AEM

WASTE AND WATER MANAGEMENT
MINE PRE-DEVELOPMENT WORK
NWB 2BE-MEA0507

AGNICO-EAGLE
MEADOWBANK PROJECT

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Table of Contents

List of Tables

List of Figures

Executive Summary

Agnico-Eagle Mines Limited (AEM) has applied for a Type A water license to allow for construction, operation and reclamation of the Meadowbank Gold Project. This application is under review and if a positive decision is reached could lead to the start of construction in the summer of 2008. Due to the remote location and short summer ice free construction season AEM projects that it will take one full summer ice free season to construct the first dewatering dike (the East Dike) required allowing for development of the Portage Pit. This requires the pre-development of the two on-land starter pits on the Portage deposit to develop a stockpile of broken rockfill material ahead of the start of construction that will be required to construct the outer shells of the East Dike. AEM is applying for an amendment of its current Type B water license to allow for the stripping of overburden and the development of these two starter pits in the winter of 2008 (March thru June) to develop a sufficient stockpile of broken rock to allow for summer construction of the East Dike. To minimize the effects on the environment, the broken rock will be left in place in the pit footprint until AEM receives the License A.

All supplies for the pre-development work will be transported through an all-weather private access road from Baker Lake that is currently under construction and should be completed at the beginning of 2008.

Mitigation measures will be put in place to minimize the effects on the environment during the pre-development work. These mitigation measures include: installation of silt fences on the shore around the working areas and stockpiles, minimization of the effects of waste rock by keeping the broken rock in place and, whenever possible, construction of winter ice road instead of a temporary road.

This report presents the Waste and Water Management Plan for the proposed pre-development work.

1. INTRODUCTION

This report presents the Waste and Water Management Plan for the proposed pre-development work at the Meadowbank site. The proposed mine pre-development will involve the construction of roads, installation of culverts and the establishment of temporary stock piles for overburden storage. The pre-development work will occur during the winter of 2008 (March to June) and is essential to allow the construction of the dikes during the summer of 2008 assuming that AEM receives an approved Type A Water License (application currently under review). This pre-development work is necessary given the short 'open water' construction season in Nunavut. The objective is to create a stockpile of suitable dike construction material in the second quarter of 2008 so that construction of the East Dike can commence as soon as possible after the Type A water License is approved by the Minister of Indian Affairs and Northern Development. The accelerated schedule is to prevent the Meadowbank Project slipping by one year which could occur if the East Dike cannot be fully constructed in the summer of 2008. This Waste and Water Management plan is included as a component to an application to amend the existing Meadowbank Type B water license 2BE-MEA0507 to allow for this pre-development work.

2. BACKGROUND INFORMATION

Agnico-Eagle Mines Limited (AEM), the owner of the Meadowbank Gold Project, has applied to the Nunavut Water Board to amend the existing water license 2BE-MEA0507 to include this proposed pre-development work. The Meadowbank site, located 70 km north of Baker Lake, is located on Inuit owned lands (IOL BL-14) and as such is subjected to land use and water use approvals by the Kivalliq Inuit Association and the Nunavut Water Board. The Meadowbank project, subject of a type A Water license application submitted in September 2007, will be a gold mine with a roughly eight- to ten-year operational lifespan. The project received a Nunavut Impact Review Board Project Certificate in December 2006.

All construction and operating supplies for the pre-development work project will be transported from Baker Lake through the all-weather private access road (AWPAR) currently under construction; the road should be completed at the beginning of 2008. AEM has been actively exploring the Meadowbank area since 1995. Engineering, environmental baseline studies and community consultations have paralleled these exploration programs.

3. PRE-DEVELOPMENT WORK

AEM proposes to prepare the site during the winter of 2008 (March to June) to allow dike construction to start during the summer of 2008 as soon as the A license is granted (expected in early July). In order to prepare the ground for rock excavation, it is initially necessary to excavate the overburden. Stripping of 0.9 Mt of overburden on the South Portage Pit footprint and of 1.9 Mt on the North Portage Pit footprint and some rock preparation will be necessary for the dike construction. To minimize the effects on the environment, the broken rock will be left in the pit footprint until AEM receives the Type A Water License from the NWB and INAC Minister.

