples collected over a thirty day period from the identical sampling location;

"**Metal Leaching**" means the mobilization of metals into solution under neutral, acidic or alkaline conditions;

"**Mine Site Bulk Fuel Storage Facility**" means the facility, constructed to contain a nominal capacity of approximately five (5) million litres of diesel fuel and all associated infrastructure, as described in the Amendment Application for Water Licence 2BE-MEA0813 dated May 1, 2006 and all supporting documentation;

"**Mine Water**" means any water, including Ground Water, that is pumped or flows out of any underground workings or open pit;

"**Minister**" means the Minister of Indian and Northern Affairs Canada;

"**Modification**" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work;

"**Monitoring Program**" means the program to collect data on surface water and Ground Water quality to assess impacts to the environment of an appurtenant undertaking;

"**Monthly**" means, in the context of monitoring frequency, one sampling event occurring every 30 days with a minimum of 21 days between sampling events;

"**Non-Contact Water**" means the runoff originating from areas unaffected by mining activity that does not come into contact with developed areas;

"**Nunavut Land Claims Agreement**" **(**NLCA) means the "*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*," including its preamble and schedules, and any amendments to that agreement made pursuant to it;

"**Operations**" means the set of activities associated with mining, ore processing and recovery of gold; excluding construction and decommissioning activities;

"**Operator**" means the person who operates, has control or custody of, or is in charge of a mine or recognized closed mine;

"**Portage Attenuation Pond**" means the facility located in the basin at the northwest end of the northwest arm of Second Portage Lake where mine site contact water will be discharged, and where water in the pond will be reclaimed to satisfy mill process water make up requirements with any excess water being treated if required and discharged to Third Portage Lake as described in the Water Licence Application Document entitled "*Meadowbank Gold Project Mine Waste and Water Management Plan*" dated August 2007;

"**Portage Waste Rock Storage Facility**" means the facility designed to store waste rock from the Portage and Goose Island open pits as described in the Water Licence Application document entitled "*Meadowbank Gold Project Mine Waste and Water Management Plan*" dated August 2007;

"**Pre-development**" means the phase of the Project that occurs before the start of construction to allow for the development of a stockpile of broken rockfill material that will be required to construct the outer shells of the East Dewatering Dike;

"**Progressive Reclamation**" means actions that can be taken during mining operations before permanent closure, to take advantage of cost and operating efficiencies by using the resources available from mine operations to reduce the overall reclamation costs incurred. It enhances environmental protection and shortens the timeframe for achieving the reclamation objectives and goals;

"**Project**" means the Meadowbank Project as outlined in the Final Environmental Impact Statement and supplemental information submitted by Cumberland Resources Limited to the

Nunavut Impact Review Board (NIRB) as well as the Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted by the Meadowbank Mining Corporation and Agnico -Eagle Mines Ltd. to the Nunavut Water Board throughout the regulatory process. It comprises an open pit mine, an all weather private access road from Baker Lake to the mine site, and a marshalling facility in the Hamlet of Baker Lake;

"**Quarry**" means the areas of surface excavation for extracting rock material for use as construction materials along the All Weather Private Access Road, as identified in the document entitled "*Meadowbank Gold Project 2007 Annual Report All-Weather Private Access Road*";

"**Quality Assurance / Quality Control (QA/QC)**" Quality Assurance means the system of activities designed to better ensure that quality control is done effectively; Quality Control means the use of established procedures to achieve standards of measurement for the three principle components of quality: precision, accuracy and reliability;

"**Quarterly**" means, in the context of monitoring frequency, one sampling event occurring every three months with a minimum of ninety days between sampling events;

"**Reclamation**" means the process of returning the mine sites and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities;

"**Receiving Environment**" means both the aquatic and terrestrial environments that receive any discharge resulting from the Project;

"Reclaim Pond" means the facility located within the Tailings Storage Facility, designed to contain process (tailings related) water, and where water in the pond will be used to satisfy mill process water make up requirements as described in the Water Licence Application document entitled "*Meadowbank Gold Project Mine Waste and Water Management Plan*" dated August 2007;

"**Recognized Closed Mine**" means a recognized closed mine as defined by section (1) of the *Metal Mining Effluent Regulations* SOR/2002-222 dated 6 June 2002;

"**Regulations**" means the *Northwest Territories Water Regulations SOR/93-303 8 June, 1993*;

"**Saddle Dam**" means the structures located around the Tailings Storage Facility including the North Saddle Dam and the South Saddle Dam where the South Saddle Dam is designed as a permanent tailings retaining structure and the North Saddle Dam is to act as a berm, as described in the Water Licence Application documents entitled "Final Report – Detailed Design of Central Dike Meadowbank Gold Project" dated March 16, 2007, Volumes 1, 2 and 3 and as illustrated in DWGs 4000-18 and 4000-20, dated January 10, 2007, Golder Associates Project Number 06-1413-089;

"**Seepage**" means any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged through open pits, runoff from waste rock storage facilities, ore stockpile areas, quarries,

landfill or landfarm areas;

"**Sewage**" means all toilet wastes and greywater;

"**Sewage Treatment Plant**" means the rotary biological contactor sewage treatment plant described in the Water Licence Application document entitled "*Pre-development Camp and Sewage Treatment Plant Description for the Meadowbank Project Site*" dated March 05, 2008;

"**Short Term Maximum**" means the maximum concentration of all samples collected over a 24 hour period or less taken from the identical sampling location;

