October 1st, 2015

Sophia Granchinho
Senior Technical Advisor
Nunavut Impact Review Board
29 Mitik St
P.O. Box 1360
Cambridge Bay, NU
X0B 0C0

Re: NIRB File 03MN107 – AEM response to Information Requests received from Parties regarding AEM's Addendum to the Final Environmental Impact Statement for the Vault Pit Expansion Amendment Proposal for the Meadowbank Gold Mine Project

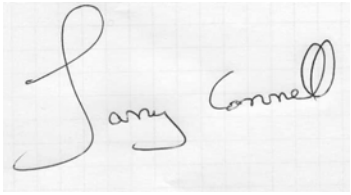
Dear Ms. Granchinho,

As requested, the following information and comments are intended to address the recommendations outlined in response to the NIRB Information requests and comments in the letter dated September 4th, 2015, *NIRB File 03MN107 – AEM response to Information Requests received from Parties regarding AEM's Addendum to the Final Environmental Impact Statement for the Vault Pit Expansion Amendment Proposal for the Meadowbank Gold Mine Project.*

Should you have any questions or require further information, please contact Stephane Robert at stephane.robert@agnicoeagle.com or 819.763.0229, Larry Connell or Ryan Vanengen (see below).

Regards,

Agnico Eagle Mines Limited – Meadowbank Division



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1.0 Aboriginal Affairs and Northern Development Canada IR

1.1 AANDC-IR #1: Impact Assessment Scope

Issue: Contradictory information concerning consideration of haul roads in the EIS Addendum.

Reference: EIS Addendum-Main Document Pages 45&75 Appendix C - Impact Assessment Tables 7-7 to 7-11

Concern: AEM mentions the construction and operation of a few additional haul roads connecting new pits and Vault Pit infrastructure as some of the changes that might result in impacts (See EIS Addendum Main Document, Page 75) but also states on Page 47 of the same document that "*As presented in Section 4.10.1 there are no anticipated changes to the All Weather Roads and no winter roads are proposed. Please refer to the FEIS as no additional information is provided in the EIS Addendum*". Furthermore, they assert in Tables 7-7 to 7-11 of Appendix C-Impact Assessment- that there are no new roads associated with the proposed amendment. This apparent contradictory creates the impression that hauls roads were not incorporated into the impact assessment analysis.

Information Request: The proponent should update the Impact Assessment to include the proposed haul roads, or provide rationale for exclusion from the Impact Assessment.

Importance of Issue: The lack of clarity makes it difficult to assess if the proposed additional haul roads were appropriately scoped and incorporated into the assessment of the potential impacts of site roads on various valued ecosystemic and socio-economic components. An assessment of the potential impacts associated with any new haul roads related to the proposed development is thus needed to clarify and complete the Impact Assessment and to facilitate the subsequent technical review of the Project.

AEM's Response:

AEM would like to clarify the statement made in Section 4.10.1 of the FEIS Addendum. In Section 4.10.1, AEM is referring to the "All Weather road and winter roads", which is defined in the NWB Type A License Schedule A, as "the 115 km road and associated water crossings between the Hamlet of Baker Lake and Meadowbank "; this road differs from haul roads, which AANDC has grouped together. The all weather road has been used, and will continue to be used to transport employees, fuel and supplies from the Baker Lake to the Meadowbank Mine. In Section 4.10.1, AEM has accurately distinguished the All Weather Road from haul roads in this Addendum as these roads are different in function, in construction (width and load) and in the volume of traffic. As a result, there are no new all weather roads or winter roads that are proposed for Phaser Pit and BB Phaser Pit.

AEM has not excluded haul roads in the impact assessment. In Section 4.20, AEM describes that the Vault haul roads, which connects the Meadowbank Mill and Vault Pit was approved in the original FEIS, and has since been constructed and is in operation. This ~8 km road, will continue to be used to feed Phaser Pit and BB Phaser Pit ore to the Meadowbank mill. Within the area of Phaser Lake, small spur haul roads will be constructed to connect the Phaser Pits to the existing Vault haul road (see Figure 4.10.1 in the addendum - in brown near the pits). These small spur roads will connect the Phaser Pit and BB Phaser Pit operations to the mill and to the existing Vault Infrastructure (Vault Shelter, fuel farm, etc). As stated in Section 4.19.1, overall, traffic on these

new roads will not increase as no additional mining equipment will be required for Phaser Pit and BB Phaser Pit operations. Rather it is a short extension of mining the Vault deposit, which was within the original scope of the socio-economics considered in the original Project certificate (9- 10 years; or 2009 - 2018 or 2019).

1.2 AANDC-IR #2: Water Quality

Issue: Evaluation of increased nutrient and metals loading on Wally Lake from discharge of Phaser Pit effluent during pit dewatering; and evaluation and assessment of potential short term or long term effects on Wally Lake water quality is not contained in the EIS Addendum. Results from 2014 and 2015 surface water monitoring are not provided in the EIS Addendum.

Reference: Ammonia Management Plan, Version 1, Feb. 2013 EIS Addendum-Main Document, Section 4.19.3.2, Page 71 -2014 Annual Report, Table 8.16.

Concern: Development of the Phaser pits will involve blasting and the potential release of blasting residues containing nitrogen compounds. The existing Ammonia Management Plan was presumably developed to mitigate excess ammonia resulting from blasting at the Vault Pit. Lakes in the Meadowbank Project area are identified as ultra-oligotrophic to oligotrophic (nutrient-poor), indicating very low levels of nutrients and sensitivity to enrichment from increased discharges of additional nitrogenous compounds from the Phaser Pit. Appendix G4 of the Meadowbank Gold Project 2014 Annual Report set the proposed threshold for ammonia-N in Wally Lake at 0.126 mg/L, resulting in a trigger value of 0.067 mg/L.

Ammonia-N concentrations of surface water samples collected during contact water discharge from the Vault Attenuation Pond in 2014 were 0.730 mg/L and 1.7 mg/L on July 8 and August 6, 2014 at the Vault Attenuation Pond; and 0.41, 0.37, and 0.22 mg/L at the Vault Attenuation Pond Discharge location in July and August, indicating a potential for excessive discharges of ammonia to Wally Lake. These levels at the Attenuation Pond Discharge location exceeded Water Licence grab sample discharge limits (40 mg/L) on July 31, 2014, and exceeded maximum average concentration limits (20 mg/L) on all three 2014 sampling events.

"Further review of 2014 water quality results for the Vault Attenuation Pond discharges to Wally Lake revealed that:

- Total phosphorous discharges were up to 30 times higher than concentrations in Wally Lake;
- The total aluminum concentration on August 6 exceeded CCME levels by almost 10 times;
- Total copper levels exceeded CCME concentrations on all three sampling events and was greater than 4 times higher than CCME levels on August 6; and
- Total copper, nickel, and lead concentrations were all higher at the Attenuation Pond Discharge on August 6 than on the same date at a sampling location distant from the discharge location.

Since Phaser Lake water will be directed to the Vault Lake Attenuation Pond during dewatering and subsequently discharged to Wally Lake, it is important to fully understand possible impacts (short term or long term) of this activity on the future anticipated water quality of Wally Lake."

Information Request: While the noted levels in the Vault Attenuation Pond did not exceed existing NWB Water Licence or Metal Mining Effluent Regulations (MMER) discharge limits, please provide available Wally Lake

water quality monitoring data for 2014 and 2015 to permit an evaluation of the potential impacts of Vault Lake dewatering and pit development and the planned dewatering of Phaser Lake on the ongoing and future water quality of Wally Lake.

Importance of Issue: As noted, lakes in the Meadowbank area, including Wally Lake have low concentrations of nutrients and salts so even minor increases could contribute to nutrient or metals enrichment in the downstream receiving waters, which could cause undesirable changes to downstream aquatic life. Thus, information on how previous Vault Lake and pit development activities have impacted Wally Lake would assist in evaluating the potential impacts of Phaser Lake dewatering on the ongoing and future water quality of Wally Lake.

AEM's Response:

AEM refers AANDC to CREMP annual monitoring reports for Wally Lake Water Quality data which can be found on the NIRB website. Data since 2008 can be found in the respective annual reports.

More specifically refer to the 2013 CREMP – Section 3.3.1 in the report to find Wally Lake WQ data.

http://ftp.nirb.ca/03-MONITORING/03MN107-MEADOWBANK%20GOLD%20MINE/03-ANNUAL%20REPORTS/02-PROPONENT/2013/01-REPORT/140415-03MN107-App%20G6-CREMP%202013-IA2E.pdf

2014 CREMP – refer to Section 3.3.1 in the report to find additional Wally Lake WQ data.

http://ftp.nirb.ca/03-MONITORING/03MN107-MEADOWBANK%20GOLD%20MINE/03-ANNUAL%20REPORTS/02-PROPONENT/2014/01-REPORT/150422-03MN107-2014%20Annual%20Report-App%20G4-IA1E.pdf

The CREMP 2015 data has been collected and will be provided in our 2015 annual report which is due on March 31st, 2016. As stated in Section 4.21.2.2 of the Addendum, AEM will continue to monitor the water quality prior to discharge, if necessary treat the water and follow the approved NWB dikes and dewatering management plans, which will be updated during the regulatory approval phase.

Furthermore, AEM directs the reviewer to review the dewatering activities described in Section 8.1.2 of the 2013 Meadowbank annual monitoring report which describes the successful dewater of Vault Lake (a total of 1,172,549 m3 in 2014). The same practices and facilities will be used for the dewatering and management of water for Phaser Lake.

http://ftp.nirb.ca/03-MONITORING/03MN107-MEADOWBANK%20GOLD%20MINE/03-ANNUAL%20REPORTS/02-PROPONENT/2013/01-REPORT/140415-03MN107-2013%20Annual%20Rpt-IA2E.pdf

1.3 AANDC-IR #3: Water Quality

Issue: Information on the proposed Phaser Lake dewatering monitoring program is not provided in the EIS Addendum.

Reference: EIS Addendum-Main Document, Section 4.21.2.2, Pages 112-113.

Concern: Section 4.21.2.2 of the EIS Addendum for the Meadowbank Project indicates that monitoring will be carried out during dewatering of Phaser Lake, but no details of this program are provided.

Information Request: Please provide details on the proposed Phaser Lake dewatering monitoring program, in particular, provide information on the proposed water quality sampling stations, sampling frequency and monitoring parameters to be monitored for the discharge from Phaser Lake, the Vault Attenuation Pond and downstream in Wally Lake.

Importance of Issue: Information on AEM's plan for monitoring the discharge of Phase Lake water through the Vault Attenuation Pond and subsequent release of this water into Wally Lake will help reviewers evaluate that the information being collected is (or will be) adequate and useful for determining if the water quality of Wally Lake is being (or will be) affected by the Phaser Lake dewatering activity.

AEM's Response:

As stated in Section 4.21.2.2. Water quality will be monitored during the dewatering of Phaser Lake by extending the use of the approved Vault Attenuation pond Station ST-10 or if during dewatering water may be sent directly from Phaser Lake to Wally lake. In this case station

AEM intends to transfer Phaser Lake water into the Vault Attenuation pond, treat if needed, and discharge the water into Wally Lake through the diffuser and in accordance with NWB Type A water License Part F Item 3, 4, 5, 11, 12 and Schedule II Table 1 and 2. The renewed Meadowbank Type A Licence can be found on the NWB website:

ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MEA1525%20Agnico/4%20LICENCE/1%20LICENCE/2015%20Renewal/

More specifically, Part D Item 8 requires that monitoring stations during dewater are established and shall not exceed the following limits:

8. Effluent from new dewatering activities shall be monitored at Monitoring Stations ST-DD-1 to ST-DD-TBD and not exceed the following Effluent quality limits:

Parameter	Maximum Monthly Mean	Short Term Maximum
Total Suspended Solids (TSS)	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

According to Schedule I Table 2, a station will be assigned during dewatering.

ST-DD-1 to TBD	Monitoring Stations during Dike Dewatering as defined in Water Quality Monitoring and Management Plan for Dike Construction and Dewatering referred to in Part D, Item 5	Construction	As defined in Final water Quality Monitoring and management Plan for Dike Construction and Dewatering referred to in Part D, tem 5	As defined in Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering as referred to in part D, Item 5

AEM intends to dewater Phaser Lake in 2016 and mine Phaser Pit and BB Phaser Pit in Q1 of 2017 during the winter. As a result, all of the water that accumulates during the freshet of 2017 will contribute to the reflooding of Phaser Pit. If these plans change and regulatory approvals are received on a different schedule, AEM will monitor the Vault Attenuation Pond water (which will receive Phaser Pit water during operations, if operational plans change) and prior to discharge will monitoring Station ST-10 as per Type A renewed license.

In this case, the Discharge of Effluent from the Vault Attenuation Pond (Part F Item 3 and 4) requires AEM to monitor Water Quality at Station ST-10 which shall be directed to Wally Lake through the Wally Outfall Diffuser and shall 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
TDS (mg/L)	1400	1400
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)	0.1	0.2
T-P (mg/L)	1.5	3.0
T-Zn (mg/L)	0.2	0.4
T-Cl^- (mg/L)	500	1000

In Part F Item 5: The Discharge of Effluent from a Final Discharge Point at Monitoring Program Stations ST-9 and ST-10, shall be demonstrated to be non-Acutely Lethal under the following test and as stipulated in Schedule I of the Licence: Acute Lethality of Effluents to Rainbow Trout (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13 Second Edition December 2000 (with May 2007 amendments).

In Part F Item 11: The Licensee shall confirm compliance with Effluent quality limits in Part F, Items 3, 4 and 8 prior to Discharge. In Part F Item 12: The Licensee shall provide at least ten (10) day notice to the Inspector prior to any planned Discharges from any facilities. The notice shall include the estimated volume proposed for Discharge and the receiving location.