The first zone to be excavated will be the south pre-development zone (see Figure 1). Approximately 0.9 million tonnes of overburden will be removed from that zone. This overburden will be placed in two stock piles, one West of the south zone and one to the East.

In parallel, the same type of excavation work will take place in the north pre-development zone (see Figure 1). Approximately 1.9 million tonnes of overburden will be excavated from the north zone and placed in the general proximity.

Once overburden excavation is completed, the next stage will be to prepare the rock within the exposed open pit zones used for dike construction (the East Dike). The exposed surface waste rock will be drilled and blasted. To minimize the effects on the environment, the broken rock will be left in place in the two pre-development zones. Estimated quantities of drilled and blasted material in the south and north zones are summarised in the following tables:

Table 1 Estimated quantities of blasted rock left in place

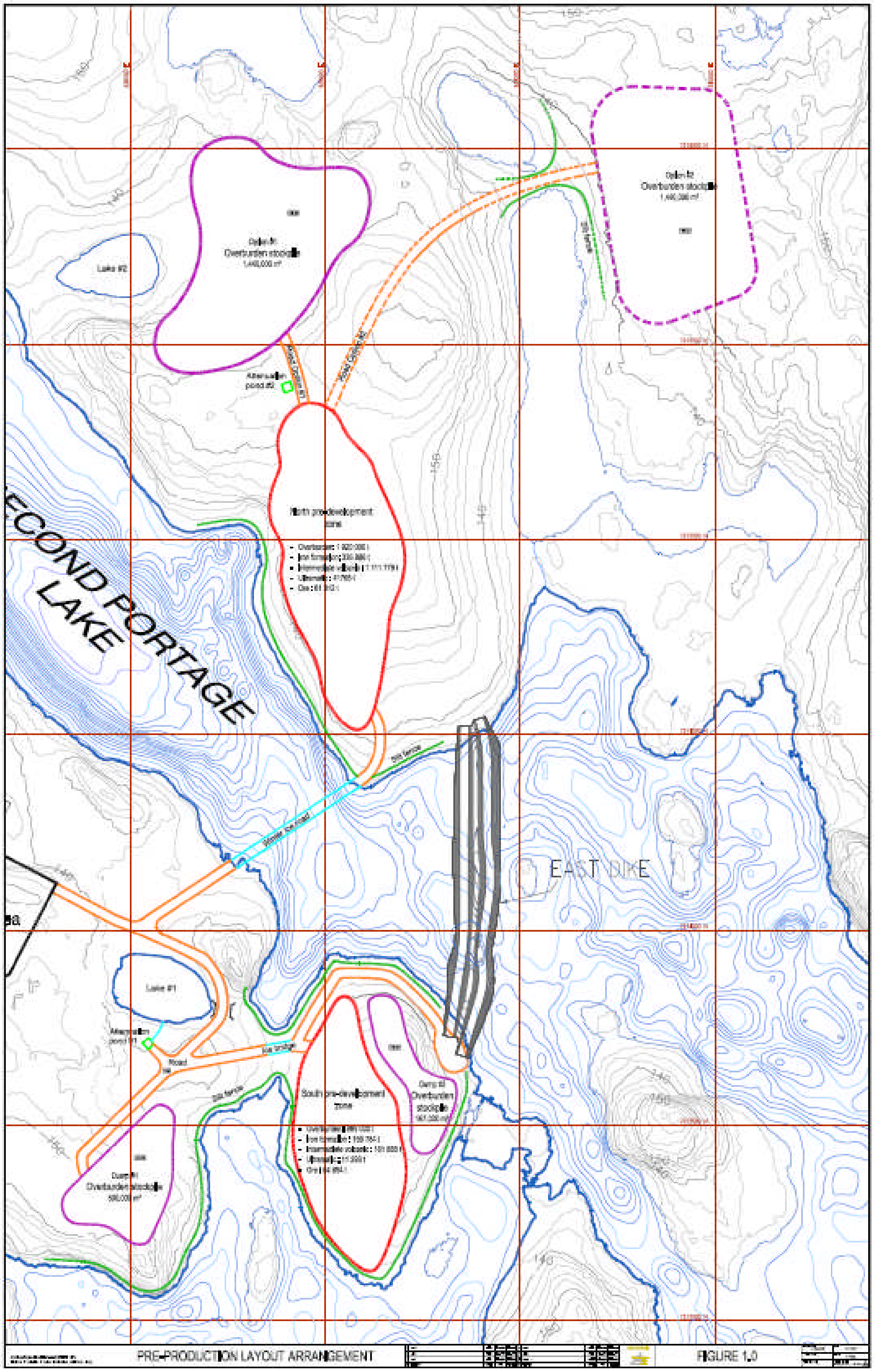
Zone	Rock Type*	Vol. in-place (m^3)	Vol. blasted (m^3)	Tonnes
South	Ore	17 594	26 391	54 894
	UM	4 019	6 028	11 293
	IV	58 868	88 301	161 886
	IF	51 213	76 819	159 784
	QZ	-	-	-
	Total	131 694	197 540	387 857
North	Ore	19 773	29 660	61 693
	UM	14 863	22 294	41 765
	IV	404 283	606 425	1 111 779
	IF	107 976	161 964	336 886
	QZ	2 469	3 703	6 542
	Total	549 365	824 047	1 558 665