"**South Camp Dike**" means the dike that encloses the Goose Island area along with the Bay Zone Dewatering Dike, Goose Island Dewatering Dike, and nearby land, such that it can be isolated from Third Portage Lake as illustrated in Figure 3.1 of the Water Licence Application document entitled "*Meadowbank Gold Project Type A Water Licence Application*" dated August 2007;

"**Stormwater Dike**" means the structure designed to isolate the Portage Attenuation Pond from tailings as described in the Water Licence Application documents entitled "*Final Report – Detailed Design of Central Dike Meadowbank Gold Project*" dated March 16, 2007, Volumes 1, 2 and 3 and as illustrated in DWG 4000-19, dated January 10, 2007, Golder Associates Project Number 06-1413-089;

"**Stormwater Management Pond**" means the facility that incorporates the existing Tear Drop Lake designed with impervious walls to contain treated sewage and contact water as described in the Water Licence Application document entitled "*Pre-development Camp and Sewage Treatment Plant Description for the Meadowbank Project Site*" dated March 05, 2008;

"**Sump**" means an excavation in impermeable soil for the purpose of catching or storing water or waste;

"**Tailings Storage Facility**" means the facility designed to permanently contain the solid fraction of the mill tailings, located in the northwest arm of the partially dewatered Second Portage Lake. The facility includes the Reclaim Pond, the Central Dike, Saddle Dams, and the Stormwater Dike;

"**Third Portage Lake Outfall Diffuser**" means the effluent pipe located in low value fish habitat within Third Portage Lake, designed to discharge and enhance mixing of effluent from the Portage Attenuation Pond in the receiving environment as described in the Water Licence Application document entitled "*Design for the Third Portage Lake Effluent Outfall Diffuser Meadowbank Gold Project, Nunavut*" dated November 27, 2007;

"**Traditional Knowledge**" means the practical knowledge that has been gathered through the experience of living in close contact with nature and has been passed along or communicated orally, and handed down from generation to generation;

"**Total Metals**" means the suite of metals referred to in Group 4 of Table 1 – Monitoring Groups

located in Schedule J of this Licence. Total metals shall be analyzed on an un-filtered sample;

"**Use**" means use as defined in section 4 of the Act;

"**Vault Attenuation Pond**" means the facility located in the Vault mining area where contact water including pit water will be discharged and treated, if required, prior to final discharge to Wally Lake as described in the Water Licence Application Document entitled "*Mine Waste and Water Management Plan*" dated August 2007;

"**Vault Dewatering Dike**" means the structure designed to isolate Vault Lake from Wally Lake, for the purpose of dewatering and development of the Vault Open Pit and allow for storage of effluent in the Vault Attenuation Pond as illustrated in Figure 3.1 of the Water Licence Application document entitled "*Meadowbank Gold Project Type A Water Licence Application*" dated August 2007;

"**Vault Haul Road Crossing**" means the crossing located at the outlet of Turn Lake to Drill Tail Lake along the road that connects the Portage mining area to the Vault mining area, as described in the Water Licence Application document entitled "*Meadowbank Gold Project, No Net Loss Plan*" dated November 2006;

"**Vault Waste Rock Storage Facility**" means the facility designed to store waste rock from the Vault open pit as described in the Water Licence Application document entitled "*Meadowbank Gold Project Mine Waste and Water Management Plan*" dated August 2007;

"**Wally Lake Outfall Diffuser**" means the effluent pipe located in low value fish habitat within Wally Lake, designed to discharge and enhance mixing of effluent from the Vault Attenuation Pond in the receiving environment as described in the Water Licence Application document entitled "*Conceptual Design of the Effluent Outfall Diffuser for Wally Lake*" dated July 25, 2007;

"**Waste**" means waste as defined in section 4 of the Act;

"**Waste Rock**" means all unprocessed rock materials that are or were produced as a result of mining operations and have no current economical value;

"**Waste Water**" means the water generated by site activities or originates on-site that requires treatment or any other water management activity;

"**Water**" means water as defined in section 4 of the Act;

"**Water Supply Facilities**" means the facilities designated for the supply of water including the Fresh Water Intake Barge at Third Portage Lake, the Reclaim Barge, and the Emulsion Plant fresh Water intake;

"**Waste Disposal Facilities**" means all facilities designated for the disposal of waste including: the mine site Sewage Treatment Plant, Landfill ~~#1, Landfill #2~~, Landfarm, Tailings Storage Facility, Portage Waste Rock Storage Facility, Vault Waste Rock Storage Facility, Portage Attenuation Pond and Vault Attenuation Pond;

"**Water Licence Application**" for the purposes of this Licence includes the totality of the NWB and NIRB Public Registries established as a result of the filing of the application dated March, 2003, including Supporting Documents, and Technical Meeting Information Supplement documents;

"**Weekly**" means, in the context of monitoring frequency, one sampling event occurring every 7 days with a minimum of 5 days between sampling events.

Schedule B - General Conditions

The Annual Report referred to in Part B Item 5, shall include:

CONSTRUCTION

1. For the dikes and dams:
   a. An overview of methods and frequency used to monitor deformations, seepage and geothermal responses;
   b. A comparison of measured versus predicted performance;
   c. A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk;
   d. As-built drawings of all mitigative works undertaken;
   e. Any changes in the design and/or as-built condition and respective consequences of any changes to safety, water balance and water quality;
   f. Data collected from instrumentation used to monitor earthworks and an interpretation of that data;
   g. A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams; and
   h. The monthly and annual quantities of seepage from dikes and dams in cubic metres;

WATER

2. Results of lake level monitoring conducted under the protocol developed as per Part D Item 11.

3. Summary of reporting results for the Water Balance Water Quality model and any calibrations as required in Part E Items 6 and 7.

