Appendix A1

2016 Mine Plan

AGNICO EAGLE

MEADOWBANK GOLD PROJECT

Production Lease KVPL08D280
2016 Mine Plan

December 2015

EXECUTIVE SUMMARY

Condition 5.09 of Production Lease KVPL08D280 for the Meadowbank Gold Project states:

On or before January 1st in each year of the Term, AEM shall deliver to KIA its annual Mine Plan for the next calendar year, detailing at least the following:

(i) a description of the activities and work that AEM proposes to perform in that year on the Leased Land, together with a listing of major equipment to be brought onto the Leased Land; and

(ii) a description of the topographical features and any natural or manmade features, structures, works and waters that may be affected.

This document presents the 2016 Annual Mine Plan for the Meadowbank Gold Project.

The Meadowbank gold mine began the operation phase of the project in February 2010, and thus, is entering its seventh year of operations. In addition to routine activities throughout the 2016 season, a number of secondary construction/modification projects will be undertaken near the main mine site area and Vault area. Construction of the Central Dike Phase 4 and, Saddle Dam 3, 4 and 5 will be completed in 2016.

Environmental monitoring (wildlife, aquatic effects, groundwater, noise and air) will continue through 2016 in support of all operational undertakings at the Meadowbank site as required by the NWB Type A Water License 2AM-MEA1525, NIRB Project Certificate No.004, DFO authorizations, and MMER regulations.

TABLE OF CONTENT

SECTION 1 • INTRODUCTION 5

SECTION 2 • 2016 PLANNED EXPLORATION ACTIVITIES 6

SECTION 3 • 2016 PLANNED CONSTRUCTION ACTIVITIES 7

3.1 Dike construction and tailings management 7
3.2 Vault Pit Expansion into phaser lake 7

SECTION 4 • 2016 PLANNED OPERATION ACTIVITIES 8

4.1 Mining Plan 8
4.1.1 Portage Pit 8
4.1.2 Goose Pit 8
4.1.3 Vault Pit 8
4.2 Waste Rock Management Plan 10
4.3 Equipment 11

SECTION 5 • MONITORING 14

5.1 Wildlife Monitoring 14
5.1.1 Harvest Study (Condition of Project Certificate) 14
5.1.2 Breeding Bird Plot Surveys (Condition of Project Certificate) 14
5.1.3 Raptor Nest Surveys (Condition of Project Certificate) 14
5.1.4 Caribou Satellite-Collaring Program 14
5.1.5 Checklist Surveys and Wildlife Logs 15
5.1.6 AWAR and Mine-Site Road Surveys 15
5.1.7 Screening Level Risk Assessment 15
5.2 Aquatic Effects Monitoring Program 16
5.2.1 Core Receiving Environment Monitoring (CREMP) 16
5.2.2 Metal Mining Effluent Regulations (MMER) Monitoring 19
5.2.3 Water Quality and Flow Monitoring 19
5.2.4 Seepage Water from Waste Rock Storage Facility 22
5.2.5 Assay Road Seepage 22
5.2.6 Central Dike Seepage 22
5.2.7 Blast Monitoring 22
5.3 Groundwater Monitoring Program 23
5.4 Noise Monitoring Program 23
5.5 Air Monitoring Program 23

SECTION 6 • LOGISTICS 24

LIST OF TABLE

Table 4-1 Mine Production Schedule 9
Table 4-2 Equipment currently at Meadowbank..... 11

LIST OF FIGURE

Figure 1: Meadowbank Water Quality, Sediment, Coring, and Invertebrate Sampling Areas 17
Figure 2: Baker Lake Water, Sediment, Coring and Benthic invertebrate Sampling Area and Limnology Profile Location 18
Figure 3: Meadowbank Mine Site 2016 Sampling Locations 20
Figure 4 : Vault 2016 Sampling Location 21

SECTION 1 • INTRODUCTION

The Meadowbank gold mine began the operation phase of the project in February 2010, and thus, is entering its seventh year of operations. In addition to routine activities throughout the 2016 season, a number of secondary construction/modification projects will be undertaken near the main mine site area and Vault area. Construction of the Central Dike Phase 4 and, Saddle Dam 3, 4 and 5 will be completed in 2016.

The following sections outline the exploration, construction, operation and environmental activities planned for 2016 at the Meadowbank Gold Project, conducted in accordance with Production Lease KVPL08D280.

SECTION 2 • 2016 PLANNED EXPLORATION ACTIVITIES

The 2016 exploration program for the Meadowbank Gold Project area will be conducted by the Exploration Division of Agnico Eagle Mines Ltd. Consequently, this work will be performed under KIA Commercial Exploration Lease KVCL303H305.

SECTION 3 • 2016 PLANNED CONSTRUCTION ACTIVITIES

Construction activities at the Meadowbank mine are mainly completed. There are a number of secondary projects and modifications to existing infrastructure that will continue in 2016, including progressive reclamation of the site, such as the capping of the North Cell with NPAG.

3.1 DIKE CONSTRUCTION AND TAILINGS MANAGEMENT

In 2016, dike construction and water management activities will include the following:

- Finalize tailings deposition in the North cell;
- Continue capping with NPAG a portion of the North tailings cell;
- Continue using the South cell for tailings deposition;
- Construction of Central Dike – Phase 4 to elevation 143m;
- Construction of the Saddle Dam 3 to elevation 143m;
- Construction of the Saddle Dam 4 to elevation 143m; and,
- Construction of the Saddle Dam 5 to elevation 143m.

3.2 VAULT PIT EXPANSION INTO PHASER LAKE

AEM is currently in the process of getting authorizations to proceed with the Vault Pit expansion into Phaser Lake. Once the project is approved, AEM plans to begin dewatering Phaser Lake in Q3 of 2016 while completing a fishout, and then completely dewater it in Q4 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. All Water License and MMER discharge criteria will be met.