AEM also refers AANDC to the Schedule II Table 1 and 2 that will apply during operations of the Phaser Pits in the summer:

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TABLE 1 – MONITORING GROUP

Group	Parameters
1	pH, turbidity, hardness, alkalinity, ammonia nitrogen, total metals (aluminum, arsenic, barium, cadmium, chloride, chromium, copper, fluoride, iron, lead, manganese, mercury, molybdenum, nickel, nitrite, nitrate, selenium, silver, thallium, zinc) sulphate, total dissolved solids (TDS), TSS, total cyanide. If CN total is detect in an analysis result; further analysis of CN Free and CN WAD will be triggered.
2	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, conductivity, hardness, calcium, potassium, magnesium, sodium, sulphate, pH, total alkalinity, TDS, and TSS, turbidity. Total cyanide and free cyanide. If CN total is detected above 0.05 mg/L in an analysis result for monitoring station in receiving environment; further analysis of CN WAD will be triggered.
3	MMER parameters (total cyanide, arsenic, copper, lead, nickel, zinc, radium 226, total suspended solids, pH), sulphate, turbidity and total aluminum.
4	Total Arsenic, Total Copper, Total Lead, Total Nickel, TSS, Benzene, Toluene, Ethylbenzene, Xylene, TPH, pH.
MMER	Total cyanide, arsenic, copper, lead, nickel, zinc, radium 226, total suspended solids, pH, effluent volumes and flow rate of discharge, acute toxicity (Rainbow Trout and Daphnia magna) and environmental effects monitoring (EEM).
Full Suite	Group 2, Total Petroleum Hydrocarbons, Turbidity. Acutely Lethality tests (Rainbow Trout and Daphnia magna) for discharge only.

ST-10	Vault Attenuation Pond prior to discharge through Wally Lake Outfall Diffuser	Late operations	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

Please refer to the relevant monitoring plans that are also available on the NWB website and stipulated in the NWB Type A License Item 13 which states:

The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing. The Board has approved (or accepted) the following Plans for implementation under the relevant sections in the Licence: Any changes to the plans deemed significant shall be considered as an amendment to the plan(s) or as a modification and must be approved by the Board.
a. Aquatic Effects Management Program (AEMP), Version 2 (Dec. 2012);
b. Core Receiving Environment Monitoring Program (CREMP), Design Document, Version 1 (Dec. 2012);
c. Water Quality Monitoring and Management Plan for Dike Construction and Dewatering, Version 4 (April 2010);
e. Quality Assurance/Quality Control (QA/QC) Plan, Version 2 (June, 2014) accepted by the Board;
f. Water Quality and Flow Monitoring Plan, Version 4 (January 2015);

Concurrent with the NIRB process, as per Part G Item 1 of the NWB Type A License (considerations applying to the modifications), AEM will intends to submit revised plans, specifically c) Water Quality Monitoring and Management for Dike Construction and Dewatering and f) Water Quality and Flow Monitoring Plan to include Phaser Pit dewatering and water management related to this IR.

Only two new stations are anticipated to be added to the Type A license within the Vault Mining Area (i.e. if needed, Phaser Pit and BB Phaser Pit sumps during late operation; and Phaser Pit Lake during closure will be added in Schedule I Table 2). Currently mining is anticipated for Q1 2017 and therefore all water that reports to Phaser Pits will contribute to reflooding of the pits. This water will be monitored as part of closure planning. If plans change, all water from Phaser Pit sumps during operation in the open water season will be sent to the Vault Attenuation pond and discharged according to Part F Item 4. No additional receiving water quality stations are anticipated to be added as ST-10 into Wally lake will continue to be the operating outfall for Phaser lake dewatering and Vault Attenuation discharge.

1.4 AANDC-IR #4: Water Quality

Issue: Characterization of seepage volumes or geochemistry based on pit wall geology is not provided in the EIS Addendum.

Reference: EIS Addendum-Main Document, Section 4.19.3.1 Page 70.

Concern: It is stated that in-pit seepage is not expected to significantly increase, and there will be no significant residual impacts on water quality. If the seepage volume or chemistry is not adequately characterized, and is of greater volume or contains higher metal values than initially assumed, it will affect water quality in the receiving environment.

Information Request: Please provide any available data on expected volumes of seepage from pit walls and water quality prediction results based on pit wall geology.

Importance of Issue:

This information is needed to help validate the current AEM prediction that no significant residual impacts on water quality are expected to result from groundwater seepage flowing into the future Phaser and BB Phaser Pits during operation and closure. Inadequate characterization of seepage volume/chemistry could potentially result in higher than expected metal concentrations and resultant negative effects on fish and other aquatic organism.

AEM's Response:

Please refer to AEM response 1.11 to AANDC IR #11 related to the consistency and extension of the Vault Pit lithology into Phaser Pit and Section 4.4 and Section 8.1.8 of the 2014 Meadowbank Annual report.

http://ftp.nirb.ca/03-MONITORING/03MN107-MEADOWBANK%20GOLD%20MINE/03-ANNUAL%20REPORTS/02-PROPONENT/2013/01-REPORT/140415-03MN107-2013%20Annual%20Rpt-IA2E.pdf

Given that the lithology is the same for Phaser Pits as it is for Vault Pits, water quality models originally used to predict the Vault pit sump water quality have been used in providing water management engineers the ability to anticipate the water quality for Phaser Pits and the requirements for the water treatment plant to ensure effluent limits are met prior to discharge. As previously discussed, AEM will ensure that per Type A license limits for dewatering will be met and if needed the Type A license will include requirements for monitoring Phaser pit and BB Phaser Pit sumps. As previously discussed, if the permits are received by July 2016 and no later than August 1st, 2016 , AEM plans to dewater and fishout Phaser Lake beginning in mid July and continuing to October 2016. If on schedule, AEM will mine the Phaser Pits in the winter of 2017. As a result, water collected in the future freshets and summer periods (whether it is seepage or surface inflows during freshet) will contribute to future reflooding of Phaser Pits and BB Phaser Pits. AEM currently estimates a natural flow of water from the Phaser Lake water shed of 171,470 m3 in the spring of 2017; this water quality will be monitored according to the Type A water license for end pit lakes.

Furthermore, the approved Vault ARD/ ML will extend into the Phaser Pit operations and will validate the lithology and geochemical characterization. Given the commitment of AEM to meet discharge limits and manage both water quality and quantity within the current management plans and limits set in the Type A water license, and the fact that operations will be occurring in the winter, additional seepage analysis is not required for Phaser Pits prior to operation. Additional details on estimated volumes of seepage and will be provided to the interveners in the updated water management plans in 2015 and the NWB modification for Phaser Pit.

1.5 AANDC-IR #5: Water Quantity

Issue: Water balance assumptions for summer runoff are not presented in the EIS Addendum.

Reference: EIS Addendum Appendix F (SNC 2012 Water Management Plan), Section 4.1, Page 16.

Concern: Water balance assumptions stated in Section 4.1 indicate an assumed 100% runoff coefficient for accumulated October-May winter precipitation over the study area. The report is silent on runoff coefficient assumptions for summer rainfall which typically accounts for nearly 60% of total annual precipitation. The

report cites a prior document, July 2009 UWMP for additional assumptions, but this was not available for the current review.

Information Request: Please describe water balance assumptions for summer runoff.

Importance of Issue: This information is needed because it will help reviewers to understand whether the assumptions used by AEM for summer runoff in the water balance are conservative or not. This in turn will permit a more confident assessment of the potential impacts of the Project on water quantity-related issues.

AEM's Response:

AEM refers AANDC to SNC 2012 Water Management plan page 10 and Appendix A2-6 (for the schematic that presents a summary of inputs for Phaser Lake into the Vault Attenuation pond) and A3 that accounts for monthly water balance for Vault area from 2015 to 2025, including summer runoff within the Vault and Phaser watershed. As stated in the text, "Vault Pit water balance assumptions were extended to include Phaser Lake watershed." As per AEM response 1.4, AEM intends to dewater Phaser Pit in Q3 2016 (mid July to October) and is planning to mine Phaser Pits in the winter months. Given that operations will occur during the winter months (estimated Q1 of 2017), all water that will accumulate in the Phaser Pit sumps will contribute to future reflooding of the pit which will actively begin in the Vault Pit and Phaser Pit beginning in Q2 2018. As per Type A water license closure plans, pit water quality will be monitored prior to breaching of the Vault dike.

1.6 AANDC-IR #6: Water Quantity

Issue: Dry weather conditions sensitivity analysis of lake-refill times, such as a recurrence of the driest 10-year period in the Baker Lake climate record was not included in the EIS Addendum.

Reference: EIS Addendum Appendix F (SNC 2012 Water Management Plan), Figures 4-11 and 4-21, Pages 34 and 35.

Concern: The water balance analyses are based upon the assumption of mean annual values which recur each and every year. Consideration of annual variability appears to have been suitably accounted for in the analysis of mine construction and operation phases by superimposing a 100-year freshet runoff on top of annual conditions. However, for the closure phase, it is the occurrence of dry weather and low runoff conditions that is of concern because this would prolong the time needed to refill the lakes. Dry conditions would reduce the local runoff into the pits and possibly also restrict the volume of water that could be withdrawn from Wally Lake.

Information Request: Please address the sensitivity of lake-refill times to plausible dry weather conditions, such as a recurrence of the driest 10-year period in the Baker Lake climate record.

Importance of Issue: This information will contribute to an improved understanding of how the Project would manage future pit and lake refilling during the closure phase to ensure that no significant residual effects on downstream lakes occur.

AEM's Response:

As per the commitments in the original FEIS water management plans, AEM has committed to monitoring the Wally Lake water level to ensure that during closure and refilling of the pits, that Wally Lake and the lakes downstream are not significantly impacted. As per NWB Type A Part D Item 5 AEM has developed a protocol for monitoring and maintaining water levels in Wally Lake within the natural variation. If an extreme "driest 10-year" period occurs, AEM will adjust the reflooding practices to ensure the Part D Item 5 is respected.

1.7 AANDC-IR #7: Water Quantity

Issue: Erratum

Reference: 2013 Water Management Report and Plan, Table 2.1, Page 8.

Justification: Column heading "Snowfall, (mm)" is incorrect. It should be revised to indicate "Snowfall Water Equivalent (mm)" as per the source SNC report.

Information Request: Erratum

Importance of Issue: Addressing this erratum in future editions of the Water Management Report and Plan will correct the referenced table.

AEM's Response:
AEM agrees with the AANDCs comments. This will be corrected in future reports.

1.8 AANDC-IR #8: Groundwater

Issue: Baseline groundwater quality monitoring data specific to Phaser Pit area of influence is not presented in the EIS Addendum. Baseline characteristics of the groundwater regime within the Phaser Pit area of influence are not described in the EIS Addendum. Contingency measures for management of excess groundwater inflow into the Phase Pit are not described in the EIS Addendum. Potential effects of Phaser Pit development and closure on surrounding permafrost regime, and regional and local groundwater quality and flow are not described in the EIS Addendum.

Reference: EIS Addendum-Main Document, Section 4.21, Pg. 110. Groundwater Monitoring Plan, Version 4, January 2014.Project Description Report. Appendix D – SNC 2012 Water Management Plan Interim Closure and Reclamation Plan, Version 2 (Jan. 2014). Section 3. Page 47.

Concern: The EIS Addendum for the Vault Expansion to include Phaser Pit and BB Phaser Pit refers to the 2014 Groundwater Monitoring Plan. The Groundwater Monitoring Plan includes no groundwater quality monitoring infrastructure in the vicinity of Phaser Pit.

The water management and water balance design criteria and assumptions as outlined in the 2012 version of the Water Management plan indicates that the groundwater and seepage water inflow volumes incoming from all pits were taken from the 2010 Water Management Plan.

The permanent closure plan for the open pits is to flood them. Flooding of the Open Pits could form an open talik. The talik could form a connection for migration of pit water to flow to other water bodies. Further, the pit water is likely to stratify, with poorer quality water towards the bottom.

Information Request:
a.) Please provide the baseline groundwater quality along with inferred groundwater flow directions and hydraulic properties of the various geologic units.

b.) Please provide an explanation of how active layer groundwater quality is being determined and how it has varied, if at all, during the operational period of the project. Particular emphasis should be given to infrastructure which could have impacts e.g. dams, dykes, tailings facilities, waste dumps etc.

c.) Please indicate if the water balance estimates are "reasonable estimates" or "conservative estimates" and provide rationale.

d.) Indicate how water would be managed during an extreme event or if groundwater is encountered where it was not previously anticipated.