4. The bathymetric survey(s) conducted prior to each year of shipping at the Baker Lake Marshalling Facility;

WASTE

5. Geochemical monitoring results including:
   a. Operational acid/base accounting and paste pH test work used for waste rock designation (PAG and NPAG rock);
   b. As-built volumes of waste rock used in construction and sent to the Waste Rock Storage Facilities with estimated balance of acid generation to acid neutralization capacity in a given sample as well as metal toxicity;
   c. All monitoring data with respect to geochemical analyses on site and related to roads, quarries, and the All Weather Access Road;
   d. Leaching observations and tests on pit slope and dike exposure;
   e. Any geochemical outcomes or observations that could imply or lead to environmental impact;
   f. Geochemical data associated with tailings solids, tailings supernatant, cyanide leach

residue, and bleed from the cyanide destruction process including an interpretation of the data; and

g. Results related to the road quarries and the All Weather Private Access Road.

6. Volumes of waste rock used in construction and placed in the Rock Storage Facilities;

7. An update on the remaining capacity of the Tailings Storage Facility;

8. Summary of quantities and analysis of seepage and runoff monitoring from the landfills;

9. A summary report of solid waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal;

10. Report of Incinerator test results including the materials burned and the efficiency of the Incinerator as they relate to water and the deposit of waste into water;

SPILLS

11. A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken;

MODIFICATIONS

12. A summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities;

MONITORING

13. The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I;

14. The results of monitoring under the AEMP;

15. Results of monitoring pursuant to the Fault Testing and Monitoring Plan (August 2007);

CLOSURE

16. A summary of any progressive closure and reclamation work undertaken including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling;

17. A summary of on-going field trials to determine effective capping thickness for the Tailings Storage Facility and Waste Rock Storage Facilities for the purpose of long term environmental protection;

18. An updated estimate of the current restoration liability based on project development

monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking;

PLANS/ REPORTS/ STUDIES

19. A summary of any studies requested by the Board that relate to Waste disposal, Water use or Reclamation, and a brief description of any future studies planned

20. Where applicable, revisions as Addendums, with an indication of where changes have been made, for Plans, Reports, and Manuals.

21. An executive summary in English, Inuktitut ~~and French~~ of all plans, reports, or studies conducted under this Licence;

GENERAL

22. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector;

OTHER

23. A summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions; and

24. Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.

Schedule C – Conditions Applying to Security

There is no Schedule for Part C – Conditions Applying to Security

Schedule D - Conditions Applying to Construction

1. The Construction Monitoring Report referred to in Part D Item 26 shall include:

    a. A summary of construction activities including photographic records before, during and after construction;
    b. As-built drawings,
    c. Documentation of field decisions that deviate from original plans and any data used to support these decisions;
    d. Discussion of mitigation measures implemented during construction and effectiveness;
    e. Monitoring undertaken in accordance with Part D;
    f. Blast vibration monitoring for quarrying activity carried out in close proximity to fish bearing waters; and
    g. Monitoring for sediment release from construction areas.

Schedule E – Conditions Applying to Water Use and Management

There is no Schedule for Part E – Conditions Applying to Water Use and Management

Schedule F - Conditions Applying to Waste Disposal and Management

There is no Schedule for Part F – Conditions Applying to Waste Disposal and Management

Schedule G – Conditions Applying to Modifications

There is no Schedule for Part G – Conditions Applying to Modifications

Schedule H – Conditions Applying to Emergency Response and Contingency Planning

There is no Schedule for Part H – Conditions Applying to Emergency Response and Contingency Planning

Schedule I - Conditions Applying to General and Aquatics Effects Monitoring

TABLE 1 - MONITORING GROUP

Group	Parameters
1	pH, turbidity, hardness, alkalinity, ammonia, ammonia nitrogen, total metals (~~-~~aluminum, arsenic, barium, cadmium, chloride, chromium, copper, fluoride, iron, lead, manganese, mercury, molybdenum, nickel, nitrate, selenium, silver, thallium, zinc), sulphate, total dissolved solids (TDS), TSS, total cyanide.
~~2~~	~~pH, turbidity, total dissolved solids (TDS), alkalinity, ammonia, arsenic, copper, lead, nickel, zinc,~~
~~3~~	~~pH, alkalinity, turbidity, hardness, ammonia nitrogen, nitrate, nitrite, chloride, fluoride, sulphate, TDS, **total and free cyanide for wells in ground water flow path of the tailings storage facility.** Dissolved Metals: aluminum, arsenic, barium, cadmium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium and zinc.~~
2~~4~~	**Total and Dissolved metals:** aluminum, antimony, arsenic, boron, barium, beryllium, cadmium, copper, chromium, iron, lithium, manganese, mercury, molybdenum, nickel, lead, selenium, tin, strontium, titanium, thallium, uranium, vanadium and zinc; **Nutrients:** Ammonia-nitrogen, total kjeldahl nitrogen, nitrate nitrogen, nitrite-nitrogen, ortho-phosphate, total phosphorous, total organic carbon, total dissolved organic carbon and reactive silica; ~~-~~**Conventional Parameters:** bicarbonate alkalinity, chloride, carbonate alkalinity, turbidity conductivity, hardness, calcium, potassium, magnesium, sodium, sulphate, pH, total alkalinity, TDS, ~~and~~ TSS, total cyanide and free cyanide.
3~~5~~	MMER parameters (total cyanide, arsenic, copper, lead, nickel, zinc, radium 226, total suspended solids, pH), sulphate, ~~and~~ turbidity and total aluminum.
~~6 *~~	~~pH, TSS, Electrical Conductivity, Total Ammonia, Total Arsenic, Total Trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), Oil and Grease, TPH (Total Petroleum Hydrocarbons), and BTEX (Benzene, Toluene, Ethylbenzene and Xylene)~~
4~~7 *~~	Total Arsenic, Total Copper, Total Lead, Total Nickel, TSS, Ammonia, Total Cyanide, Benzene, Toluene, Ethylbenzene, Xylene, TPH, ~~Lead,~~ Oil & Grease, pH
MMER	total cyanide, arsenic, copper, lead, nickel, zinc, radium 226, total suspended solids, pH, effluent volumes and flow rate of discharge, acute toxicity, Daphnia Magna and environmental effects monitoring (EEM).
Full Suite	Group 2~~4~~, Total Petroleum Hydrocarbons, Turbidity