SECTION 4 • 2016 PLANNED OPERATION ACTIVITIES

4.1 MINING PLAN

In 2016, AEM mining plan is to operate Portage and Vault pits at the Meadowbank mine site. A total of 33.5 Mt of rock will be hauled from these two pits during the year. The mine plan consists of moving 29.5 Mt of waste rock and 4.1 Mt of ore from the open pits and 0.5 Mt of ore from the stockpiles.

5.0 Mt of material will be mined out from Portage pit. Vault pit will accommodate the majority of the mining, totaling 28.5 MT of total mining.

In the 1st two quarters of 2016, due to a shortage of Pit ore, AEM will reclaim approximately 0.3 Mt of mostly lower grade stockpiles (1.05 g/t)

4.1.1 Portage Pit

Portage pit will see its phase 3 depleted by the end of the second quarter of 2016 and the mining activities will be focused in the ultimate phase in the south from the outset of 2016 until the end of life of mine. At the south of the pit, the ultimate Phase will only resume operations in the 4th quarter of the year.

The mine plan in Portage for next year is to move 5.0 Mt of rock from which, 4.6 Mt will be waste and 0.5 Mt will be ore. This translates to a stripping ratio of 9.8 to 1. The ore coming from Portage will have an average of 3.27 g/t. The Portage stockpiles will feed the mill with 0.3 Mt of ore at a grade of 1.55 g/t.

4.1.2 Goose Pit

Goose pit was completely depleted in 2014, so therefore no production / mining is planned in 2016 under the current LOM approved.

4.1.3 Vault Pit

The mine plan for 2016 in Vault is set to mine approximately 28.5 Mt of rock from which, 24.9 Mt will be waste and 3.6 Mt will be ore with an average mined ore grade of 2.67 g/t.

The Mine is located approximately 9 km North East of the Portage Pit Area. The Vault stockpiles will feed the mill with 0.2 Mt of ore at a grade of 2.60 g/t.

Table 4.1 shows the 2016 Mine production schedule of Meadowbank on a monthly basis.

Table 4-1 Mine Production Schedule

			Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2016
Total Portage															
Ore	T		126,254	46,039	11,018	5,952	25,930	5,409	12,794	15,592	31,812	28,118	46,014	104,348	**459,280**
Ounces	oz.		12,917	3,286	652	265	1,673	328	740	1,122	3,403	3,355	5,416	15,166	**48,322**
Grade	(g/t)		3.18	2.22	1.84	1.38	2.01	1.89	1.80	2.24	3.33	3.71	3.66	4.52	**3.27**
Overburden	T		57,960	-	-	-	-	-	-	-	-	-	-	-	**57,960**
Waste	T		441,954	520,538	282,047	274,888	368,091	221,721	345,647	282,287	425,658	326,821	325,621	701,661	**4,516,935**
Total	T		626,169	566,577	293,065	280,840	394,021	227,130	358,442	297,879	457,470	354,939	371,635	806,008	**5,034,175**
	T/D		21,971	21,380	10,283	10,030	13,134	7,571	11,563	9,609	15,249	12,454	13,514	28,281	
Total Vault															
Ore	T		149,504	171,553	210,464	374,096	270,946	340,532	464,121	424,591	331,614	238,585	354,302	267,095	**3,597,403**
Ounces	oz.		11,366	13,696	16,706	27,739	22,900	28,777	38,556	38,558	30,870	18,430	33,670	27,319	**308,587**
Grade	(g/t)		2.36	2.48	2.47	2.31	2.63	2.63	2.58	2.82	2.90	2.40	2.96	3.18	**2.67**
Overburden	T		-	-	-	-	-	-	-	-	-	-	-	-	-
Waste	T		2,194,733	1,961,301	2,443,994	2,229,060	2,460,581	2,334,205	2,144,899	2,104,884	1,769,345	2,088,895	1,776,562	1,395,309	**24,903,767**
Total	T		2,344,237	2,132,854	2,654,458	2,603,156	2,731,527	2,674,737	2,609,020	2,529,475	2,100,959	2,327,479	2,130,864	1,662,404	**28,501,170**
TOTAL MINED FROM PITS															**7.3**
Ore	T		275,758	217,592	221,482	380,048	296,876	345,941	476,915	440,183	363,426	266,703	400,317	371,443	**4,056,684**
Ounces	oz.		24,283	16,982	17,358	28,004	24,573	29,105	39,296	39,680	34,273	21,785	39,086	42,485	**356,909**
Grade	(g/t)		2.74	2.43	2.44	2.29	2.57	2.62	2.56	2.80	2.93	2.54	3.04	3.56	**2.74**
Overburden	T		57,960	-	-	-	-	-	-	-	-	-	-	-	**57,960**
Waste	T		2,636,687	2,481,839	2,726,041	2,503,948	2,828,672	2,555,926	2,490,546	2,387,171	2,195,003	2,415,716	2,102,183	2,096,970	**29,420,701**
Total Mined from Pits	***T***		***2,970,405***	***2,699,431***	***2,947,523***	***2,883,996***	***3,125,548***	***2,901,867***	***2,967,461***	***2,827,354***	***2,558,429***	***2,682,418***	***2,502,499***	***2,468,413***	**33,535,345**
TOTAL MINED FROM STOCKPILES															
Ore	T		91,614	129,434	104,180	-	79,077	-	-	-	1,463	105,828	-	2,923	514,520
Ounces	oz.		9,621	4,402	4,664	-	3,510	-	-	-	117	9,406	-	255	31,975
Grade	(g/t)		3.27	1.06	1.39	-	1.38	-	-	-	2.48	2.76	-	2.72	1.93
ORE PROCESSED															
TOTAL ORE	**T**		356,345	332,688	315,735	331,560	348,719	315,480	342,922	336,288	296,010	344,162	334,800	349,897	**4,004,606**

***Ore mined from pits and stockpiles differs from ore processed on any given period due to additions and subtractions from stockpiles.**

4.2 WASTE ROCK MANAGEMENT PLAN

The Waste Management Plan for 2016 is to maximize waste storage facility (WSF) utilization and minimize haulage cycle times which will, in turn, minimize the greenhouse gas emissions and impact on the environment.