* Ore = Mineralized material UM = Ultramafic IV = Intermediate volcanic
IF = Iron formation QZ = Quartzite

Table 2 South zone blasted rock quantities left in place, by bench

	Tonnes					
	Ore	UM	IV	IF	QZ	Total
Bench 136	39 887	11 293	111 860	143 164	-	306 204
Bench 142	15 007	-	50 026	16 620	-	81 653
Total	54 894	11 293	161 886	159 784	-	387 857

Figure 1 Pre-development layout arrangement



ECOND PORTAGE
LAKE
EAST DIKE
Lake #2
Lake #1
PRE-PRODUCTION LAYOUT ARRANGEMENT
FIGURE 1.0

Table 3 North zone blasted rock quantities left in place, by bench

	Tonnes					
	Ore	UM	IV	IF	QZ	Total
Bench 142	44 873	40 643	731 833	247 681	6 542	1 071 572
Bench 148	16 654	1 122	375 771	87 879	-	481 426
Bench 154	166	-	4 175	1 326	-	5 667
Total	61 693	41 765	1 111 779	336 886	6 542	1 558 665

3.1. Road

To have access to the working areas and allow the circulation of mining trucks on the site, the construction of access and haul roads are necessary. These roads will be used throughout the life of the mine. Two main working areas will be developed, the South and the North pre-development zones.

Access to the South zone

The roads required to access the South zone will connect the plant site area to the zone of pre-development. These roads will also be necessary to have access to the overburden stockpile and to the East dike (see Figure 1). At first the roads will be constructed to access the pre-production zones using material already present on site (left from previous earthworks). When sufficient overburden has been removed to access the bedrock, non-acid generating waste rock material will be used to finalise the construction of the roads. The roads will then comprise a mixture of blasted waste rock (non acid generating) coming from the pre-production zone and crushed material already present on the site. The roads will be 2.1 km long and 25 m wide, with a height of 1 m and a maximum grade of 8%. One drainage channel will be crossed by these roads; an ice bridge will be set up, and before the spring a temporary bridge will be constructed to allow unobstructed fish and water passage.