~~* Groups 6 and 7 are referenced from 8BC-MEA0709~~

Comment [MM24]: AEM proposes a slightly revised Group 1 list parameters to provide clarity and less redundancy in sampling parameters groups. Group 1 will apply to all mines ite related to monitoring and has relevant long term contaminants identified in the original license and those identified in SNC 2014.

Comment [MM25]: AEM proposes to use Group 2 for all receiving water quality monitoring (as part of the AEMP, CREMP, pit reflooding and groundwater monitoring. It included all of the parameters listed in Group 1, 2, 3 and 4 in the original license and AEM proposes to also include turbidity, total cyanide and free cyanide.

Comment [MM26]: AEM proposes to use Group 3 parameters for evaluation prior to discharge and have added aluminum to the list.

Comment [MM27]: AEM proposes to use Group 4 for all tankfarm secondary storage facility discharge to land and have added Xylene and TPH for consistency.

TABLE 2 – MONITORING PROGRAM

Station	Description	Phase	Monitoring Parameters	Frequency
Mine Site				
ST-DC-1 to TBD	Monitoring stations during Dike Construction as defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 11	Construction	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 11	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 11
ST-DD-1 to TBD	Monitoring stations during Dike Dewatering as defined in ~~Final~~ Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 11	Construction	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 11	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D Item 11
ST-1	Water Intake for camp, mill and reflooding ~~and mill~~	Construction, early operation, late operation, closure	Volume (m^3)	Monthly
~~ST-2~~	~~Reclaim Water Intake~~	~~Construction, early operation, late operation, closure~~	~~Volume (m^3)~~	~~Monthly~~
ST-3	Water Intake for Emulsion Plant	~~Construction, early operation, l~~Late operation, closure	Volume (m^3)	Monthly
ST-4	Water reclaimed from Tailings Storage Facility	~~Early operation, l~~Late operation, closure	Volume (m^3)	Monthly
ST-5	Portage Area (east) diversion ditch	~~Early operation, l~~Late operation, closure	~~Group 5, Aluminum~~ Group 3	Monthly during open water
ST-6	Portage Area (west) diversion ditch	~~Early operation, l~~Late operation, closure	~~Group 5, Aluminum~~ Group 3	Monthly during open water
~~ST-7~~	~~Vault Area diversion ditch~~	~~Early operation, late operation, closure~~	~~Group 5, Aluminum~~	~~Monthly during open water~~
ST-8	East Dike Seepage Discharge	Late operation, closure	Group 3	Monthly
ST-9	Portage Attenuation Pond prior to discharge through Third Portage	Early operation	Full Suite	Prior to discharge and Weekly during discharge

	Lake Outfall Diffuser		Volume (m^3)	Daily during periods of discharge
			Acute Lethality	Once prior to discharge and Monthly thereafter
ST-10	Vault Attenuation Pond prior to discharge through Wally Lake Outfall Diffuser	Late operation	Full Suite	Prior to discharge and Weekly during discharge
			Volume (m^3)	Daily during periods of discharge
			Acute Lethality	Once prior to discharge and Monthly thereafter
ST-11	Tailings Storage Facility	Post closure	Group 1 ~~MMER, Ammonia - Nitrogen, Nitrate - Nitrogen, Nitrite - Nitrogen~~	Annually during open water
ST-12	Portage/ Goose Pit Lake	Post closure	Full Suite	Annually during open water season
ST-13	Vault Pit Lake	Post closure	Full Suite	Annually during open water
ST-14 (TEH-11)	Discharge to the TSF ~~land~~ from Landfarm sump at mine site	~~Pre-development, Construction, early operation, l~~Late operation, closure	~~Benzene, Toluene, Ethylbenzene, Lead, Oil & Grease~~ Group 4	Prior to discharge ~~and Weekly during discharge~~
			Volume (m^3)	Daily during periods of discharge
~~ST-15~~	~~Vault non-contact diversion ditch~~	~~Early operation, late operation, closure~~	~~Group 5, Aluminum~~	~~Monthly during open water~~
ST-16	Portage Rock Storage Facility	~~Early operation~~	~~Group 3~~	~~Bi-annually during open water~~
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
		Late operation	Group 1~~2~~	Monthly during open water
		Closure	Group 1~~3~~	Bi-annually during open water
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
ST-17**	North Portage Pit Sump	~~Early o~~Operation	Group 1~~2~~	Monthly during open water
			~~Group 3~~	~~Bi-annually during open water~~