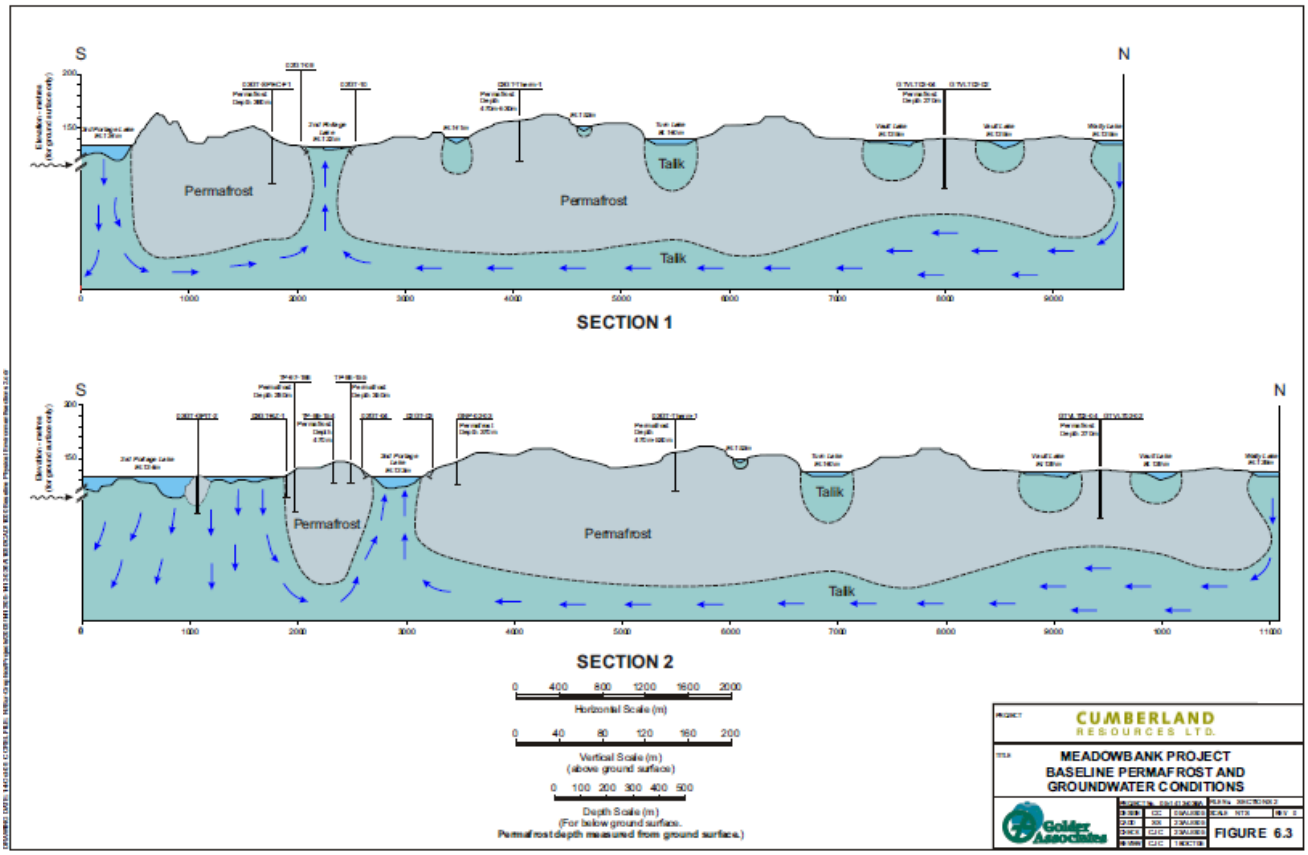
e.) Indicate where the formation of a talik on closure has been considered and how the potential groundwater quality impacts related to talik formation have been assessed.

Importance of Issue: This information is needed to help reviewers understand if there is a potential pathway for poor quality groundwater to report to (flow into) nearby surface water bodies which could negatively impact downstream receiving lake water quality.

AEM's Response:

The area around Phaser Lake was originally assessed in the FEIS as being within the continuous permafrost. This has been confirmed during Vault Pit operations, as no groundwater sources have been encountered; this is also the case for Phaser Lake. As a result there are no groundwater flows to predict for pits and no talik in this area. In response to AANDC IR#8b, AEM would like to clarify that there are no new infrastructure such "as dams, dykes, tailings facilities or waste dumps, etc." for Phaser Pit.

Please refer to the original FEIS document entitled Meadowbank Gold Project Baseline Physical Ecosystem Report, October 2006, specifically Section 6 – permafrost found on the NIRB website. Specifically, refer to Figures 6.2 and 6.3 below, that depicts the permafrost and groundwater regime around Vault Lake.



Similar to Vault Lake, Phaser Lake does not have an open talik and AEM does not anticipate any impacts to the groundwater as a result of Phaser Pit operations. Please refer to AEM response to AANDC IR #4 (AEM response 1.4). Based on our experience operating Vault Pit, AEM are prepared to manage any concerns of inflows into the pit during operation.

1.9 AANDC-IR #9: Water Management (Permafrost)

Issue: Site-specific permafrost data and characterization below Phaser Lake is not presented in the EIS Addendum. Management of groundwater discharge into Phaser Pit during the winter for ensuring worker safety is not described in the EIS Addendum.

Reference: Project Description Section 2.3, Page 12.

Concern: Section 2.3 Water Management identifies that since mining is expected in winter months there is no expectation of having any pit water. The depth of water in Phaser Lake is understood to be on the order of 4 to 5 metres. As such, a talik is likely to exist below the deeper parts of the lake. These unfrozen soils/rock could generate water inflows into the pit. Experience at other northern mines has shown that water inflow into a pit from taliks can sometimes generate significant icings on the pit walls during the winter. This can pose a significant safety hazard to men and equipment.

Information Request: Please provide AEM's operational procedures for managing pit icings and for ensuring worker safety.

Importance of Issue: This information is needed to assure reviewers that AEM has adequate operational procedures for managing pit icings and for ensuring worker safety.

AEM's Response:

As per the previous response, the area around Phaser Lake was originally assessed in the FEIS as being within the permafrost. AEM refers AANDC to the original FEIS document entitled Meadowbank Gold Project Baseline Physical Ecosystem October 2006, specifically Section 6 – permafrost found on the NIRB website and the annual monitoring reports which document the Vault Pit inflows and successful operations in Vault Pit. AEM has had over 5 successful years of operating and managing pit icing to ensure workers safety; it is our intent to operate these pits in the winter and therefore do not foresee any concerns with unfrozen soils/ rock during operation. The same practices will be transferred to Phaser Pit and BB Phaser Pit operations. Furthermore, during exploration drilling, drill results demonstrated similar ice lensing to Vault Pit operational drilling; AEM has a dedicated geotechnical staff and consultants that we use to ensure the best design for workers safety.

1.10 AANDC-IR #10: Waste Rock Management

Issue: Site-specific acid base accounting (ABA) or metal leaching (ML) data from samples within the proposed Phaser and BB Phaser Pits is not provided in the EIS Addendum or the Project Description. The distribution of potentially acid rock drainage (ARD) generating materials (PAG) - not-potentially ARD generating materials (NPAG) within the proposed expansion areas is not described in the EIS Addendum.

Reference: 2014 Annual Report Section 5.1 Page 16-17 /EIS Addendum-Main Document Page 7.

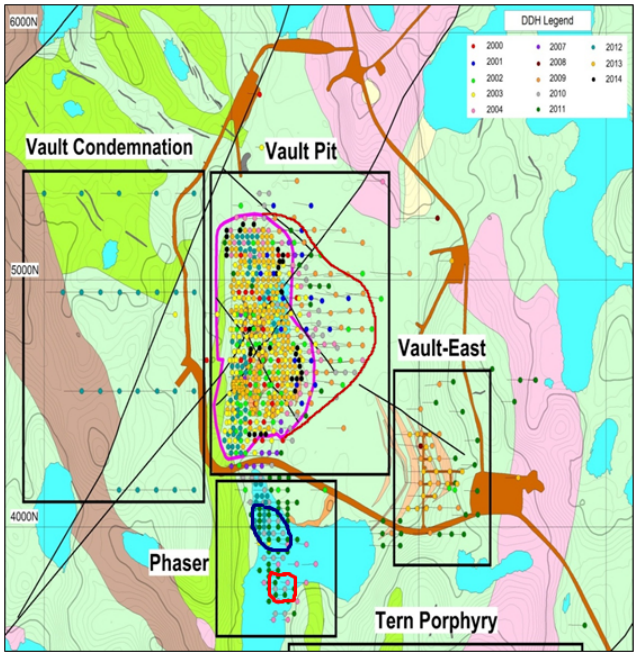
Concern: The annual report summarizes the proportion of PAG rock within the Vault Pit area as making up 14% of waste rock. This is supported by volumes provided in Section 5.2 Waste Rock Volumes. There is no data found in the application or the Project description report reporting either the rock type of waste rock or the expected proportion of PAG to NPAG rock within the expansion area of the Phaser and BB Phaser Pits. If the ARD and ML potential within the waste rock differs from that indicated in the original FEIS or in current mining areas, then this affect has not yet been assessed and could result in a negative impact in the receiving environment. Within the EIS Addendum document it is stated that a classification system will be used to identify PAG and NPAG during mining, but the details are not specified.

Information Request: Please provide site-specific ABA and ML data from samples within the Phaser and BB Phaser Pits to show distribution of PAG - NPAG within the proposed expansion areas.

Importance of Issue: It is important to fully understand the nature of the waste rock to be produced from the Phaser and BB Phaser pits to ensure that this waste rock is properly characterized and placed in the appropriate area(s) of the Vault Waste Rock Storage Facility for effective management during mine closure.

AEM's Response:

As described in Section 4.10.1.1 of the FEIS Addendum, Phaser pit and BB Phaser Pit is an extension of the Vault Pit deposit and is located in the same lithology of the Vault deposit. Figures 1 and 2 below present the current block model presenting the lithological summaries of the Vault Pit, Phaser Pit and BB Phaser Pit deposit.



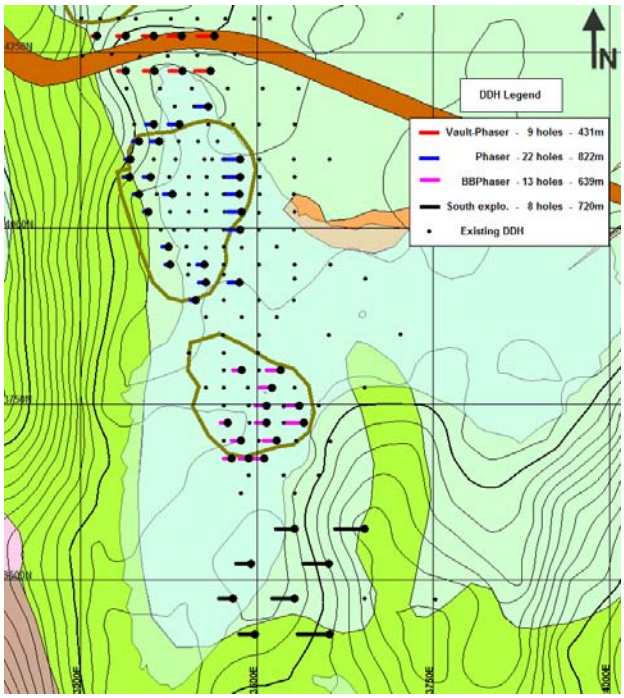


***Figure 1a and 1b**: Plan view of exploration drill patterns to determine the lithology and ore-body in Phaser and BB Phaser Pits*

Figure 2a: Vault section – 5000 N

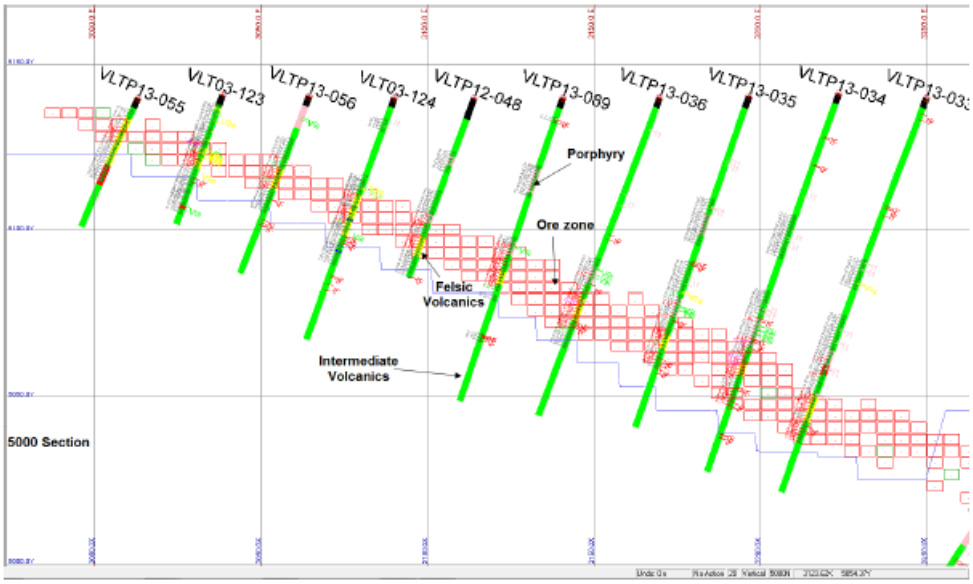


Figure 2b: Phaser section – 4075 N

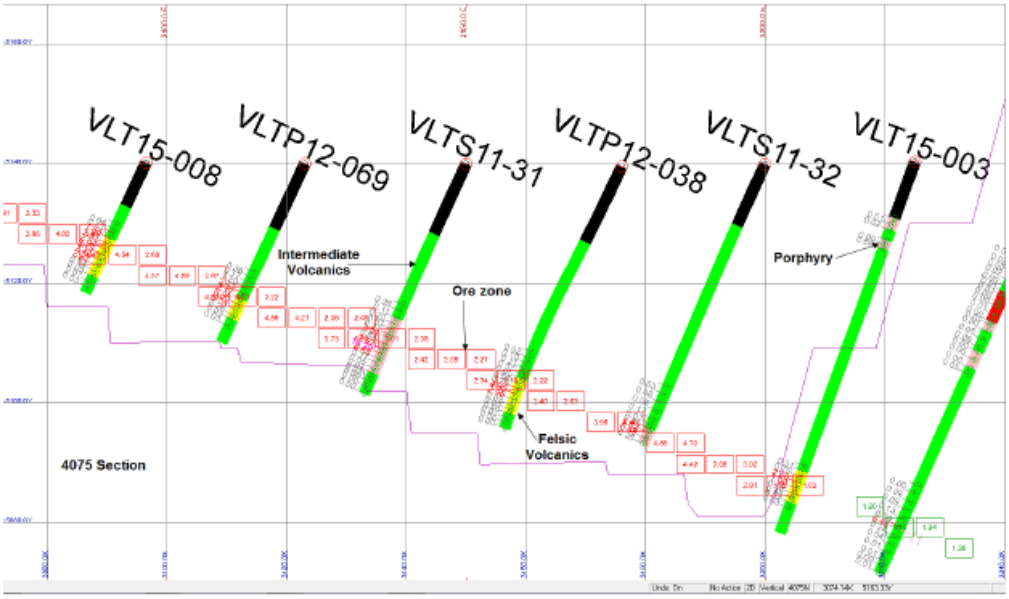
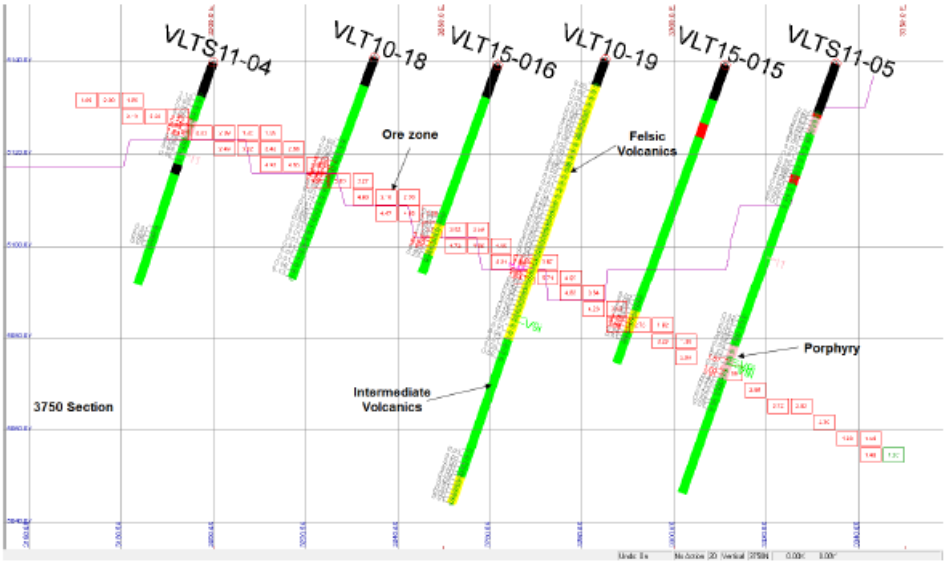