Throughout the year most of the potentially acid generator (PAG) material from Portage pit will be moved to the pit fill dump, this area is the depleted central portion of Portage pit, available now for PAG rock; the dump will reach a maximum elevation of 127m masl. Some PAG material will also be sent to Goose Pit as it is depleted as well and constitutes a shorter hauling destination. The maximum elevation of 127m masl is respected as well. No PAG rock will be sent to the PAG rock storage facility (PRSF) in 2016.

The majority of the NAG will be sent to the Portage NAG stockpiles and Goose dump which will all be used also as inventory for the closure plan of the mine.

Some construction projects will also require NAG material such as the North cell capping by the beginning and end of 2016. Some PAG will be required to build the Central dike on the West side of Portage pit.

The Vault dump will store NAG material from Vault pit. It is expected that almost all the material from Vault pit will be NAG, if any PAG rock is found it will be placed in the core area of the dump and capped with NAG material.

4.3 EQUIPMENT

Table 4-2 lists the equipment currently at Meadowbank. No new equipment will be brought to site in 2016.

Table 4-2 Equipment currently at Meadowbank

Manufacturer	Unit Number	Model	Description
CATERPILLAR	61BAC03	307	BACKOE CATERPILLAR 307
CATERPILLAR	61BAC04	330	BACKOE CATERPILLAR 330D
CATERPILLAR	61BAC05	345D	BACKOE CATERPILLAR 345DQ
CATERPILLAR	61BAC06	385C	BACKOE CATERPILLAR 385C
CATERPILLAR	61BAC07	345D	BACKOE CATERPILLAR 345DL
KOMATSU	61BAC08		BACKOE PC1250 KOMATSU
CATERPILLAR	61BAC09		BACKOE 390DL CATERPILLAR
TEREX	61BAC10	RH120	BACKOE TEREX O&K RH120-E
TEREX	61BAC11	RH120	BACKOE BUCYRUS RH120-E
CATERPILLAR	61BAC13		BACKOE CAT6030
CATERPILLAR	61DOZ01	D8T	DOZER D8T CATERPILLAR
CATERPILLAR	61DOZ02	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ03	D8R	DOZER D8R CATERPILLAR
CATERPILLAR	61DOZ05	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ06	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ07	D9T	DOZER D9T CATERPILLAR
CATERPILLAR	61DOZ08	834H	DOZER 834H CATERPILLAR
CATERPILLAR	61DOZ09		DOZER D6T CATERPILLAR
CATERPILLAR	61GRA01	16H	MOTOR GRADER 16H CAT
CATERPILLAR	61GRA02	160H	MOTOR GRADER 160H CAT
CATERPILLAR	61GRA03	16M	MOTOR GRADER 16M CAT
CATERPILLAR	61GRA04	16M	MOTOR GRADER 16M CAT
CATERPILLAR	61GRA05	16M	CATERPILLAR GRADER 16M
CATERPILLAR	61HTR01	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR02	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR03	777F	TOW HAUL 120T
CATERPILLAR	61HTR04	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR05	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR06	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR07	777F	HAUL TRUCK 100T CATERPILLAR
CATERPILLAR	61HTR08	777F	HAUL TRUCK 100T CATERPILLAR

CATERPILLAR	61HTR09	773E	HAUL TRUCK 50T CATERPILLAR
CATERPILLAR	61HTR11	777F	HAUL TRUCK 777F CATERPILLAR
CATERPILLAR	61HTR12	777F	HAUL TRUCK 777F CATERPILLAR
CATERPILLAR	61HTR14	777F	HAUL TRUCK 777F CATERPILLAR
CATERPILLAR	61HTR15	773D	WATER TRUCK 773D CATERPILLAR
CATERPILLAR	61HTR20	785B	HAUL TRUCK 150T CATERPILLAR
CATERPILLAR	61HTR21	785B	HAUL TRUCK 150T CATERPILLAR
CATERPILLAR	61HTR22	785B	HAUL TRUCK 150T CATERPILLAR
CATERPILLAR	61HTR23	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR24	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR25	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR26	785C	HAUL TRUCK 150T CAT 785C
CATERPILLAR	61HTR28	785C	HAUL TRUCK 150T CAT 785C
CATERPILLAR	61HTR29	785D	HAUL TRUCK 150T CAT 785D 2011
CATERPILLAR	61HTR30	785D	HAUL TRUCK 150T CAT 785D 2011
CATERPILLAR	61HTR31	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR32	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR33	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61HTR34	785D	HAUL TRUCK 150T CAT 785D
CATERPILLAR	61LOA01	IT14G	LOADER IT14G CAT
CATERPILLAR	61LOA02	IT14G	LOADER IT14G CAT
CATERPILLAR	61LOA03	992G	LOADER 992G CATERPILLAR
CATERPILLAR	61LOA04	992G	LOADER 992G CATERPILLAR
CATERPILLAR	61LOA05	420EIT	LOADER 420E IT CAT (PEPINE)
CATERPILLAR	61LOA06	966H	LOADER 966H CATERPILLAR
JOHN DEERE	61LOA08	TC44H	LOADER TC44H JOHN DEERE
CATERPILLAR	61LOA09	966H	LOADER 966H CATERPILLAR
CATERPILLAR	61LOA10	980H	LOADER 980H CATERPILLAR
CATERPILLAR	61LOA11	420E	LOADER 420E CATERPILLAR
CATERPILLAR	61LOA12	980H	LOADER 980H CATERPILLAR
CATERPILLAR	61LOA13	992K	WHEEL LOADER 992K CATERPILLAR
CATERPILLAR	61LOA15	980K	LOADER 980K CATERPILLAR
CATERPILLAR	61LOA16	IT14G	LOADER IT14G CATERPILLAR
ATLAS COPCO	61RBD01	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD02	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD03	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD04	DM45	ROTARY BLAST DRILL 6" ATLAS
ATLAS COPCO	61RBD05	CM785	LONG HOLE DRILL CM785
ATLAS COPCO	61RBD06	DML	DML DRILL 6" ATLAS