			Volume (m^3)	Daily during periods of discharge
	Portage Pit Lake	Late operation	Group 2~~4~~	Monthly during open water
		Closure	Group 2~~3~~	Bi-annually during open water
~~ST-18~~	~~Portage Attenuation Pond~~	~~Early operation~~	~~Group 2~~	~~Monthly during open water~~
			~~Group 3~~	~~Bi-annually during open water~~
ST-19**	South Portage~~Third Portage~~ Pit Sump	Early operations	Group 1~~2~~	Monthly during open water
			~~Group 3~~	~~Bi-annually during open water~~
			Volume	Daily during periods of discharge
	Third Portage Pit Lake	Late operations	Group 2~~4~~	Monthly during open water
ST-20	Goose Island Pit Sump	Early operations	Group 1~~2~~	Monthly during open water
			~~Group 3~~	~~Bi-annually during open water~~
			Volume	Daily during periods of discharge
	Goose Island Pit Lake	Late operations	Group 2~~4~~	Monthly during open water
		Closure	Group 2~~3~~	Bi-annually during open water
ST-21	Tailings Reclaim Pond	~~Early operation (south of central dike)~~	~~Group 3, Cyanide~~	~~Monthly during open water~~
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
		Late operation ~~(north of central dike)~~	Group 1~~3, Cyanide~~	Monthly during open water~~Bi-annually during open water~~
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
ST-22	Tailings Storage Facility	~~Late operation~~	~~Group 3, Cyanide~~	~~Bi-annually during open water~~
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
		Closure (drainage runoff)	Group 2~~3, Cyanide~~	Bi-annually during open water

Comment [MM28]: This station has been replaced by ST-9 and no longer exist.

			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
ST-23	Vault Pit Sump	Late operations	Group 2	Monthly during open water
			~~Group 3~~	~~Bi-annually during open water~~
			Volume (m^3)	Daily during periods of discharge
	Vault Pit Lake	Closure	Group 2	Bi-annually during open water
~~ST-24***~~	~~Vault Rock Storage Facility~~	~~Late operation~~	~~Group 2~~	~~Monthly during open water~~
			~~Group 3~~	~~Bi-annually during open water~~
			~~Total Metals~~	~~Once annually immediately following spring freshet~~
		~~Closure (east ditch) ST-24-A~~	~~Group 3~~	~~Monthly during open water~~
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
		~~Closure (west ditch) ST-24-B~~	~~Group 3~~	~~Monthly during open water~~
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
ST-25	Vault Attenuation Pond	Late operation	Group 1~~2~~	Monthly during open water
			~~Total Metals~~	~~Once Annually immediately following spring freshet~~
			~~Group 3~~	~~Bi-annually during open water~~
~~ST-26~~	~~Vault Pit Lake~~	~~Closure~~	~~Group 4~~	~~Monthly during open water (flooding)~~
			~~Group 3~~	~~Quarterly (fully flooded)~~
ST-S-1 to TBD	Seeps (to be determined)	~~Construction~~	~~Group 3~~	~~Monthly during open water~~
		~~Early operations,~~ ~~I~~Late operations, closure	Group 1	Monthly or as found
ST-GW-1 to TBD	Groundwater wells (to be determined)	~~Construction,~~ Early operations, late operations, closure	Group 2~~3~~	Annually

ST-AEMP-1 to TBD	Receiving AEMP and CREMP	~~Construction, Early operations, l~~Late operations, closure	Group 2~~4~~	~~Monthly during open water season all AEMP stations. Monthly throughout year at a smaller number of locations (through ice)~~A minimum of 5 events per year at CREMP stations. Ideally 3 during open water and 2 during winter (through ice). TPL assay, NP2, NP1 and Dogleg ponds to be monitored monthly during open water (July, Aug, and Sept.) Monthly field limnology data collected throughout year at smaller number of locations (through ice)
ST-MMER-1 to TBD	Vault and Portage effluent outfall	~~Early and l~~Late operations	MMER	Weekly during open water
		~~8BC-TEH0809~~		
~~ST-27 and ST-28 (TEH-1 & TEH-2)~~	~~Water Intake for camp and concrete batch plant purposes~~	~~Pre-development, Construction~~	~~Volume for each purpose (m^3)~~	~~Monthly~~
~~ST-29 and ST-30 (TEH-3 & TEH-4)~~	~~Water, if any, accumulated in north and south pre-development zones~~	~~Pre-development~~	~~pH, Turbidity~~ ~~Metals using an ICP-Metals 36-element scan, Total Ammonia, Nitrate, Sulphate~~	~~Weekly~~ ~~Monthly~~
~~ST-31 and ST-32 (TEH-5 & TEH-6)~~	~~Water pumped from north and south pre-development zones to Contact Water Collection System~~	~~Pre-development~~	~~pH, Turbidity~~	~~Daily during periods of pumping~~
~~ST-33 and ST-34 (TEH-7 & TEH-8)~~	~~Contact Water Collection System Lakes #1 and #2~~	~~Pre-development, Construction~~	~~pH, Turbidity, Metals using an ICP-Metals 36-element scan, Total Ammonia, Nitrate, Sulphate~~	~~Weekly during periods of pumping from the pre-development pits~~

Comment [MM29]: AEM proposes these changes to correspond with CREMP revisions in 2012 and additional monitoring stations requested by KIA in 2014.