Figure 2c: BBPhaser section – 3750 N



As part of the feasibility process, AEM has a thorough understanding of the lithology for the purposes of block modelling, pit design, economical modelling and operational planning. Furthermore, up to date operational data from the Vault deposit was recently compared to static test database collected by Golder during project start-up ("Vault Static Test Database (Golder, 2005)") in order to recommend a minimum sulphur cut-off concentration to be used to identify material that is non PAG for future operation of the Vault Pit; this cutoff will be extended for the Phaser Pits and BB Phaser Pits. The NPR values for both datasets were compared to test the fit of both data sets and to determine the total sulphur content at which material may be considered as potentially acid generating per MEND (2009).

NPR values are plotted against total sulphur in the Figure 3 below. The datasets correlate and in general, material with a total sulphur content below 0.2% reports an NPR > 2 and thus, is designated as non PAG. During the operation of Phaser Pit and BB Phaser Pit, AEM will continue to evaluate the NPR and Total sulfur content to determine the cutoff and will continue to use the robust database established with the Vault Pit to ensure segregation of PAG and NPAG material described in the NWB approved Operational ARD/ML Testing and Sampling Plan..

Furthermore, as presented in Section 4.10.1.1, the mining methods and use of the Vault Waste Storage area has been approved. Table 4.10.1 illustrates how small the overall volume of Phaser Pit and BB Phaser Pit waste rock material is as compared to the total Vault waste rock storage facility. The waste rock will contribute 4% of the total material in the approved waste rock storage facility.

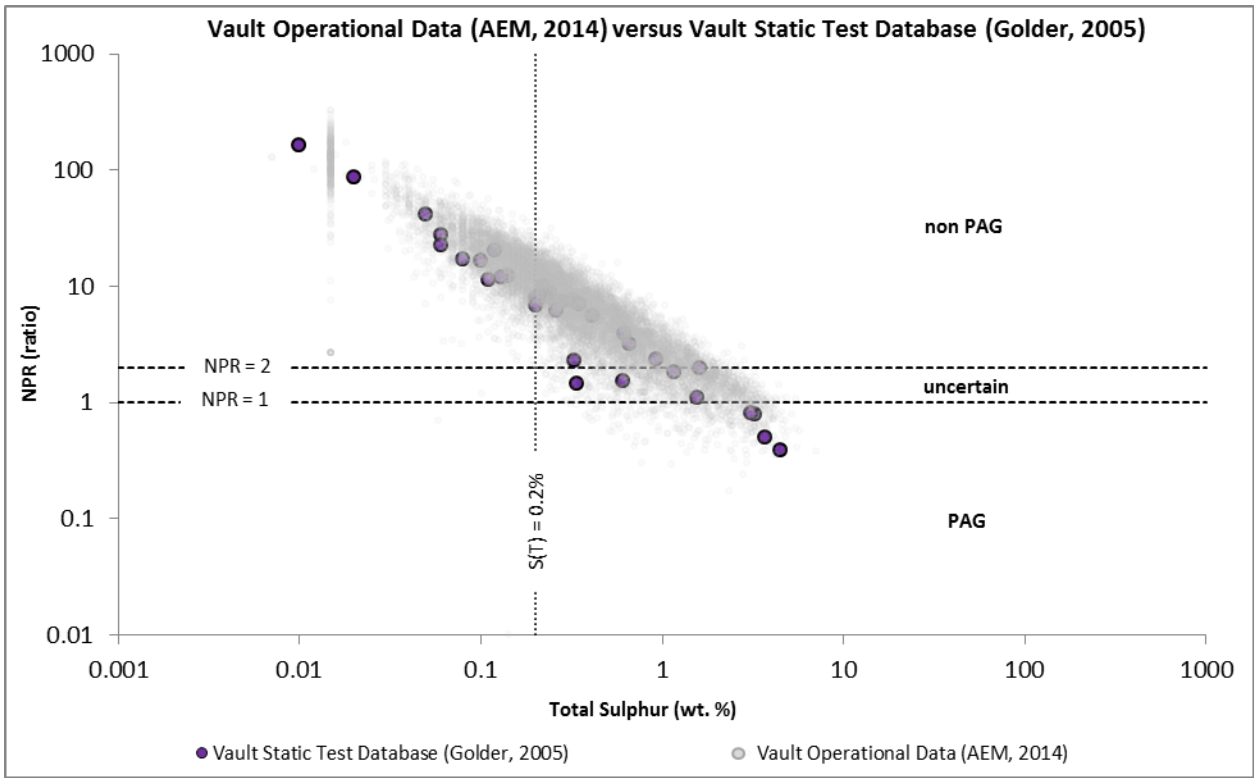


***Figure 3**: Comparison of Vault Static Test Database (Golder, 2005) and Vault Operational Data (AEM, 2014)*

Based on AEM's extensive understanding and experience with the lithology of the Vault Pit and the fact that the ore and waste rock to be disturbed through mining of the Phaser and BB Phaser pits are in the same lithological units, AEM is confident that it existing waste characterization and management practices that are have been well demonstrated over the past two years during ongoing mining of the Vault deposit will be adequate to correctly characterize PAG from Non-PAG waste rock. The management of these rock types will be identical to that currently being applied at the adjoining Vault Pit. The current practice sees drill cuttings tested on side for total sulphur content with the resultant results used to charactize PAG from Non-PAG prior to extraction.

1.11 AANDC-IR #11: Waste Rock Management

Issue: Baseline local and regional geology information (bedrock and structural) showing continuity of rock type and related geochemistry from Vault Pit to Phaser and BB Phaser Pits is not presented in the EIS Addendum.

Reference: EIS Addendum, Phaser Pits Section 4.10.1.1.

Concern: Discussion of geology is limited to saying that the Phaser and BB Phaser Pits are within the Intermediate Volcanic Structure with low PAG potential and moderate ML potential; however there is no geologic map or data provided to support this, or to indicate if waste rock is comprised of a single lithology or of multiple lithologies. If the geology of the waste rock in the Phaser and BB Phaser Pits differs from that in the

current mining then the impact assessment from the original FEIS will not apply, and there could be potential impact to the receiving environment as a result of metal leaching or ARD from the waste rock.

Information Request: Please provide a geology map and cross sections showing waste rock lithology and continuity of geologic structures between the Vault Pit, and proposed Phaser and BB Phaser Pits, including faults and other geologic features.

Importance of Issue: It is important to fully understand the nature of the geology and thus the waste rock to be produced from the Phaser and BB Phaser pits to ensure that this waste rock is properly characterized and placed in the appropriate area(s) of the Vault Waste Rock Storage Facility for effective management during mine closure.

AEM's Response:

AEM appreciates AANDCs comment and we too realize the importance of understanding the geology of the deposit for mine planning. AEM refers AANDC to AEM's response 1.10 which demonstrates a full understanding of the geology and its' importance in managing the Vault Waste Rock facility and economically mining Phaser Pit and BB Phaser Pit.

1.12 AANDC-IR #12: Waste Management

Issue: Description of Phaser Lake bottom sediments quality substantiated by site-specific field data is not presented in the EIS Addendum. Measures for disposal of sludge from the water treatment plant to prevent negative environmental effects are not described in the EIS Addendum.

Reference: Project Description Section 2.3, Page 12; 2012 Water Management Plan Technical Note Page 45; EIS Addendum-Main Document Section 4.12 Pages 53-54.

Concern: AEM proposes to begin dewatering Phaser Lake in Q3 of 2015 while completing a fish-out, and then completely dewater it in Q3 2016, in advance of mining in 2017. Water is proposed to be transferred into the Vault Attenuation Pond and discharged through a diffuser into Wally Lake. AEM's Water Quality Monitoring and Management Plan for Dike Construction and Dewatering will be followed (AEM Project Description). AEM's 2012 Water Management Plan states that the lower 40% of the lake water volume will be treated (Actiflo) if necessary to remove excess TSS prior to release to the receiving Lake and Figure 4-16 (Page 46) indicates that 0.3 Mm3 of this bottom water may require treatment to remove TSS. EIS Addendum Section 4.12, Pages 53-54, citing the original FEIS, states: "The majority of lake sediments are potentially acid generating, with relatively low sulphur but almost no buffering capacity".

Information Request: Please describe the plan for disposal of the sludge (treated lake bottom sediments from Phase Lake) generated by the Vault Water Treatment Plant. Please provide Phaser Lake bottom sediment quality data and describe its potential for generating acid and leaching metals into the receiving environment. Please describe measures to mitigate potential negative environmental effects from disposal of Vault Water Treatment Plant sludge.

Importance of Issue: This information is needed to gain an understanding of the quality of the treated sludge (containing suspended lake bottom sediments) generated by the Vault Water Treatment Plant and to ensure that it is disposed of in an acceptable manner.

AEM's Response:
Corresponding to the past dewatering and associated water treatment of the east arm of Second Portage Lake, Bay Goose Basin and Vault Lake, water treatment sludge from the Vault Water Treatment Plant will be shipped to the Meadowbank Tailings Storage Facility for disposal.

AANDC-IR #13: Waste Rock and Tailings Management

Issue: Mine Waste Rock and Tailings Management Plan does not clearly describe measures for management of waste material from Phaser or BB Phaser Pits.

Reference: EIS Addendum Main Document, 4.21.1 Management Plan Overview, Page 111

Concern: It appears as though the referenced Mine Waste Rock and Tailings Management Plan, Version 1 (2014) was only updated to include Phaser Pit, but not BB Phaser and that it was only the diagrams that were updated to include Phaser and not the text of the management plan.

Information Request: Provide an updated Mine Waste Rock and Tailings Management Plan, including updates to sections such as Table 6.1: Quantities of Waste Rock by destination.

Importance of Issue: It is important to fully understand how waste rock from the Phaser and BB Phaser Pits will be managed, including its placement in the appropriate area(s) of the Vault Waste Rock Storage Facility for effective future mine closure purposes.

AEM's Response:
Please refer to AEM's response 1.10 which illustrates the lithology of Phaser Pit and BB Phaser Pit. Given that Phaser Pit and BB Phaser Pit are the same lithology of Vault Pit, the existing Meadowbank ARD/ML management procedures will be followed. These procedures have been demonstrated as being effective for the Portage, Goose and Vault deposits and have been the subject of prior review by the NWB and other regulatory agencies, most recently as part of the 2015 Meadowbank Type A Water License renewal process. The plan has drill cutting analyzed on site for total sulphur content and then based on these analysis the waste rock to be mined is then characterized as being PAG or non-PAG prior to extraction and directed to the appropriate disposal are within the waste rock storage facility. These same processes will be used in characterizing and managing waste rock extracted from the Phaser and BB Phaser pits. The Phaser Pits Waste Rock represents 4% of the total Vault Waste Rock Storage Facility, AEM is confident in our ability to ensure this material is stored for future closure. Nevertheless, concurrent with the NIRB process, AEM will submit revised "quantities of waste rock by destination" in the annual report. As per Part G Item 1 of the NWB Type A License (considerations applying to the modifications), AEM will submit to the NWB a revised Mine Waste Rock and Tailings Management Plan (March 2014) to include specific details on Phaser Pit and BB Phaser Pits waste rock quantities and destination, including the placement of the Vault Waste Rock Storage Facility.

1.13 AANDC-IR #14: Tailings Management

Issue: Geochemical characteristics of expected tailings from proposed Phaser and BB Phaser Pits and its potential interaction with tailings stored in the Tailings Storage Facility are not provided in the EIS Addendum.

Reference: EIS Addendum, Section 4.10.1.2 Page 45.

Concern: There is no apparent discussion or composition or make up of ore, or similarities or differences between the Vault Pit and the Phaser and BB Phaser Pit. If the mineralogy and make-up of the ore in the Phaser and BB Phaser pits is different from that in the current mining areas, the tailings will have a different composition and the assessment from the original FEIS will not apply and additional assessment will be required to assess the impact of the tailings on the environment.

Information Request: Please provide mineralogical sample descriptions and/ or metallurgical test results that show the make-up of the ore and expected tailings from the Phaser and BB Phaser Pit, and its comparison to the ore and tailings generated from the existing Vault pit.