ATLAS COPCO	61RBD07	DML	DML DRILL 6" ATLAS
ATLAS COPCO	61RBD08	DML	DML DRILL 6" ATLAS

SECTION 5 • MONITORING

5.1 WILDLIFE MONITORING

5.1.1 Harvest Study (Condition of Project Certificate)

The hunter harvest study has continued to provide relevant information to assess wildlife in the Local Study Area (LSA). The HHS, through regular visits, has contributed to developing a strong relationship with local harvesters, the HTO and GN DOE. The purpose of the HHS is to monitor and document the spatial distribution, seasonal patterns, and harvest rates of hunter kills and angler catches within the Meadowbank LSA. The HHS monitoring program will be suspended for one year until 2017 to allow participants to rest and to develop new approaches and direction. In 2016 AEM will be exploring other ways to gather harvest data in consultation with the HTO, KIA, GN, and potentially other agencies.

5.1.2 Breeding Bird Plot Surveys (Condition of Project Certificate)

The breeding bird PRISM plot monitoring program has been designed to evaluate potential project-related changes in breeding bird species abundance, richness and diversity over time and is one component of the larger monitoring strategy to evaluate the success of mitigation measures to minimize the amount of vegetation that is removed or degraded by the project.

In accordance with the TEMP, breeding bird plot monitoring is to continue for at least the first three years of mine operation (2010 to 2012). PRISM plot surveys were conducted in 2015. No significant changes have been identified between mine site and control plots and impact prediction thresholds have not been exceeded. Survey activities will resume in 2018.

5.1.3 Raptor Nest Surveys (Condition of Project Certificate)

The raptor nest survey monitoring program has been designed to confirm that mine-related activities do not result in inadvertent negative effects on nesting raptors. AEM will survey historical sites along the AWAR and periodically visit the nests to determine site occupancy in conjunction with AWAR road survey. AEM is working closely with Alastair Franke (Arctic Raptors Inc.) to assist in managing and mitigating any potential disturbance to raptors and possible nest sites.

5.1.4 Caribou Satellite-Collaring Program

Agnico Eagle is assisting the GN in a Caribou satellite-collaring program within the Meadowbank Regional Study Area (RSA). Information on the status and location of various herds that use the RSA at different times of the year is an important component of on-going monitoring and management efforts at the mine site and along the AWAR. The collaring program was initiated in May 2008 with subsequent deployments in November 2009, April 2011, and in April of 2013.

The satellite-collaring program was initially designed to continue for five (5) consecutive years in accordance with the TEMP. The total number of collars supported by Agnico Eagle in the study to date is 25 (in addition to 18 collars supported by other companies and 15 collars shared by AEM and other companies). In collaboration with the GN DOE Wildlife branch, AEM agreed, in 2013, to the Memorandum of Understanding to contribute to the regional ungulate monitoring program for a 3 years term. In 2016, AEM intends on renewing their MOU with the GN for another three years. The majority of the contribution will go towards continued caribou collaring but will also assist in a detailed Qamanirjuaq herd survey or other GN led initiatives planned for 2016. These collaring data will be used to assist AEM in anticipating large herds passing near mine development and contribute to appropriate management decisions.

5.1.5 Checklist Surveys and Wildlife Logs

At the mine site, noteworthy wildlife sightings are recorded in an on-site wildlife log, which is tabulated at the end of each year and included in the annual wildlife monitoring summary report. Meadowbank employees are also encouraged to record wildlife sightings on a daily basis. A monthly wildlife report is sent to the GN-DOE.

5.1.6 AWAR and Mine-Site Road Surveys

The AWAR and Mine-Site road surveys monitoring program has been designed to evaluate sensory disturbance to wildlife, particularly Caribou and Muskox, utilizing habitats adjacent to the road. Road kill information and large Caribou herds are also documented to facilitate the implementation of adaptive management strategies. The terrain on both sides of the road (to a maximum horizontal distance of 1 km) is surveyed as the vehicle progresses at a maximum speed of 30 km/hr. For each sighting, the vehicle is safely parked in a road pullout and UTM coordinates are recorded along with estimated distance of animals from the road, habitat type and direction of movement.

The AWAR survey monitoring program will continue on an annual basis.

5.1.7 Screening Level Risk Assessment

As a requirement for the Meadowbank Gold site's Environmental Health Monitoring Plan (NIRB - Condition 67), AEM collected field data in 2014 in support of a Screening Level Risk Assessment (SLRA) and submitted a report with the 2014 annual report. It follows the baseline SLRA completed by Azimuth Consulting Group Inc. in 2006, and the 2011 report completed by Baxter Consulting. It provided an updated evaluation of soil and vegetation tissue chemistry as well as an assessment of risk to resident birds, mammals and a conservative estimate of potential impacts to local harvesters due to consumption of wildlife. In 2016, AEM will work with the NIRB and Health Canada to ensure the data analysis and assessment fulfills condition 67 of the NIRB project certificate. Sampling activities will resume in 2017.