Comment [MM30]: AEM proposes to eliminate Station ST-27 to ST-36 as they no longer exist or never exist.

~~ST-35 (TEH-9)~~	~~Discharge from Lake #1 of Contact Water Collection System (Stormwater Management Pond) to Second Portage Lake~~	~~Pre-development, Construction~~	~~pH, TSS, T-Al, BOD_5, Fecal Coliforms, T-As, T-Cu, T-CN, T-Pb, T-Ni, T-Zn, T-Radium$_{226}$~~	~~Once prior to discharge and Weekly during periods of discharge~~
			~~Acute Lethality~~	~~Once prior to discharge and Monthly thereafter~~
			~~Volume (m3)~~	~~Daily during periods of discharge~~
	~~In addition, if discharge from Bulk Fuel Storage Facility directed to Lake #1~~		~~Benzene, Lead, Toluene, Ethylbenzene, Oil & Grease~~	~~Once prior to discharge and Weekly during periods of discharge~~
~~ST-36 (TEH-10)~~	~~Discharge from Lake #2 of Contact Water Collection System to Second Portage Lake~~	~~Pre-development, Construction~~	~~pH, TSS, T-As, T-Cu, T-CN, T-Pb, T-Ni, T-Zn, T-Radium$_{226}$~~	~~Once prior to discharge and Weekly during periods of discharge~~
			~~Acute Lethality~~	~~Once prior to discharge and Monthly thereafter~~
			~~Volume (m3)~~	~~Daily during periods of discharge~~
~~**8BC-MEA0709**~~				
~~ST-37 (MEA-1)~~	~~Water sample location at Baker Lake in close proximity to the construction facilities~~	~~Pre-development, construction, early operation, late operation, closure~~	~~Group 6~~	~~Annually~~
~~ST-38 (MEA-2)~~	~~East Contact Water Pond located in the south-east corner of the lay-down area~~	~~Pre-development, construction, early operation, late operation, closure~~	~~Group 6 & 7~~	~~Prior to discharge or transfer of Effluent~~
			~~Volume (m3)~~	~~Monthly~~
~~ST-39 (MEA-3)~~	~~West Contact Collection Pond located in the south-west corner of the lay-down area~~	~~Pre-development, construction, early operation, late operation, closure~~	~~Group 6 & 7~~	~~Prior to discharge or transfer of Effluent~~
			~~Volume (m3)~~	~~Monthly~~
ST-37	Secondary containment sump at the Bulk Fuel Storage Facility at Meadowbank	Late Operation, closure	Group 4	Prior to discharge or transfer of effluent
ST-38	Secondary containment sump at the Bulk Fuel Storage Facility in Baker Lake – Jet-A containement	Late Operation, closure	Group 4	Prior to discharge or transfer of effluent
ST-40 (MEA-4)	Secondary containment sump at the Bulk Fuel Diesel Storage Facility in Baker Lake	~~Pre-development, construction, early operation, l~~Late operation, closure	Group 4~~6 & 7~~	Prior to discharge or transfer of Effluent

Comment [MM31]: AEM proposes to removes station ST-37, ST-38, ST-39 and ST-41 and the associated parameters in the original license named Group 6 and 7. These are relics of the Type B license and are not applicable. AEM proposes to have consistent fuel containment discharge to land parameters and limits. ST-37 and ST-38 would be replace as described below.

~~ST-41 (MEA-5)~~	~~Water sample location at the ammonium nitrate storage area~~	~~Pre-development, construction, early operation, late operation, closure~~	~~Group 7~~	~~Prior to discharge or transfer of Effluent~~
~~ST-42 (MEA-6)~~	~~Water sample location at the explosive storage area~~	~~Pre-development, construction, early operation, late operation, closure~~	~~Group 7~~	~~Prior to discharge or transfer of Effluent~~

** ST-17 and ST-19 in Closure become one sampling point

~~*** During Closure, two contact water monitoring points will be assigned to the Vault Storage Facility at ST-24~~

Schedule J – Conditions Applying to Abandonment, Reclamation and Closure

There is no Schedule for Part J – Conditions Applying to Abandonment, Reclamation and Closure

10 REFERENCES

AEM (2014). 2013 Water Management Report and Plan. Meadowbank Mine. March 2014.

Azimuth (2012). Core Receiving Environmental Monitoring Program (CREMP): Design Document 2012 Meadowbank Mine. Prepared for Agnico-Eagle Mines Ltd. – Meadowbank Division. December 2012

Azimuth (2014). Core Receiving Environmental Monitoring Program 2013. Meadowbank Mine. Prepared for Agnico-Eagle Mines Ltd. – Meadowbank Division. March 2014.

Cumberland Resources Ltd. 2005. Mine Waste and Water Management. Part of the Environmental Impact Statement. October, 2005.

SNC Lavalin, 2013. Water Management Plan 2012. Prepared for Agnico-Eagle Mines Ltd. March, 2013.