Importance of Issue: This information is needed to clearly demonstrate that the tailings to be generated by future processing of ore from the Phaser and BB Phaser Pits will be comparable to tailings currently being processed from Vault Pit ore. This will ensure that PAG/ML tailings are identified and disposed of appropriately.

AEM's Response:

Please refer to AEM's response 1.10 which describes the lithology of Phaser Pit and BB Phaser Pit. Given that Phaser Pit and BB Phaser Pit are the same lithology of Vault Pit, ARD/ML plans will be followed and the Phaser Pit and BB Phaser Pit Waste Rock represents 4% of the total Vault Waste Rock Storage Facility and about 400,000 tonnes of additional tailings to be deposited into the existing Meadowbank TSF. This represents something in the order of 1% of the total tailings volume within the TSF. Based on our experience and knowledge of the geology and lithology of the ore zones within the Vault Pit (see AANDC 1.10 above) we know that the ore to be mined in the Phaser and BB Phaser pits is an extension of the ore already being mined in the Vault Pit and thus we expect the mineralization to be similar to that already being mined.

AEM refers AANDC to AEMs response 3.4.4 to ECs IR# 4. The tailings generated by mining these two small pits will be similar to that already encountered and characterized in mining of the Vault Pit (same lithologic units) and will be managed in the same manner. We do not expect that the tailings generated from the milling of this ore will result in any required modification to the existing tailings management or closure plans for the Meaowbank TSF.

1.14 AANDC-IR #15: Public Consultation Record

Issue: There is an incomplete record of public consultation undertaken to date.

Reference: EIS Addendum, Section 4,5 and Table 4.5.1

Justification: Section 4.5 outlines the public consultation the Proponent has undertaken regarding the Phaser Pit and BB Phaser Pit operations. It appears based on Table 4.5 that the Proponent has primarily met with government officials regarding the new development proposed. It would be helpful for reviewers to understand whether the Proponent has consulted with community members, and further what the results of consultations with the HTO, and other affected groups were.

Information Request: Can the Proponent indicate if they have consulted or intend to consult affected community members/ groups regarding the proposed developments? Can the Proponent provide a summary of results from consultations with the HTO and other consulted groups? This information would assist reviewers in determining any concerns by affected communities/ groups.

Importance of Issue: This information is important to understand what issues or concerns related to this project amendment have been raised by affected community members and groups and how they have been/ will be addressed by AEM.

AEM's Response:

AEM has discussed with stakeholders the possibility of dewatering and mining in Phaser Lake beginning in 2011. Meetings effectively began with DFO in January of 2011 and AEM followed up with a meeting to review options for fisheries compensation at Meadowbank hosted with the KIA, HTO, DFO and Baker Lake hamlet in Baker Lake. This provided an opportunity to discuss offsetting options with community members prior to designing and calculating habitat losses or gains. Given that the area terrestrial landscape was not predicted to be significantly impacted due to Phaser Pit operations, and given that one additional month of milling was within the scope of the original 2005 FEIS, AEM focused much of our consultation with the stakeholders on the impacts to Phaser Lake fish habitat losses as a result of mining Phaser Pits.

After meetings with local stakeholders in 2011 (including a helicopter tour of future fisheries compensation around Meadowbank) during the planning stages of offsetting, consultation regarding Phaser Lake offsetting plans and methods continued with DFO representatives (including Dr. Ken Minns) who at the time reviewed the methods used in AEM (2012). AEM and our consultants worked closely with DFO to establish a consistent path-forward for fisheries offsetting and assessments for our Nunavut projects. As the economics of Meadowbank changed, AEM was uncertain if the Phaser Pit would advance and plans to mine Phaser Pit were put on hold. Regardless, AEM followed up with the HTO in June 2013 to discuss their interest in the Vault fishout and for changes to the NNL plan that included Phaser Lake dewatering and mining in Phaser Lake. See Appendix A – records of consultation, relevant presentations and meeting minutes.

More recently, in February 2015, during the community sessions for the Meadowbank Type A renewal, AEM presented a few slides related to future mine planning that included Phaser Pits. At the time there were no comments specific to Phaser Pits. Recently AEM also participated in the NIRB sessions in Baker Lake; there were few concerns with the proposed Phaser Lake dewatering and Phaser Pit mining from community members. AEM believes this is evidence that stakeholders and community members have been adequately consulted over the years as key stakeholders participated in the initial planning of Phaser Lake dewatering and fisheries offsetting.

1.15 AANDC-IR #16: Employment Predictions

Issue: Quantifiable employment predictions based on the proposed development.

Reference: EIS Addendum, Section 4.19.10

Justification: On page 93 the Proponent outlines that the proposed expansion will "allow current Meadowbank employment levels and training programs to continue for at least one additional month." This is followed by a breakdown of employment for the year 2014. While this is a helpful illustration, it does not provide certainty over what the quantifiable employment estimates are, should project conditions change between now and the time of the proposed new development. It would be helpful for reviewers to have a more quantifiable estimate of employment at the time of the proposed development. Are the current levels of employment or the required skill breakdowns expected to change drastically between now and when activities pertaining to the proposed new development commence?

Information Request: It is recommended that the Proponent provide quantifiable employment estimates for the proposed Phaser expansion, rather than relying exclusively on references to current employment numbers from the 2014 report. This would give reviewers certainty over the effects of the new development on employment and training.

Importance of Issue: Quantifiable employment information would provide certainty to reviewers in understanding the employment and income impacts of the proposed new development.

AEM's Response:

The Meadowbank Mine currently employs 1,178 people, broken down as follows: directly employed by Agnico Eagle – 849 persons; employed by contractors working for Agnico Eagle at Meadowbank – 329 persons. The proportion of this workforce that are Nunavummiut and/or Inuit Beneficiaries is approximately 38%.

Looking forward Agnico believes that these employment levels will continue at this same level through all of 2015, 2016 and through the first half of 2017. The numbers will begin to drop slowly during the second half of 2017 as certain sustaining capital projects conclude and as Meadowbank mine development work concludes (including Phaser Pit development). Agnico forecasts that on average the Meadowbank Mine will employ 950 people in 2017. In 2018 Agnico forecasts that under current economic conditions mining will conclude at the end of September and milling halt at the end of November. Agnico forecasts that on average the Meadowbank Mine will employ 440 people in 2018.

The skills mix of the employees working at Meadowbank will remain the same as it is now through all of 2015, 2016 and most of 2017. In the second half of 2017 the number of people working for contractors at Meadowbank will drop as sustaining capital projects and mine development projects conclude, projects such as raising of tailings dams and preparation of mining areas. Also the amount of waste rock to be moved will decrease as we get closer to the conclusion of active mining as the activity gets concentrated into the lower levels of the Vault Pit. Consequently there will be a reduction in the number of drillers, driller helpers and haul truck operators required in the second half of 2017 and into 2018. The reduction in equipment required to drill

and move waste rock will result in a corresponding decrease in the support staff required for mining such as heavy equipment mechanics, mine planners, surveyors, etc.

It should be noted that Agnico is currently working on advancing the drilling at the Amaruq site as a satellite open pit that will supply ore to the Meadowbank Mill. If this deposit is proven to be economically viable then many of the job reductions currently forecast may change and AEM will make all efforts to maintain the highly trained and specialized workforce.

If we look at the Phaser pit in isolation from all other components of the Meadowbank Mine, including the mill and all support facilities (camp, warehouse, maintenance etc.) then mining of the Phaser Pit will create approximately 460 person days of employment in the mine related skills (drilling, blasting, hauling, etc.). This is employment of 17 persons over 27 to 30 days.

These forecasts are Agnico's best estimates using current economic conditions. A significant drop in the market value of gold could shorten the mine life. Conversely a significant rise in the market price of gold will only have a small impact because once the Vault and Phaser pit boundaries are established it is difficult for market conditions to materially affect the outside boundaries because any pushback of the upper pit levels requires a much higher proportion of waste removal as the pulling back of the upper benches is typically all in waste rock significantly increasing the waste to ore stripping ratio.

2.0 Fisheries and Oceans Canada IR

2.1 1a-c: Vault Area Offsetting Plan - Habitat Types

Reference: No-Net-Loss Plan (NNLP) October 15, 2012, p. 10, 12, No Net Loss Plan Addendum – Vault Area Offsetting Plan (AEM, 2015), p. 5—6

Issue/Concern: Habitat types used by AEM in the Habitat Evaluation Procedure (HEP) consist of categories 1 through 11, with 10 representing end pit lake habitat with stratification (i.e., a monimolimnion) and 11 representing end pit lake habitat without such stratification and with water quality suitable for aquatic biota (NNLP, p. 10; NNLP Addendum, p. 5). Type 10 habitat is considered to be less suitable than Type 11 habitat for all fish species considered by AEM in Habitat Suitability Index (HSI) calculations (NNLP Addendum, p. 6). Habitat types 1 through 9 are classified based on depth zone and substrate ("fine", "mixed", and "coarse"; NNLP Addendum, p. 5), but the actual size range for these substrate categories is not given.

Part of the habitat gains AEM proposes in its offsetting plan for the Vault Pit Expansion into Phaser Lake, arising following closure, assume that the reflooded pits will provide habitat suitable for fish after a period of stabilization (i.e., pits will contain type 11 and not type 10 habitat).

The issue that Fisheries and Oceans Canada notes is that the information supporting this habitat classification does not appear to be available in the submission.

Shortcomings: AEM states that stratification (meromictic conditions, with the formation of a monimolimnion) in reflooded pits after closure is expected to dissipate in four years, restoring holomictic conditions and habitat more suitable for fish, and thus producing habitat type 11 instead of 10. However, in support of this statement,

AEM does note that this prediction is based on modelling from the reference "Golder, 2005" that was only completed for Portage Pit, and that it is assumed Bay-Goose and Vault Pit will be similar (NNLP, p. 12).

AEM has not provided justification that stratification is not expected to occur for BB Phaser Pit following reflooding. Furthermore, the reference "Golder, 2005" is not found in the Reference section of NNLP 2012. There is a Golder, 2010 report listed in the References entitled "Preliminary Pit Lake Mixing Study" however, this was prepared for a different proponent, Diavik Diamond Mines Inc. (p. 71).

The concern that Fisheries and Oceans Canada has is that if stratification does persist in reflooded pits after closure, the expected fish habitat gains post-closure will not be realized because type 10 habitat will be produced (with a monimolimnion), and not type 11. Type 10 habitat is less suitable for all fish species (i.e., it has a lower HSI value) so if type 10 habitat is formed, there will be fewer habitat gains as a result of the proposed offsetting plan.

Importance of issue to Impact Assessment: If fish habitat losses and gains resulting from the proposed Project are not calculated appropriately, fish habitat losses may not be appropriately offset during the regulatory phase, and unauthorized residual *serious harm to fish* may result from the proposed Project.

Information Requests:
1a Provide the reference "Golder, 2005" referred to in page 12 of the NNLP 2012 in support of predictions that type 11 habitat will be produced in reflooded pits in the Vault area after closure.

1b Provide information supporting the statement in the NNLP and NNLP Addendum that reflooded pit conditions will reflect habitat type 11 for the reflooded Vault Pit and newly-proposed BB Phaser Pit, based on modelling completed for Portage Pit in "Golder, 2005."

1c Provide the substrate sizes used to define the categories of "fine", "mixed", and "coarse" substrates defining habitat types 1 through 9.

AEM's Response:

1a. Golder 2005 (a supporting document in the original FEIS) is found on the NIRB website and supports the presumption and assignment of type 11 for Phaser Pits.

ftp.nirb.ca%20-%20/02-REVIEWS/COMPLETED%20REVIEWS/03MN107-MEADOWBANK%20GOLD%20MINE/02-REVIEW/09-FINAL%20EIS/02-FEIS/SUPPORTING_DOCS/001%20Baseline/water%20quality%20predictions/

In Golder (2005), predictions were also made for Vault Pit Lake "which were inferred from the Portage pit". AEM has reviewed this report and continues to be confident in assigning Habitat Type 11 to these end pit lakes (i.e. we anticipate no monimolinium and water quality is expected to be suitable for aquatic biota).

1b. Furthermore, AEM anticipates Phaser Pit Lakes to be small and relatively shallow as compared to Vault Pit. Phaser Pit is approximately 3 hectares by 125 m deep and will be partly backfilled at closure (placing waste rock from either Vault or BB Phaser in Phaser Pit) thus reducing the overall depth of Phaser Pit to approximately 25m. BB Phaser Pit is approximately 2 hectares by about 50 m deep and is not proposed to be backfilled. Given

the lithology of Phaser Pit, the connection to shallow littoral areas and the depth at closure following backfilling, it is likely that wind driven currents will mix the end pit lakes. Given the similarities in lithology (see AEM's response 1.9 to AANDCs IR#9 , similar to Vault Pit, Phaser Pits end pit lakes are expected to meet Territorial drinking water quality guidelines. In Golder (2005), the following text summarizes the predictions of Vault Pit Lake –

"The long-term Vault pit lake water quality is predicted to meet MMER for all constituents and meet CEQG criteria for most regulated constituents except for aluminum, arsenic, cadmium, copper, fluoride, mercury, and unionized ammonia (NH3), with exceedances being of the same order of magnitude as the CEQG guideline. Total dissolved solids (TDS) are predicted to reach a maximum monthly average concentration of 150 mg/L. Under a proper level of care of explosives use (5% wastage), the average monthly concentration of explosives by products in pit lake water may reach 0.04 mg/L for unionized ammonia and up to 30 mg/L nitrate. These concentrations can be reduced if stringent explosives control measures are employed during operation. Vault pit lake water is predicted to meet Territorial drinking water guidelines." (Pg 6-1)

As a result, AEM is confident in assigning Type 11 to these end pit lakes (i.e. we anticipate no monimolinium and water quality is expected to be suitable for aquatic biota).