5.2 AQUATIC EFFECTS MONITORING PROGRAM

5.2.1 Core Receiving Environment Monitoring (CREMP)

The CREMP (formerly called the AEMP) has been implemented every year since 2006, with some modifications (e.g., station additions, parameter deletions/additions, sampling frequency and intensity), to improve the program and to comply with regulatory requirements (e.g., the NWB Type A Water License). This monitoring program will continue throughout the operations and closure phases of the mine project. Monitoring in 2016 will continue to be conducted at 12 sampling stations (6 near fields; 2 mid-fields; 1 far-field; 4 references) for limnology, water and sediment chemistry, phytoplankton and benthic invertebrate community. See Figure 1 and Figure 2 for the CREMP sampling locations in 2016.

Figure 1: Meadowbank Water Quality, Sediment, Coring, and Invertebrate Sampling Areas

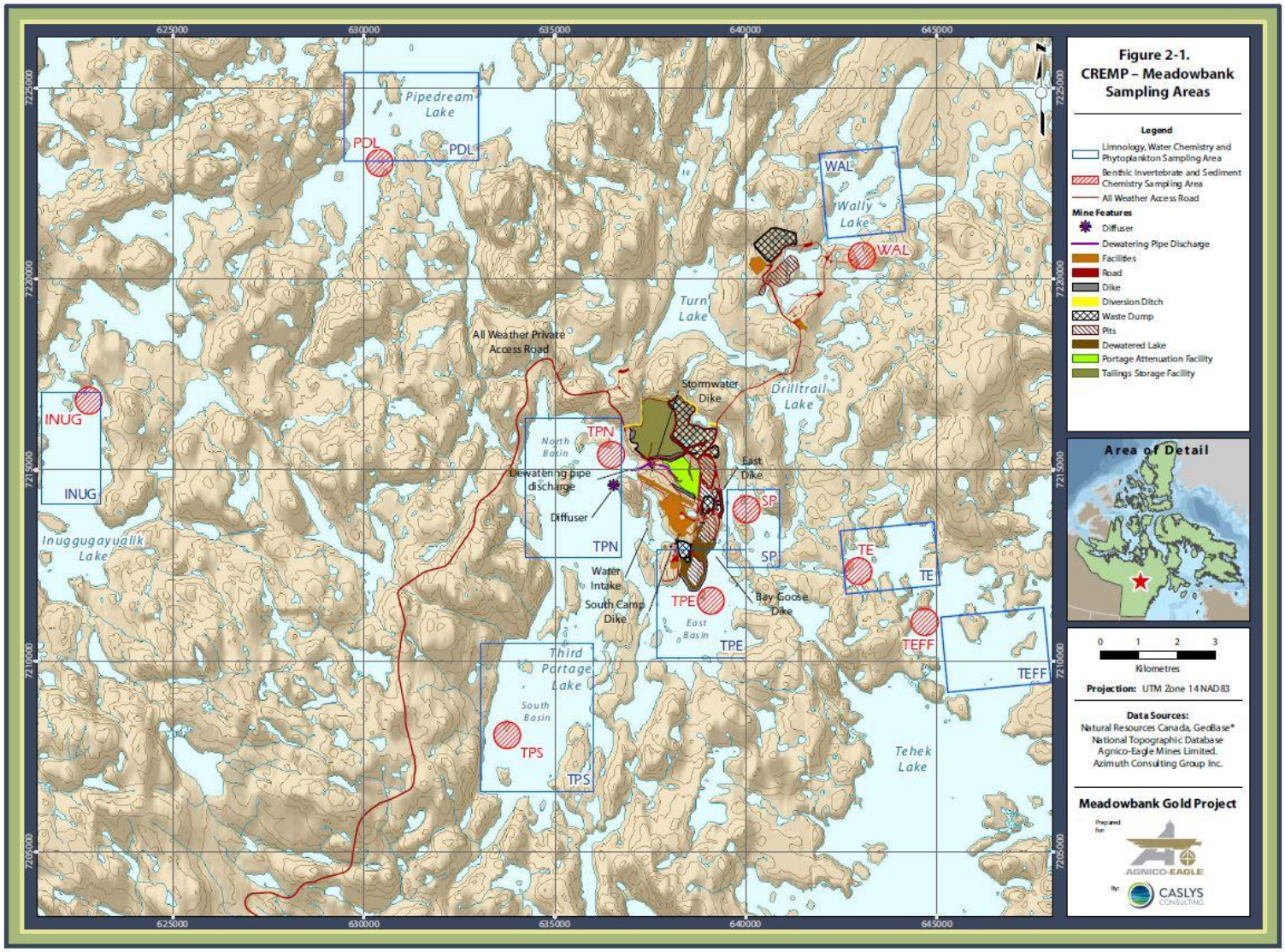
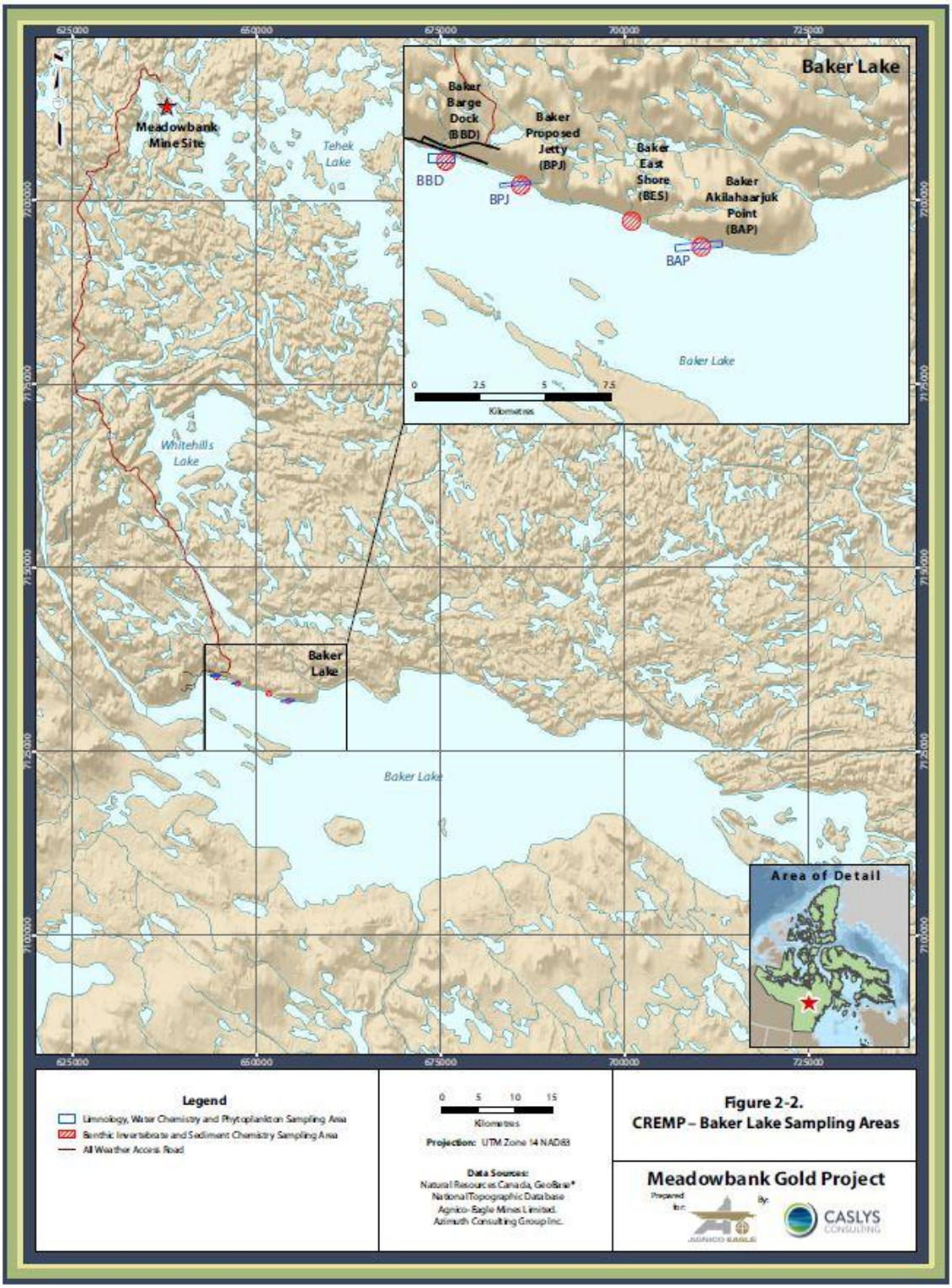