APPENDIX A – LIST OF LEASES, PERMITS AND AUTHORIZATIONS

Permit/License	Type	Licensor	Approved Ops	Status	Begin of term	End of term	Comments
66A/8-71-2	Land Lease	AANDC	All Weather Private Access Road construction, operation, maintenance and reclamation	Active	01-Jan-07	31-Dec-21	
66A/8-72-2	Land Lease	AANDC	Quarrying for the AWPAR	Active	01-Jan-07	31-Dec-16	
08-HCAA-CA7-00039	Freshwater Intake Pipe Screen Approval	DFO	Freshwater Intake Pipe at Exploration Camp	Active	06-Jan-09		No obligations or renewal deadlines. Approval does not have expiry date.
08-HCAA-CA7-00040 (NU-08-0040)	Freshwater Intake Pipe Screen Approval	DFO	Freshwater Intake Pipe at Meadowbank Camp	Active	06-Jan-09		No obligations or renewal deadlines. Approval does not have expiry date.
NU 03-191 s30	Freshwater Intake	DFO	Freshwater Intake at Emulsion plan	Active	16-Nov-09		No obligations or renewal deadlines. Approval does not have expiry date.
FWISL-ACC-07-08-056	Animal Use Protocol	DFO		Expired		31-Mar-08	
FWI-ACC-2009-027	Animal Use Protocol	DFO		Expired	04-Jun-09	31-Dec-09	
FWI-ACC-2008-2009-054	Animal Use Protocol	DFO		Expired	07-Jul-08	31-Mar-09	
FWI-ACC-2008-2009-064	Animal Use Protocol	DFO		Expired	31-Jul-08	31-Mar-09	
FWI-ACC-2010-022	Animal Use Protocol	DFO		Expired	09-Jun-10	31-Dec-10	
FWI-ACC-2011-025	Animal Use Protocol	DFO		Expired	17-Jun-11	31-Dec-11	
FWI-ACC-2012-038	Animal Use Protocol	DFO		Expired	13-Jun-12	01-Oct-12	
FWI-ACC-2013-033	Animal Use Protocol	DFO		Expired	11-Jun-13	01-Nov-13	

S-08/09-1042-NU	Licence to fish for scientific purposes	DFO		Expired	11-Aug-08	31-Oct-08	
S-08/09-1040	Licence to fish for scientific purposes	DFO		Expired	14-Jul-08	30-Sep-08	
S-09/10-1027-NU	Licence to fish for scientific purposes	DFO		Expired	24-Jun-09	30-Sep-09	
S-10/10-1011-NU	Licence to fish for scientific purposes	DFO		Expired	17-Jun-10	15-Oct-10	
S-11/12-1015-NU	Licence to fish for scientific purposes	DFO		Expired	15-Jun-11	15-Oct-11	
S-11/12-1042-NU	Licence to fish for scientific purposes	DFO		Expired	10-Aug-11	31-Aug-11	
S-12/13-1023-NU	Licence to fish for scientific purposes	DFO		Expired	15-Jun-12	30-Sep-12	
S-13/14-1010-NU	Licence to fish for scientific purposes	DFO	AWPAR and on-site fisheries monitoring including CREMP	Expired	15-Jun-13	15-Oct-13	
S-13/14 3018-YK	Licence to fish for scientific purposes	DFO	Vault Fishout	Expired	15-Jul-13	31-Mar-13	
NU-03-0190	HADD Authorization - AWPAR (amendment #1 and #2)	DFO	AWPAR - Infilling of fish habitat as a result of water crossing construction affecting a total of 0.53 HU / 2793m3 of fish habitat	Expired	02-May-07	31-Dec-08	
NU-03-0191	HADD Authorization - Mine Site. Fisheries Act Authorization	DFO	Infilling of fish habitat as a result of infilling and dewatering of Second and Third Portage Lakes - dikes and pits + airstrip extension	Active	30-Jul-08	15-Dec-15	
NU-03-0191.02	s.32 Fisheries Act Authorization - Meadowba	DFO	Authorization for the fish destruction by means other than fishing during the dewatering of Bay Goose impoundment	Expired	22-Feb-11	31-Jul-12	

	nk Dewatering Bay Goose		area in Third Portage Lake				
NU-03-0191.03	Portage Pit and Bay Goose Fisheries Act Authorization	DFO	Second Portage Lake: Dewatering, excavation, dike and road footprint (east and central dikes) and in water placement of coarse material. Third Portage Lake : Dewatering, excavation, road footprint, Bay Goose and South Camp Dike footprints and in water placement of coarse material	Active	05-Mar-13	31-Dec-17	
NU-03-0191.04	Vault Fisheries Act Authorization	DFO	Dewatering, excavation, dike construction and placement of course material in Vault Lake basin	Active	02-Apr-13	31-Dec-17	
NU-08-0013	HADD Authorization - Western Channel	DFO	Infilling of fish habitat as a result of a temporary culvert installation affecting 1.01 HU on the westernmost channell connecting 2PL and 3PL	Expired	28-May-08	13-Jun-08	
NU-08-0052	Authorization for destruction of fish	DFO	Fisheries Act Sec.32 - destruction of fish arising from dewatering of NW arm of 2PL	Expired	02-Mar-09	31-Dec-10	
NU-10-0049	Vault Culvert Crossing	DFO	Vault Culvert Crossing	Active	25-Jan-11		No end term
MMER Sec 27.1 Approval TIA (08-HCAA-CA7-00191)	Letter of Approval	DFO	Authorization for deposition of tailings in TIA. Approval of Compensation Plan.	Active	14-Jan-10		TIA Habitat Compensation Plan
DvlptPA	Development Partnership Agreement	GN	700,000m3/annually - mining, milling & associated activities, operation of Baker Lake Facilities, operation of AWPAR	Active	17-Feb-07	17-Feb-22	As per article 11.1, Agreement remains in force until completion of Closure and Reclamation
L-51260	Baker Lake Marshalling Area	GN	Marshallimg Facility ; tank farm, explosive area, access road.	Active	01-Mar-10	01-Mar-13	Permit renewal on going