1c. For both the 2012 NNLP and 2015 NNLP Addendum, substrate types and zones were based on GIS files used in the original 2006 NNLP. As described in that document, aerial photography and underwater imagery were used in 2006 to delineate areas dominated by the following substrate classes: boulder, boulder/cobble, sediment with boulder/cobble and sediment fines. GIS files containing only this sediment information were not available, so the substrate zones mapped for the 2012 updated assessment (including Vault and Phaser Lakes) were based on the "habitat type" maps from 2006 (note: these are not equivalent to the habitat types used in the 2012 update). Table 1 shows these "habitat types" from 2006, and the corresponding Golder/AEM model substrate type.

Table 1. Description of sediment associated with fine, mixed, and coarse substrate types in 2006, 2012 NNLPs, and 2015 NNLP addendum.

AEM (NNLP 2012, 2015) Categories	Cumberland (NNLP 2006) Categories	"Habitat Type" Description (from 2006 NNLP)
Fines	Sediment Basin AND Sediment Apron	*Sediment apron* – Transition habitat with small amounts of coarse substrate (boulder/cobble <25%) and moderate to low complexity. Transition to higher amounts of fines (silt/clay) and reduced complexity with increased depth. Moderate to uniform complexity typically at depths of 4 to 6 m. *Sediment basin* – Inferred from field and video data where substrate is dominated by fines (>90%) with few, occasional boulders or small cobble patches. Morphology is flat with uniform complexity and depth is greater than 6 to 8 m.
Mixed	Mixed Sediment Apron	*Mixed sediment apron* – Transition habitat consisting predominantly of fine sediments (sand, silt, clay >50%) with occasional boulder and cobble embedded in the sediment with moderate complexity and moderate depth (2 to 4 m).
Coarse	Boulder Apron AND Boulder Shoal AND Boulder Platform	*Boulder platform* – Situated adjacent to shorelines, substrate is typically very coarse, dominated by large boulders (<75%) and cobble, shallow depth (<2 m), and high complexity. *Boulder shoal* – Situated offshore of landforms, unconnected to shorelines. Substrate is very heterogeneous and comprised of boulders (75%) with mixed sediment, including cobble and coarse gravel. Depth ranges from shallow (2 m) to moderate depth (2 to 4 m) with high complexity. *Boulder apron* – Transition habitat between platforms or shoals and deep sediment basin habitat in deeper water. Substrate typically composed of a moderately complex mixture of boulder and cobble (>70%). Depth is usually shallow to moderate (2 to 4 m), although some polygons were deeper (6 m) with moderate to high complexity.

2.2 2a-b: Vault Area Offsetting Plan - Species Weights

Reference: No-Net-Loss Plan (NNLP) October 15, 2012, p. 20, 23, No Net Loss Plan Addendum – Vault Area Offsetting Plan (AEM, 2015), p. 7, 2013 Vault Lake Fish-out, March 2014 – released with 'Meadowbank Gold Project – 2013 Annual Report'

Issue/Concern: Fish species weights used by AEM in their Habitat Evaluation Procedure to calculate fish habitat losses and gains as a result of the Project (and the corresponding offsetting plan) are the product of weights assigned to each fish species based on a) expected biomass and b) fisheries value (NNLP Addendum, p. 7).

Biomass weightings were based on the average proportional biomass from the Second Portage Lake and Third Portage Lake fish-outs (NNLP, p. 20; NNLP Addendum, p. 7).

Fisheries weightings range over eight species from 0 (assigned to small-bodied fish Slimy Sculpin and Ninespine Stickleback) to 0.5 (assigned to landlocked Arctic char; NNLP, p. 23 ; NNLP Addendum, p. 7) and sum to 1 overall.

The **issue** that Fisheries and Oceans Canada notes is that no reference is provided to support the magnitude of fisheries weights assigned to each species, and it is unclear whether data from the recently completed Vault Lake fish-out support the use of data from Second and Third Portage Lakes in biomass weight allocations.

Shortcomings: The rationale for the use of data from Second Portage and Third Portage Lake in creating biomass weights was stated in the NNLP (2012) as "These biomass proportions are site-specific and known with certainty, while fish surveys are relatively limited in other area lakes" (p. 20); this rationale was also stated in the NNLP Addendum (2015; p. 7). However, since the NNLP was written in 2012, the Vault Lake fish-out was completed in 2013, with the final report issued in March 2014. Information in the FEIS Addendum on whether the results from Vault Lake fish-out have been considered in biomass weights and calculations for the proposed Phaser Lake fish-out and Vault Area Offsetting Plan (e.g., for Lake Trout and Round Whitefish) have not been provided.

Fisheries weightings that AEM uses for calculations of habitat gains and losses were described in the NNLP (2012, p. 23) as having been developed by Golder Associates and in the NNLP Addendum (p. 7) as reflecting the relative value of each species for subsistence fishing. However, supporting information and references for these weights have not been provided. Landlocked Arctic Char are assigned the highest rating (0.5); the next highest rating is Lake Trout (0.25). As the addition of Arctic Char to Phaser Lake basin through access improvements post-flooding is a part of AEM's proposed habitat offsets (NNLP Addendum, p. 14), the specific fishery value assigned to each species plays an important role in subsequent fish habitat loss/gain calculations. The concern that Fisheries and Oceans Canada has is that if fish species weights are not optimized for both biomass and fisheries value in habitat loss and gain calculations, fish habitat losses as a result of the Project will not be fully offset.

Importance of issue to Impact Assessment: If fish habitat losses and gains resulting from the proposed Project are not calculated appropriately, fish habitat losses may not be appropriately offset during the regulatory phase, and unauthorized residual serious harm to fish may result from the proposed Project.

Information Requests:
2a Provide information as to whether or not Vault Pit fish-out data support, or do not support, the use of biomass proportions derived from Second and Third Portage Lake fish-outs in predicted fish habitat biomass weights used for each species in the Habitat Evaluation Procedure.

2b Provide information or references to support the chosen fisheries weights in the context of the relative commercial, recreational or Aboriginal fisheries value of all fish species in the Vault Area Offsetting Plan.

AEM's Response:

2a. Since AEM had the benefit of obtaining data from two onsite fishouts prior to updating their NNLP in 2012, it was determined that these biomass proportions would be used in the 2012 update to the habitat model, since they were more representative of actual local biomass proportions than limited onsite catch-and-release studies. This data was used in habitat suitability calculations for all local lakes at that time, including for Vault and Phaser Lakes (see NNLP, 2012).

During discussions in November, 2014 between AEM and DFO, it was determined that AEM would present an addendum to the 2012 NNLP for the Vault pit expansion proposal. Therefore, no changes to the habitat model were made, such that the methodology remained consistent between the 2012 plan and 2015 addendum.

Although biomass proportions used in 2012 may not be identical to those in Vault Lake (see Table 2), it is not known that Vault Lake proportions better represent Phaser Lake. By creating habitat for Arctic char in Phaser Lake, it is anticipated that this fish will comprise a proportion of the population similar to areas where habitat for Arctic char currently exists (such as Second and Third Portage Lakes). Since Vault Lake is not considered to have habitat of high value for Arctic char (being a relatively shallow lake), it may not be appropriate to use the biomass proportions from Vault Lake to calculate losses and gains in productive capacity that will occur in Phaser Lake following improvements to char habitat.

Therefore, AEM believes that the use of fishout data from Second and Third Portage Lakes continues to be supported for the Phaser Lake habitat assessment, rather than changing the model to reflect biomass proportions obtained from the Vault Lake fishout.

Table 2. % biomass by species obtained during the Vault Lake fishout and proportions used in the 2012 & 2015 NNLPs (average of Second Portage and Third Portage Lake fishouts).

Species	Vault Lake Fishout (%)	2012 NNLP, 2015 NNLP addendum Second Portage + Third Portage Lake fishout average (%)
Arctic char	5	22
Lake trout	62	53
Round whitefish	30	19
Burbot	2	6

2b. As described above, AEM met with DFO representatives in November, 2014 and May 1, 2015 to discuss appropriate approach for the 2015 NNLP addendum, since legislation around fisheries habitat compensation changed after the Meadowbank plan was updated in 2012. It was determined at that time that an addendum to the 2012 plan would be submitted, using the same habitat model.

Fisheries weights were developed by AEM and Golder Associates at that time for the Meliadine site, in accordance with the traditional knowledge component of the Meliadine EIS and consultation with Baker Lake stakeholders (i.e. HTO, elders and KIA representatives – see AEM response 1.14 related to public consultation). These numbers reflect the relative value of each species for subsistence fishing in the region, since there are no commercial fisheries in the project lakes area. Given that the chosen weights were approved in 2012 by DFO for the Meadowbank site (including Phaser Lake), AEM believes that it is appropriate to use these values in the 2015 NNLP addendum.

Table 3. Fisheries weightings for AEM's Meliadine site, as developed by Golder Associates and AEM, and applied to Meadowbank's 2012 NNLP and 2015 NNLP addendum.

Species	Weight
Arctic char	0.50
Lake trout	0.25
Round whitefish	0.05
Burbot	0.05
Slimy sculpin	0
Ninespine stickleback	0
Lake cisco	0.05
Arctic grayling	0.10

2.3 3a-b: Predicted Impacts to Fish and Fish Habitat - Predicted Impacts to Fish and Fish Habitat

Reference: Environmental Impact Statement (EIS) Addendum for the Meadowbank Project: Vault Expansion to include Phaser Pit and BB Phaser Pit (AEM, 2015), p. 47, 108, NNLP Addendum Appendix C, Impact Assessment (AEM, 2015), Table 7-3

Issue/Concern: AEM notes that blasting of rock to remove overburden and material during pit development may cause mortality of fish and fish eggs in nearby waterbodies (App. C, Table 7-3). However, AEM also states that the nearest waterbody will be > 1 km away (Wally Lake) and therefore the fish are unlikely to be impacted.

AEM also states in the EIS addendum (p. 108) that a few additional haul roads will be constructed to connect the new pits to Vault Pit infrastructure; however, there are no anticipated changes to All Weather Roads and no winter roads are proposed (p. 47).

The issues that Fisheries and Oceans Canada notes are that calculations have not been provided to support AEM's conclusion that neither fish nor fish eggs in Wally Lake are likely to be impacted by blasting. Furthermore, it is unclear whether the haul roads to be constructed involve water crossings in fish-bearing streams.

Shortcomings: Information in the FEIS is absent regarding potential effects of blasting on fish, and whether water crossings are proposed to be constructed for haul roads.

The **concern** that Fisheries and Oceans Canada has is the information needed to assess the appropriateness of avoidance and mitigation of impacts to fish and fish habitat have not been fully presented for blasting or potential construction of watercrossings.

Importance of issue to Impact Assessment: If impacts to fish and fish habitat as a result of Project effects are not fully avoided or mitigated, unauthorized serious harm to fish may result from the proposed Project.

Information Requests:

3a Provide calculations showing the expected instantaneous pressure change (overpressure, kPa) and peak particle velocity (PPV, in mm/s) that is likely to be experienced by fish and fish eggs in Wally Lake as a result of the use of explosives in and near water for the proposed Project.

3b Clarify whether any roads to be constructed as a result of the proposed Project will cross fish-bearing water bodies. If so, Fisheries and Oceans Canada requests information on the water courses to be crossed, including fish species present, habitat type within the crossing footprint, crossing design and size.

AEM's Response:

3a Blast monitoring for Vault pit in 2014 included a station adjacent to Wally Lake (15W 7220873N 359907E). This location is 606 - 1685 m from blast sites, depending on blast location within the Vault pit. In 2014, a total of 69 blasts occurred in Vault pit for which PPV and overpressure were recorded at Wally Lake. The highest PPV recorded was 4.13 mm/s, and the highest overpressure was 0.0328 kPa. DFO limits for the Meadowbank site for each of these parameters are 13 mm/s and 50 kPa, respectively. Therefore, blasts in the Vault pit expansion, which is further from Wally Lake, are not expected to exceed DFO limits in Wally Lake.

It is noted that Turn Lake will also be within a similar distance (min. 1000 m) of the Vault pit expansion. In 2013 and 2014, blasts were monitored adjacent to Phaser Lake, between 95 m and 1096 km from blast locations. A total of 25 blasts were monitored at this station, with 7 exceedances of the PPV limit (max. 32.7 mm/s) and no exceedances of the overpressure limit. All 7 exceedance events were identified as occurring near the monitoring station, therefore it can be expected that blasts for the Vault pit expansion (which will occur >1000 m from Turn Lake) will not exceed DFO limits.

Following the fishout of Phaser Lake, there will be no expected exceedances of PPV or overpressure in Wally Lake or Turn Lake, and thus no anticipated impact of blasting on fish or fish eggs.

3b. No new roads will be constructed for the Phaser Pit and BB Phaser Pit operations that will cross fish-bearing water bodies. All haul roads and pit shell roads will be constructed following the fishout of Phaser Lake which is planned to begin in the open water season of 2016.

3.0 Environment Canada IR

3.1 1 - Waterbird By-catch during Fish-out Operations

Reference : EIS Addendum Section 4.19.2.2

Issue/Concern: EC is concerned by the frequency of waterbird by-catch during fish-out operations at northern mines. The inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs is known as *incidental take*. Incidental take, in addition to harming individual birds, nests or eggs, can have long-term consequences for migratory bird populations in Canada, especially through the cumulative effects of many different incidents.

The potential impacts of the fish-out program on waterbirds (a bird grouping inclusive of waterfowl and loons) were not determined by the Proponent. The Proponent did assess the loss of Phaser Lake waterfowl habitat in the EIS addendum, but not mortality. Waterbird by-catch mortality during fish-out operations was not assessed in the FEIS under Vault Pit mining activity.

In the EIS addendum, the Proponent confirmed waterbird usage of Phaser Lake (1 Common Loon was observed in 2005 on Phaser Lake, pers. comm. Martin Gebauer on May 2, 2014). The Proponent also proposes to conduct the fish-out during a period when migratory birds are still present (Q3, EIS Addendum Section 4.10.1.5).