Figure 2: Baker Lake Water, Sediment, Coring and Benthic invertebrate Sampling Area and Limnology Profile Location



5.2.2 Metal Mining Effluent Regulations (MMER) Monitoring

In 2016, AEM will have two (2) discharge points subject to MMER regulations: Vault Attenuation Pond, discharging into Wally Lake and East Dike Seepage, discharging into Second Portage Lake. Consequently, AEM is monitoring these discharges in accordance with the MMER (and Water License) requirements. This includes weekly sampling for metals, monthly toxicity testing, and monitoring water quality in the release and control areas of Wally Lake and Second Portage Lake (with Third Portage South Basin as a reference). Furthermore, in 2014, AEM completed a study design and collected the field data as part of the Cycle 2 environment effects monitoring program as per MMER Schedule 5 Part 2 of the MME. This program is regulated by Environment Canada and is designed specifically to evaluate the effects of effluent discharge on the receiving environment. The interpretive report was completed and submitted to EC in July 2015. AEM does not plan to discharge water from the Portage Attenuation Pond in 2016 as the former south cell attenuation pond became tailings storage facility in Q4 2014.

5.2.3 Water Quality and Flow Monitoring

All water sampling conducted at the mine site and along the AWAR designed to monitor the performance of the waste and water management systems for the project fall into this category. In 2016, AEM will continue to monitor the performance at the sewage treatment plant, tailings reclaim pond, Vault attenuation pond, pit sumps, seeps, bulk fuel storage facilities, freshwater usage volumes, water quality along the AWAR, and all other monitoring requirements stipulated in NWB Type A water license 2AM-MEA1525. There were no exceedances of Water License criteria in 2015. See Figure 3 and Figure 4 for all the 2016 water monitoring stations at Meadowbank Mine Site and Vault.