L-51261	Baker Lake Marshalling Area, Land Lease	GN	Baker Lake Spud Barge	Active	01-Mar-10	01-Mar-20	
L-51262	Baker Lake All Weather Private Access Road Section	GN	Municipal Lands portion of Tahek Lake AWPAR, Baker Lake, Nunavut	Active	01-Mar-10	01-Mar-20	
LUP-06-603-001 (a)	Land use permit	GN	AWPAR construction	Expired			
QP-06-603-001 (a)	Quarry Permit	GN	AWPAR Quarry 1 : authorization to take 85,388m3 of quarries bedrock - granite	Expired			
603-0-LUP-07-001	Land use permit	GN	Baker Lake Marshalling Area	Expired	01-May-07	01-May-08	
WL-2012-050	Wildlife Research Permit	GN	Ground survey of birds, nest, raptors, other animals, and wildlife signs. Must submit report at end of study	Expired	01-Jun-12	31-May-12	
Memerandum of Understandin g	Wildlife Research	GN	GN has requested that the Proponent participate in the Kivalliq Ungulate Monitoring Program and the Proponent desires to work collaboratively and in good faith to increase the common knowledge of caribou and muskonen for mutual benefit.	Active	11-Sep-13	11-Sep-16	
IIBA	Inuit Inpact Benefit Agreement	KIA	Inuit Impact Benefit Agreement	Expired	25-Mar-06	23-Jun-11	Reviewed every third year for material change and automatically renewed for a subsequent 3 year term. Under negotiation in March 2010 and renewal of IIBA in June 2011. The first version of IIBA is no longer valid -> refer to IIBA

							issued June 2013.
IIBA	Inuit Inpact Benefit Agreement	KIA	Inuit Impact Benefit Agreement	Active	23-Jun-11	23-Jun-14	Reviewed every third year for material change and automatically renewed for a subsequent 3 year term. IIBA June 2011 is the new version after negociation of 2010.
KVCA06Q11	Quarry Permit - AWPAR	KIA	Quarrying for All Weather Private Access Road, 254,546m3 of material	Active	02-Feb-07	31-Dec-21	Permit expires in 2022 or when the specified amount of material has been quarried
KVCA09Q09	Quarry Permit	KIA	Removal of 50,000m3 of gravel material - sand quarry for concrete production	Expired	03-Mar-09	03-Mar-11	Expires within 24 months or when material has been quarried
KVCA08Q10	Quarry Permit	KIA	Removal of 250,000m3 of gravel, sand, loam, mining backfill or shot rock from the land	Expired	15-May-08	15-May-12	Expires 12 months from the date hereof or when material has been quarried
KVPL08D280	Surface Production Lease (Amendment #1 and #2)	KIA	Surface Production Lease: Construction, operation and closure of the mine on Inuit owned land	Active	24-Jul-08	31-Dec-27	Production Lease Amended #1 Feb. 9th, 2009 ; Production Lease Amended #2 May 2, 2013
KVRW06F04	Right of Way Agreement - AWPAR (amendment #1)	KIA	All Weather Private Access Road (and Quarry - KVCA06Q11)	Active	01-Jan-07	31-Dec-21	
KVRW09F05	Right of Way Authorization	KIA	Winter Access Road for sand quarry	Expired	03-Mar-09	31-May-11	ROW expires one year before the sand quarry
Mine Water Comp Agrmt	Water Compensation Agreement - Mine	KIA	Compensation for water consumption at Meadowbank site and any changes in water quality, quantity or flow due to project activites	Active	14-Apr-08		Agreement terminates with C&R when KIA provides a letter of clearance

Road Water Comp Agrmt	Water Compensation Agreement - Road (amendment #1)	KIA	Compensation where development and operation of AWPAR has substantial effect on water quality, quantity or flow	Active	29-Jan-08		Agreement terminates following C&R of the road and all IOL affected by road
PC_NIRB-004	Project Certificate + modification condition 32	NIRB	Approval for the Meadowbank Project to proceed subject to its Terms & Conditions	Active	30-Dec-06	31-Dec-21	change in Condition 32 in September 15, 2010 (ATV access on AWPAR)
03-023-10N-M	Scientific Research License	NRI	Wind Data Collection	Expired	01-Jan-10	31-Dec-10	Multi-year license for January 1, 2010 - October 29, 2011 but needs to renewed each year
BL14-001-PL Vault	Subsurface Production Lease	NTI	Vault	Active	01-Jul-12	01-Jul-17	
2AM-MEA0815	Water License + Modification East Dike + Modification Airstrip + Amendment Fuel Tank Baker Lake	NWB	700,000 m3 annually - Milling, mining and associated activities at the Meadowbank Project site.	Active	10-Jul-08	31-May-15	Approved by the Minister on July 10, 2008 Modification East Dike approve on July 3, 2013 Modification Airstrip approved in 2012 Amendment Fuel Tank Baker Lake on May 5, 2010