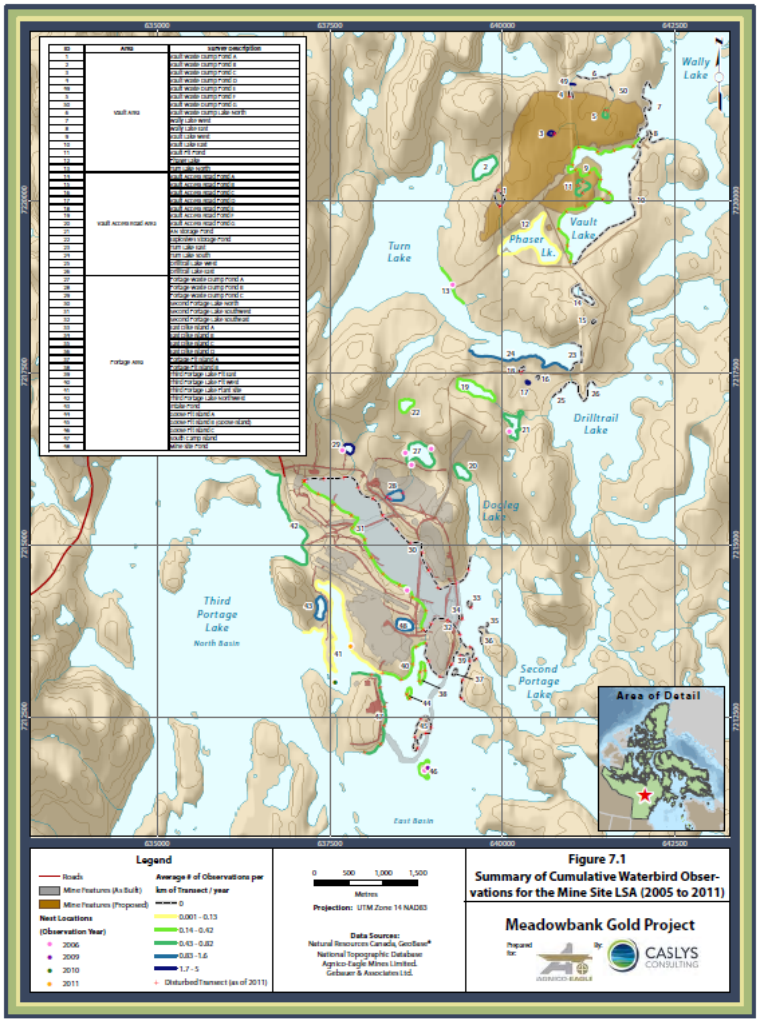
Information Request :
-EC requests that the Proponent provide a detailed description of the extent of migratory bird monitoring (specifically waterbirds) at Phaser Lake; including survey dates, methodology, observations, maps, etc.

-EC requests that the Proponent provide a description of mitigation measures to prevent waterbird by-catch during fish-out operations at Phaser Lake, based on experience from past Meadowbank fish-outs on site (e.g. Vault Lake and portions of Second & Third Portage Lakes).

AEM Response:

Between 2004 and 2012, AEM contracted a consultant to conduct waterbird nest surveys. Due to the very limited number of waterbird nests recorded each year, and the lack of evidence of mine-related effects, the waterbird nest survey program was discontinued after 2012. The primary objective of the waterbird nest survey monitoring program were to verify that mine facilities and activities did not impact the breeding success of waterbirds occurring in the area or disturb large concentrations of roosting or moulting waterbirds. Ponds, wetlands, lake shorelines and islands within 200 m of mine site facilities were surveyed on foot between 2006 and 2012 to determine the occurrence and frequency of nesting waterbirds. Similar, less intensive surveys were also conducted in 2004 and 2005. The survey protocol consists of two observers walking around the edges of islands, wetlands or shorelines, with one observer 5 m from the water's edge and the second observer 15 m from the water's edge (10 m between observers). Areas are assessed for indications of nesting waterbirds (i.e., ducks, swans, geese, jaegers) in potentially suitable sites within the mine site. Observers used maps and UTM coordinates for orientation. The UTM locations (taken with handheld GPS units) of all observed waterbirds as well as any nests and/or broods are recorded on datasheets. An attempt was made to conduct the surveys within the first two weeks of July, when most waterbird species are expected to be nesting. The total survey length around the mine site was 51,500 m (51.5 km), including the entire shoreline of Phaser Lake.

As described in the EIS addendum, one Common Loon was observed in 2005 on Phaser Lake. No water birds were subsequently observed in that area (see the Figure below taken for 2005-2011 observation summary. No additional observations were made in 2012).



AEM appreciates ECs concerns and will ensure best practices for the protection of waterbirds is applied during the fishout of Phaser Lake. AEM has been successfully in conducted 3 fishouts (in 2008 at Second Portage Lake NW Arm, in 2010 at Bay Goose Bay in Third Portage Lake and in 2012 at Vault Lake) during the open water season and have been fortunate to not have had one single recorded waterbird by-catch incident. As a result, we will continue to be aware that this was an occurrence at other northern mines, however we do not anticipate any by- catch for the Phaser Lake fishout, as we will hire an experienced team of biologists that will ensure nets are checked frequently, waterbirds are protected and that the fishout follows the DFO protocol.

3.2 2 - Timing of Dewatering

Reference : -Project Description Section 2.3, Water Management Plan (March 15, 2015) Section 4.6.2; Appendix B: Water Quality Forecasting for the Portage Area 2012 – 2025 Table 1-1

Issue/Concern: EC notes inconsistencies between the Project Description (Section 2.3) and the Water Management Plan (Section 4.6.2) regarding timing of fish-out and dewatering of Phaser Lake:

"Project Description:
AEM [the Proponent] *proposes to begin dewater Phaser Lake in Q3 of 2015 while completing a fishout, and then completely dewater it in Q3 2016, in advance of mining in 2017. This will take less than 3 months (volume of Phaser Lake is estimated at 700,000 m^3). Water is proposed to be transferred into the Vault Attenuation Pond and discharged through a diffuser into Wally Lake."*

"Water Management Plan (March 15, 2013)
The total duration of the Phaser Lake dewatering process, using a single pump, is 30 days (September 1st to September 30th). Pumping for the first 18 days occurs without treatment, at a rate of 24,500 m^3/d. After that, pumping for the next 12 days takes place using an Actiflo unit for TSS treatment, at a rate of 24,500 m^3/d.

Figure 4-15 presents the lowering of the water level over time during the dewatering process. Figure 4-16 presents the dewatering sequence over time." (This shows dewatering occurring over the month of September, following fish-out.)

Table 1-1 of the attached report "Water Quality Forecasting for the Portage Area 2012 – 2025" shows September 2016 to October 2016.

AEM does not anticipate that transfer of the water from Phaser Lake will increase water levels in Wally Lake above the current range of natural variability in water levels.

Information Request : EC requests that the Proponent provide clarification of the timing and duration of the proposed dewatering of Phaser Lake (i.e. whether a 30 day or 90 day dewatering period is required), and the time of year this is proposed to be done.

AEM's Response:
In the original submission to NIRB and DFO (in July 2014), AEM proposed to begin the fishout in 2015. As per ECs comments, this may have created confusion on dates, as it is apparent those dates are obsolete. Given the extended review process for the Vault expansion into Phaser Lake, AEM continues to adjust our dewatering and fishout strategy for Phaser Lake. As per the FEIS Addendum, AEM is currently planning to dewater and fishout Phaser Lake in the open water season beginning mid July 2016 to the end of September 2016 and no later than mid October (before freeze up). This schedule may change in the future, as it is contingent on regulatory approval.

Based on the volume of the lake and the infrastructure and pumping capabilities at Vault, AEM "could" pump Phaser Lake continuously within 30 days (as per the pumping curves in SNC, 2013). However, because we will be conducting a fishout simultaneously, AEM is planning to begin pumping and the fishout of Phaser lake in mid July 2016, pause pumping activity while the fishout is completed (which is estimated to be completed by the end of August) and then continue pumping accordingly until the end of September. AEM recognizes the misperception, as the schedule and timing of dewatering requires some flexibility, as AEM ensures the fishout is completed to the satisfaction of the DFO and stakeholders.

3.3 3 - Water Balance

Reference: Water Management Plan (March 15, 2015) Section 4.6.2; Appendix A2: Water Balance Schematics Figure A2-6

Issue/Concern: In reviewing the Water Balance Schematics, prior to dewatering of Phaser Lake the runoff area is 449 ha and an annual total of 443,138 m3 / monthly maximum of 283,234 m3 of runoff drains from that area and is directed to the Vault Attenuation Pond.

Information Request: EC requests that the Proponent clarify whether diversion of runoff water will be required for the Phaser Pit and lake bed, and if so, how that diversion will be managed.

AEM's Response:
As stated in the FEIS Addendum in Section 4.19.3.1, a diversion channel to Turn lake will not be required for Phaser Pit. On page 69 and continues onto page 70, AEM states:

"The potential effects on surface water quantity due to Vault Pit mining activity were identified in the original FEIS. Dewatering and mining activities at Vault Pit were predicted to alter Phaser Lake water quantity (i.e. changes in the Vault Lake were predicted to increase the volume of water over time in Phaser Lake due to freshet and rain events). As a result, a water management strategy was developed which required that Phaser Lake water level be monitored and if deemed necessary, pumped to Turn Lake, which would require the monitoring of sedimentation and volume/ water level changes in Turn Lake, an adjacent watershed. Currently, the plan is to pump water into Vault Attenuation pond and discharge as needed, thus maintaining the watershed volumes within the Vault Lake watershed. This is actually an improvement to the original plan as Turn Lake will not have any potential impacts as no water will be pumped to this water body.

Similarly, the revised Vault Pit Expansion plan also maintains Phaser Lake historical drainage within the Vault Lake watershed. AEM proposes to begin dewater Phaser Lake in Q2 of 2016 while completing a fish out in Q3, in advance of mining in 2017. This dewatering will take less than 3 months (volume of Phaser Lake is estimated at 700,000 m3). Water is proposed to be transferred into the Vault Attenuation pond and discharged through a diffuser into Wally Lake. Following dewatering of Phaser Lake, it is expected that no additional impacts to the watershed will occur during operations than what was originally predicted in the FEIS for the Vault Area. By directing water in Phaser Lake to Vault Attenuation and ultimately discharging it into Wally Lake, no changes in water levels in Wally Lake, Turn Lake and Drill-trail Lake are expected. "

3.4 4 - Closure of the Phaser Pit

Reference: No Net Loss Plan Section 4.1.3

Issue/Concern: At closure, Vault Lake and Phaser Lake will be joined. This will entail reflooding of the mined-out pits and original lake beds, and partial infilling of the pit and installation of rock structures.

4.1.3.1 Description states:

"Post-closure alterations to Vault and Phaser Lakes will result from construction of pits, pit caps, roads and dikes (as seen in Figure 3-5). Both lakes will be expanded as a result of land-to-lake conversion in the Vault Pit."

Information Request:
-EC requests that the Proponent describe what geotechnical work has been done to identify areas of concern for stability (e.g. permafrost ice lenses) in the Phaser/Vault closure lake configuration, and indicate how those areas of concern will be addressed.

-EC requests that the Proponent quantify increases in methylmercury associated with flooding of the previously terrestrial areas and placement of fill material, and identify mitigation measures that will be taken with respect to those increases.

AEM's Response:

As per the previous response 1.9 to AANDC IR#9, the area around Phaser Lake was originally assessed in the FEIS as being within the permafrost and the lithology of Phaser Pit and BB Phaser Pit (including rock mechanics and geotechnical elements) are a continuation of the Vault Pit (please refer to 1.10 that illustrates the lithology and block model for Phaser Pits). During exploration drilling, drill results demonstrated similar ice lensing and rock integrity as the Vault Pit; AEM has a dedicated geotechnical staff and consultants that will continue to assess the pit stability and ensure the best design for operations and closure. The same practices of reviewing geotechnical plans, dewatering and stability will be reviewed with the Meadowbank Dike Review Board will continue for Phaser Pits. All information collected during the reflooding of Portage Pits and Bay Goose pits will be transferred to Phaser Pit and BB Phaser Pit operations.

As for the concern EC has expressed related to methylmercury, AEM would like to clarify that <u>none</u> of the adjacent terrestrial area with vegetation will be flooded; rather the small area of land that is within the footprint of Phaser Pit will first be stripped of overburden, mined and then the pits will be reflooded. Therefore AEM does not anticipate any increases in methylmercury associated with flooding.

4.0 Government of Nunavut IR

4.1 GN-1 - Tailings Management and Climate Change Modelling

Reference: Mine Waste Rock and Tailings Management Plan, Version 1 (March 2014); Tailings Storage Facility: Operation, Maintenance and Surveillance Manual, Version 3 (Sept. 2013); FEIS – 2005 Reclamation and Closure Plan.

Issue/Concern: The Government of Nunavut (GN) has concerns regarding the proposed tailings management and post-closure plans associated with the Project. The Proponent has proposed to store additional tailings generated by the proposed Phaser Pit and BB Phaser Pit in the existing tailings storage facility. As described in the original FEIS, the tailings management and reclamation plans uses permafrost as an impermeable layer that will freeze and encapsulate tailings, thus preventing contaminants from entering the regional water drainage system. The tailings management plan is dependent upon the continued presence of permafrost in the local study area. However, the International Panel on Climate Change (IPCC) (2014)1 has cautioned that as global mean surface temperatures rise, near-surface permafrost extent at high northern latitudes will be reduced. If

2014 climate change models prove to be accurate, the permafrost underlying the tailings storage facility may thaw and become permeable, thus creating a pathway to groundwater via subsurface drainages. Groundwater basins do not follow the same boundaries as the surface watershed drainage areas, which could lead to surface water contamination through contaminated springs.