Figure 3: Meadowbank Mine Site 2016 Sampling Locations

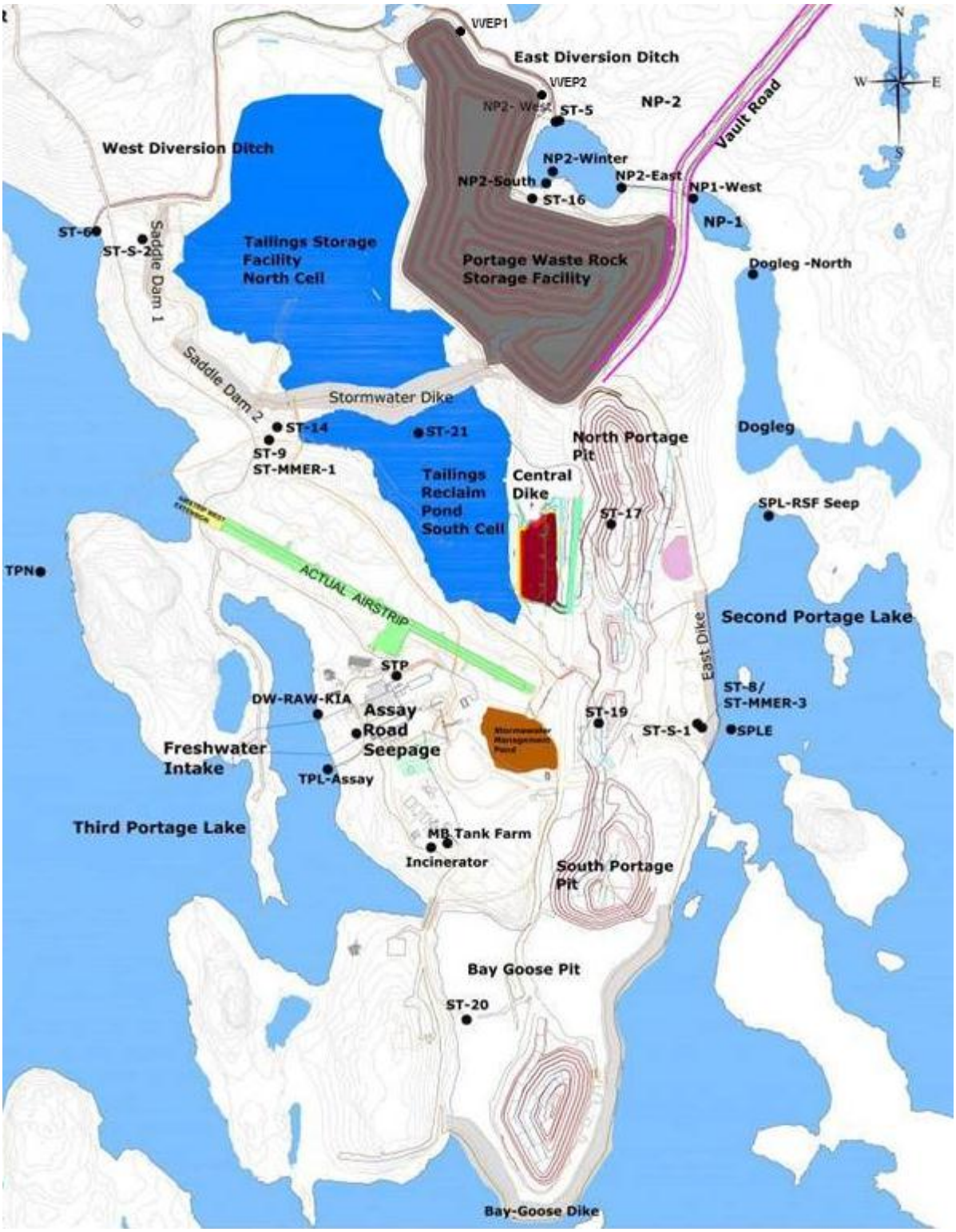
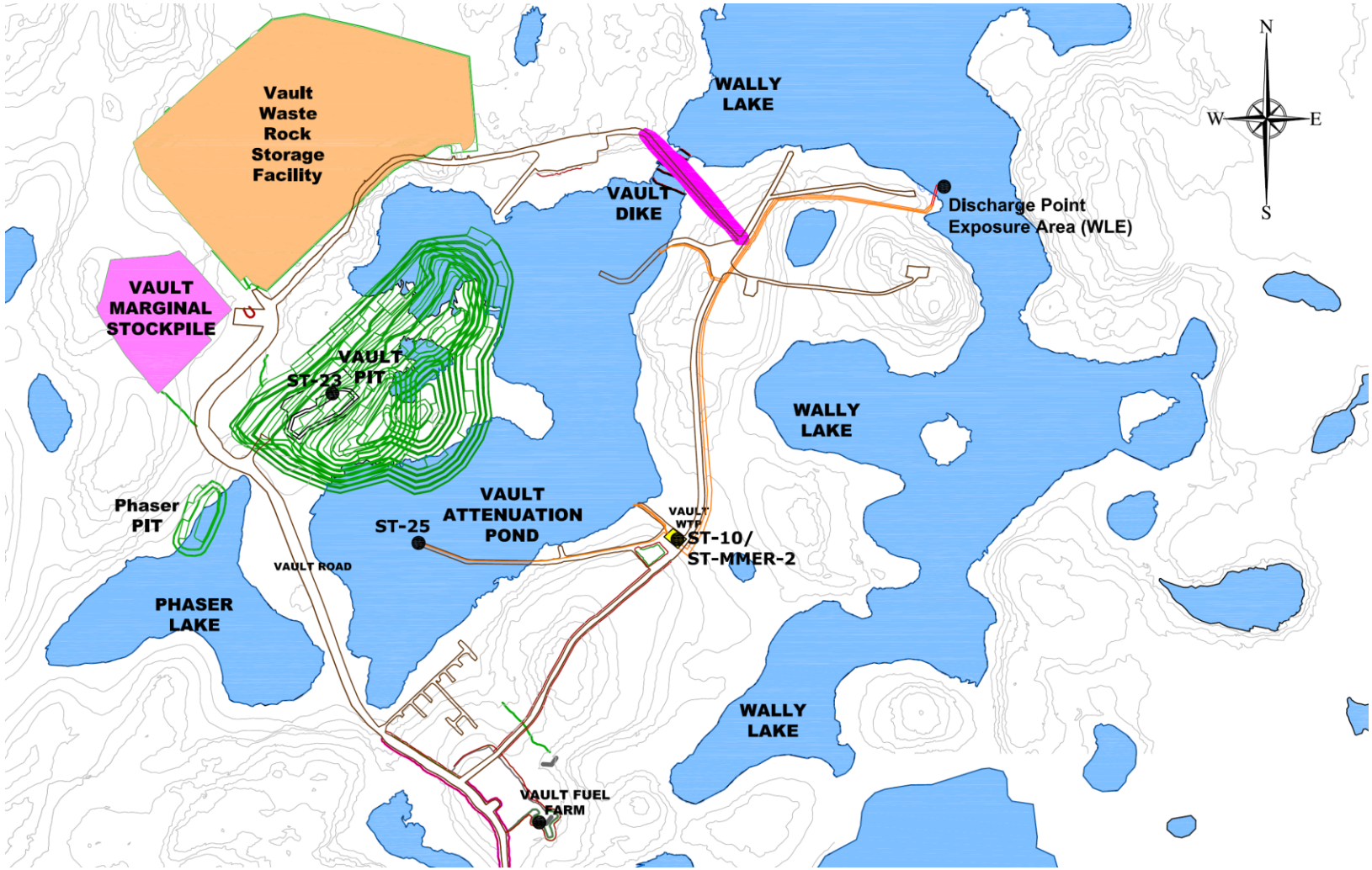