As noted by the Proponent in the 2005 Reclamation and Closure Plan,

"The results of thermal modeling indicate that complete freezing of the tailings and bedrock beneath the tailings storage facility will occur with time. For tailings not frozen during deposition, the time to begin freezing the talik beneath the lake could be as long as 200 years if climate change is not considered, and 270 years if climate change is considered."

In the IPCC's 2014 Synthesis Report, Chapter 28. Polar Regions2, the IPCC cautioned that,

"Rising temperatures, leading to the further thawing of permafrost and changing precipitation patterns have the potential to affect infrastructure and related services in the Arctic. Particular concerns are associated with the damage of residential buildings due to thawing permafrost, including, Arctic cities; small, rural settlements; and *storage facilities for hazardous materials*. (emphasis added)"

The GN is concerned that the predicted and observed changes in permafrost dynamics may lead to the tailings associated with the proposed Project contaminating the terrestrial and aquatic environment.

Information Request:

1. The GN requests that the Proponent provide an adaptive management protocol in the event that the permafrost underlying the tailings storage facility thaws and becomes permeable.

2. The GN requests that the Proponent provide information that identifies the climate change models utilized to assess the impacts of additional tailings generated by the proposed Project.

3. The GN requests that the Proponent provide a fulsome analysis of permafrost tailings management and closure monitoring in the Arctic region and consider the predicted effects of climate change and permafrost dynamics.

AEM's Response:

As previously stated, the addition of Phaser Pit and BB Phaser Pit tailings represent approximately 1 month of tailings deposition (~400,000 t of tailings, which is approximately one meter in the south cell tailings storage facility (TSF)) and is within the footprint/ capacity of the original tailings storage facility concept which was approved in the original FEIS. As per AEM's response 1.10, the lithology of the Phaser Pits is an extension of the Vault Pit, and therefore the tailings geochemistry will be consistent with Vault Pit tailings and will not have an impact on the approved TSF operations and closure or freezeback of the TSF.

Many of the above comments from the GN are consistent with concerns raised from intervenors during the Meadowbank Type A license renewal technical review. AEM agrees with these concerns related to the tailings

storage facility and permafrost and as a result, in 2013, began working with Research Institute in Mines and Environment (RIME - UQAT) and specialized consultants to ensure that the design controls for ARD in the tailings storage facility and waste rock storage facility encapsulation project and freeze control strategies will be effective for closure. We are currently conducting a fulsome analysis and are applying the most up to date scientific knowledge for closure in the Arctic. This will ensure sources of water pollution are controlled to protect nearby waterbodies and groundwater.

As part of the Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5), the IPCC adopted new Representative Concentration Pathways (RCPs) to replace the previous emission scenarios of the Special Report on Emission Scenarios (SRES). Currently, AEM has contracted specialized consultants who are designing the tailings storage facility capping project for closure. As part of their assessment, the two middle class scenarios: RCP4.5 and RCP6 scenarios were chosen as the most appropriate climate change scenarios for the Meadowbank site. RCP6 represents non-climate policy scenarios. The RCP6 scenario is more equivalent to most predictions of emissions by 2100 in the case that no climate action is taken[1]*.*

AEM will continue to take a thorough approach to planning permafrost tailings management by working with expert design teams, using monitoring data collected internally (thermistor and piezometer data) and data collected by researchers to ensure all climate change and permafrost dynamics are considered for closure. As per the Type A license requirements, closure plans will be submitted in the final reclamation and closure plan one year prior to closure.

4.2 GN-2 - Archaeological Assessment of the Vault Expansion Area

Reference: Agnico-Eagle – EIS Addendum – Phaser Pits p. 74

Issue/Concern: The Proponent reports that no new archaeological sites were identified within the Vault Expansion area (FMA Heritage Inc., 2010) as a result the original predicted impacts in the FEIS remain unchanged.

The GN notes that this statement is derived from work carried out under Nunavut Permit 2010-022A and reported in their Archaeological Impact Assessment 2010, Agnico Eagle Mines Limited Meadowbank Gold Project (the Report). The GN notes that the current footprint varies slightly from the one that was the object of the archaeological assessment conducted in 2010. Specifically, the routing to the southwest of the Turn Lake/Drill Trail Lake appears to have been modified since the 2010 assessment.

Information Request: The Department of Culture and Heritage encourages the Proponent to conduct additional archaeological survey along this road on either side of the current alignment and/or any other development areas proposed for development to determine the presence or absence of archaeological site. This information will be incorporated into the Annual Archaeological Site Status Report for management purposes and will be useful for future development planning.

AEM's Response:

[1] Van Vuuren, D.P., Edmonds, J., Kainuma, M., Raihi, K., Thomson, A., Hibbard, K. Hurtt, G.C., Kram, T. Krey, V., Lamarque, J.F., et al. 2011. The representative concentration pathways: an overview. Climatic Change. Vol. 109.

It is important to note that only a very small portion of Phaser Pit is on land, while the majority of the operations is on water. AEM appreciates GNs concern, and refers the GN to the baseline report entitled Meadowbank Gold Project Baseline Archaeological Report found on the NIRB website.

ftp.nirb.ca - /02-REVIEWS/COMPLETED REVIEWS/03MN107-MEADOWBANK GOLD MINE/02-REVIEW/09-FINAL EIS/02-FEIS/SUPPORTING_DOCS/001 Baseline/archaeology/

In this report the surrounding Phaser Lake area was thoroughly surveyed for the presence of archaeological sites in support of the original FEIS. As per GNs comments, in 2010, Archaeologists conducted additional surveys of the Meadowbank Mine area including around Phaser Lake. No new Archaelogical sites were identified within the Phaser Pit and BB Phaser Pit area.

5.0 Transport Canada IR

5.1 Navigability of Phaser Lake

As per the attached letter dated August 18, 2015, Transport Canada requests that the proponent provide information that will be used to determine if Phaser Lake is navigable for the purposes of the Navigation Protection Act (NPA). Dewatering of a navigable waterway is prohibited under Section 24 of the NPA, unless exempted by Governor in Council.

To determine if Phaser Lake is navigable for the purposes of the NPA, Transport Canada requires the following information:

- details regarding the current use of Phaser Lake for navigation, either as a self contained route or as part of a navigation network extending beyond the boundaries of Phaser Lake;
- details regarding any known historic or past use of Phaser Lake for navigation; and
- an evaluation of any future public appeal for navigation on Phaser Lake resulting from changes in access, land use, or other factors.

AEM's Response:

Phaser Lake is a small isolated lake that drains via a non-navigable channel into Vault Lake. No other water bodies drain into Phase Lake. Phaser Lake is approximately 25 ha in surface area with a maximum depth of 4 to 5 meters. While Phaser Lake itself may be navigable by small watercraft it is not accessible by road or other water way and does not form part of a natural travel way. It drains into Vault Lake through a channel that is not always flowing, is primarily flowing below boulders only in the spring, is disconnected from Vault and is definitely not navigable by small watercraft (canoe or kayak) (see below figure).

Phaser Lake is located on privately owned Inuit land where all surface access is administered by the Kivalliq Inuit Association. Phaser Lake is fully within the boundaries of the active Meadowbank Mine and thus for public safety and security is not accessible to the public. Agnico has a surface land use lease from the Kivalliq Inuit

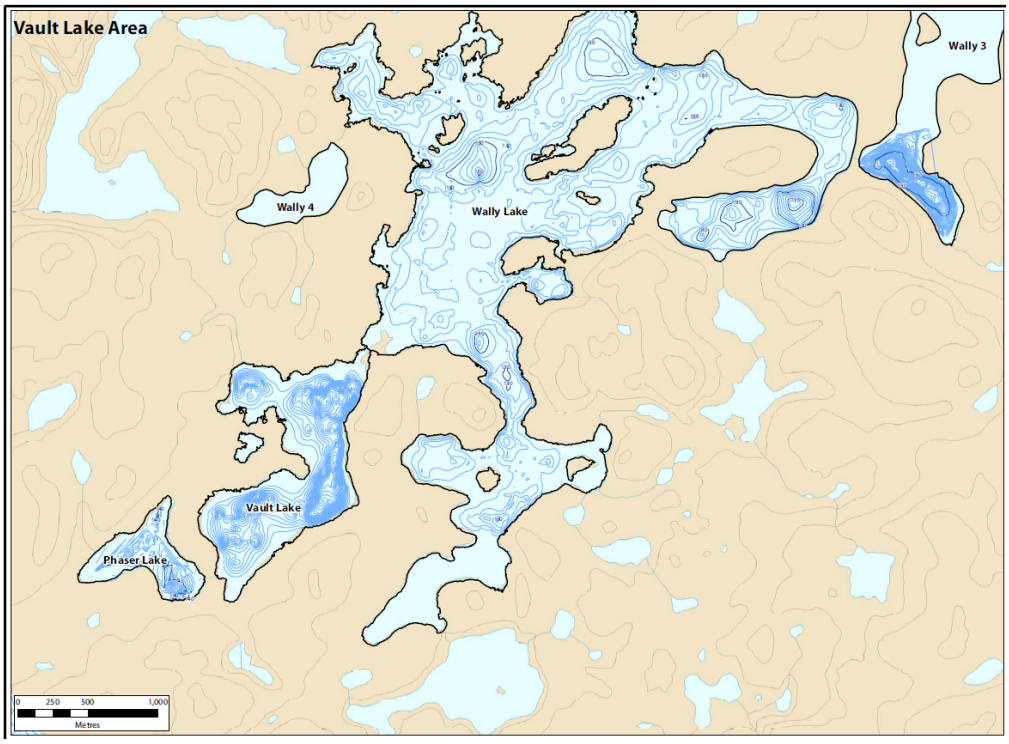
Association that allows for active mining in this area. This mining activity is authorized by the Government of Canada under Project Certificate No. 4 issued by the Nunavut Impact Review Board and signed by the Minister of Indian Affairs and Northern Development in 2008 and under a Type A Water License (2AM-MEA0815) issued by the Nunavut Water Board and signed by the Minister of Indian Affairs and Northern Development Canada in 2008 (subsequently renewed as 2AM-MEA1525 signed in 2015 for a further 10 year period).

Vault Lake has been de-watered and is currently being mined as an active open pit area consequently there is no possible way of navigating through Phaser Lake into Vault Lake and this will remain the case until the open pit is re-flooded and returned in the form of a lake. Mining is currently scheduled to end in 2018. Then the open pit will be re-flooded and the water quality monitored and actively controlled until it is of a quality suitable to allow this lake to be re-connected to the downstream Wally Lake. This is not expected to occur until sometime around 2020 to 2025.

Phaser Lake is located approximately 160 km from the nearest community, Baker Lake. Access to Phaser Lake by the public is currently not possible because it is within the boundaries of the active Meadowbank Mine Site.

Archaeological and traditional knowledge studies were completed as part of the environmental assessment work conducted for the Meadowbank Mine. These studies showed no archaeological sites that would indicate any prior use of Phaser Lake as a travel route. Similarly traditional knowledge studies did not provide any evidence or indication of past use of Phaser Lake by Inuit or other peoples for navigation or travel purposes.

Thus while Phaser Lake may be a waterbody capable of being navigated by floating vessels for the purpose of transportation/recreation use; the public have no right to travel on this lake as it is fully within the boundaries of the active Meadowbank Mine as granted by land use lease, Project Certificate and Water Use License; the waterbody (Phaser Lake) does not connect two places accessible to the public; and Phaser Lake does not form part of a navigational network. Thus in our understanding of the framework for assessing whether a waterbody is navigable as established by Transport Canada, Phaser Lake would be considered as a non-navigable waterbody.



6.0 Private Citizen IR

6.1 Social and Health Impact Assessment

Reference: Appendix C - Impact Assessment of the Meadowbank Project EIS Addendum

Issue/Concern: Find little information on social and health impact assessment

Information Request: Request a copy of the SIA (social impact assessment) and/or the HIA (health impact assessment) for this project expansion, if this is available

AEM's Response:
(The following response was provided by AEM via email to NIRB on August 08, 2015)

The Socio-economic impact assessment for the proposed expansion of the Vault Pit into Phaser Lake is contained within the main EIS Addendum document (Environmental Impact Statement (EIS) Addendum for the Meadowbank Project: Vault Expansion to include Phaser Pit and BB Phaser Pit), specifically in Section 4.19.10 entitled Social, Cultural and Economic Components (pages 76 through 108). As set out by the NIRB this assessment followed the EIS guidelines as established for the Meadowbank Project. For ease of addressing this IR attached is an extract from the addendum document covering Section 4.19.10.

For perspective the following introduction to Section 4.19.10 is repeated here:

The original Meadowbank Mine (including mining of the Vault deposit) was the subject of an impact assessment that included socio-economic and cultural components that was conducted under the direction of the Nunavut Impact Review Board using the process established under Part 5 of the Nunavut Land Claims Agreement in 2004 thru 2008. This assessment identified Baker Lake as the primary area of positive socio-economic impacts resulting from the Project. It is the closest community to the project site, and receives preference for employment and business opportunities. Some benefits also accrue to individuals and business elsewhere in Kivalliq Region and Nunavut.

The proposed extension of the Vault Pit into Phaser Lake will not materially change the socio-economic and cultural effects that have and continue to be observed in Baker Lake and other Kivalliq communities resulting from the Meadowbank Mine. Overall these effects have been viewed as being net positive to the residents of Baker Lake and the Kivalliq region of Nunavut (that is the positive effects have been viewed as being of greater importance than the negative effects). This proposed extension will allow mining and milling activities at the Meadowbank Mine to continue for approximately one additional month beyond the current planned end of mining in late 2017. Consequently the proposed extension will extend these effects (both positive and negative) for one additional month.

Please refer to Section 4.19.10 - Socio-economics and Section 4.19.21 – Management of the socio economic Impact Assessment of the FEIS Addendum document for additional details.

Appendix A – Consultation meeting minutes/ notes and presentations