Figure 4 : Vault 2016 Sampling Location



5.2.4 Seepage Water from Waste Rock Storage Facility

Monitoring of the seepage at the Portage waste rock storage facility will continue in 2016 and this will be a high priority during freshet. AEM will continue to monitor NP-2, NP-1, Dogleg and Second Portage Lake (see Figure 3 above), as per a KIA request during the Type A Water License renewal, and analyse for the following parameters: pH, conductivity, turbidity, TDS, colour, anion scan, hardness, alkalinity, DOC, TOC, TSS, TP, TKN, total ammonia, NO_3, NO_2, Chl A (lake sites only), cyanide (WAD), total cyanide, total metals, dissolved metals, total cadmium, dissolved cadmium, total mercury, temperature, and dissolved oxygen (% and mg/L).

AEM's work plan in 2016 will continue to closely follow the Freshet Action Plan which will include the active pumping and monitoring (location, quantity and quality) of the water from WEP1, WEP2 and ST-16 sump (which is pumped to the North Cell TSF). During the ice period, a weekly visual inspection will be done. AEM will also continue to monitor the tailings and waste rock freeze back following the Thermistor Monitoring Plan in accordance with Part I, Item 9 of the Type A Water License.

5.2.5 Assay Road Seepage

Monitoring and mitigation of the Assay Road Seepage will continue in 2016. All seepage water during the freshet and until the freeze up will be contained (as in the past) in the original sump and trench and pumped back to the mill. Currently the seepage area is frozen and weekly visual inspections are conducted. Based on shallow groundwater well monitoring downstream of the interception trench, all the water was contained and did not reach TPL. This was confirmed with near shore sampling in TPL; to date no contaminants have been detected in the near shore area of the lake. AEM will also follow in 2016 the Freshet Action Plan which will include the active pumping of the water back to the mill, groundwater monitoring and continued sampling of Third Portage Lake.

5.2.6 Central Dike Seepage

Monitoring of the Central Dike seepage will continue in 2016. The seepage is located within the mining footprint, away from the receiving environment and is confined directly downstream of the dike. In 2016, AEM will continue to collect water in ST-S-5 and pump it back into the South Cell Tailings Storage Facility. Monthly sampling will continue as per the requirements of the NWB Water License.

5.2.7 Blast Monitoring

The blast monitoring program will continue during 2016 in Wally Lake and Second Portage Lake. The program will monitor blasting peak particle velocity and overpressure in the receiving environment and ensure that AEM uses the specific charge weight/delay/set back necessary to meet DFO requirements, and to ensure the stability of the dikes and mines site infrastructure.

5.3 GROUNDWATER MONITORING PROGRAM

The groundwater monitoring will continue in 2016. As in the past, the groundwater monitoring program will be conduct in the summer and / or the fall. Water samples were taken from monitoring wells MW-08-02 and ST-GW-14-01 in 2015. AEM also obtained samples of groundwater near Portage pit E3 in mid-December, 2015 during a drilling campaign conducted by the Engineering Department. Monitoring well MW-11-02 located east of the tailings storage facility could not be sampled in 2013 due to a blockage comprised of well development tubing which prevented access to the formation groundwater. This was replaced by the well ST-GW-14-01. Sampling of the active wells will continue in 2016.

5.4 NOISE MONITORING PROGRAM

The noise monitoring will continue in 2016 with sampling twice a year at the five monitoring locations established at the mine site.

5.5 AIR MONITORING PROGRAM

AEM has conducted annual dustfall and air quality monitoring around the Meadowbank site since 2011. Two (2) passive NO_2 samplers and four (4) dustfall collectors were installed on site in November 2011, with the first result received in December 2011. This air monitoring will continue on a monthly basis in 2016. In 2013, 2014 and 2015, AEM also conducted dustfall monitoring along the AWAR and Vault haul road in response to NIRB, HTO and community concerns. This will continue in 2016.

SECTION 6 • LOGISTICS

Fuel, bulk goods and construction materials will be transported to site overland via the All Weather Access Road. Charter flights carrying cargo and personnel will be routed directly to the mine site via the Meadowbank airstrip.