Access to the North zone

There were several options considered to access the North Zone for pre-development. To limit the footprint on the local flora, it was decided to build an ice road over Second Portage Lake. This option eliminates the need for the construction of a 2.5 km gravel road passing North of Second Portage Lake. This ice-road will be used by equipment and will provide access to the North Zone for pre-development work. The selection of an ice-road over a road on-land will minimize the quantity of sediments which could potentially go into Second Portage Lake at the time of the ice break up. The length of this ice-road is approximately 370 meters and road connections to the South and North zones are necessary (see Figure 1). The length of the South connection is 280 meters and of the North connection is 200 meters, with a width of 25 meters. They will be built with materials coming from the South pre-development zone.

For the moment, the only road which will be used in the North pre-development zone is the one to connect the zone to the overburden waste dump (see Figure 1). As in the South, the North road will be built with a mixture of blasted non-acid generating waste rock coming from the pre-development zones and crushed material available on the site. The length of the North road connecting to the dump option #1 is 170 meters and 985 meters for the segment connecting to the option #2. The width will be 25 meters and the height approximately 1 meter.

3.2. Overburden stockpiles

Overburden material to be removed (stripped) from the pre-development zones will need to be stored in permanent stockpiles (pending final reclamation). An assessment was conducted to select strategic places to store this material. The main priorities were to minimize the environmental risks and hauling distance. The piles will be constructed by free dumping and levelling in layers of 1 m in height. The levelling will be done with a dozer which will also produce some material compaction. The side slopes of the pile will be at an angle of 45^o and the maximum height of the pile will be 15 m. As seen from figure 1, the piles will be surrounded by silt fences to prevent water body sedimentation in the spring.

In the South zone, two stockpiles locations were selected. In the North, two locations are proposed. Pending condemnation drilling, option #1 (stock pile located North of the North Zone) is the preferred solution; if condemnation drilling results confirm a potential ore resource in this location then the preferred overburden stockpile location for the North zone will be option #2. These locations are shown in Figure 1. The specifications of theses four stockpiles are described in the following table (Table 4):

Table 4 Overburden dump specifications

Zone	Dump #	Area (m^2)	Height (m)	Max. elevation (m)	Volume (m^3)	Tonnage (t)
South	1	54 000	5-15	+155	167 000	222 666
	2	36 000	5-15	+155	355 000	473 333
North*	Option #1	87 000	5-15	+155	889 017	1 185 356
	Option #2	88 800	5-15	+155	889 017	1 185 356

* Only one of the two options will be choose

A quantity of the overburden material extracted from the South Starter Pit is to be screened for use in dike construction. A rock crusher will be used and the screening will reject particles larger than 150 mm to achieve a minimum of 15 % passing through a # 200 mesh sieve.

3.3. Rock drilling and blasting

The rock drilling and blasting will be carried out in the same fashion as the quarry rock drilling and blasting previously carried out on the site for the construction of the air strip and tank farm, with the exception that the rock will remain in place and not be transported outside the perimeter of the work area.

4. SITE CONDITIONS

4.1. Climate

The Meadowbank region is located within a low Arctic ecoclimate described as one of the coldest and driest regions of Canada. Arctic winter conditions occur from October through May, with temperatures ranging from +5°C to -40°C. Summer temperatures range from -5°C to +25°C with isolated rainfall increasing through September. The long-term mean annual air temperature for Meadowbank is estimated to be approximately -11.1°C. Air temperatures at the Meadowbank area are, on average, about 0.6°C cooler than at Baker Lake, and extreme temperatures tend to be larger in magnitude. This climatic difference is thought to be the effect of a moderating maritime influence at Baker Lake. Skies tend to be more overcast in winter than in summer. The prevailing winds at Meadowbank for both the winter and summer months are from the northwest. A maximum daily wind gust of 83 km/h was recorded on 21 May 2002. Light to moderate snowfall is accompanied by variable winds up to 70 km/h, creating large, deep drifts and occasional whiteout conditions. Monthly rainfall, snowfall, and total precipitation values were adjusted for under catch using the values reported by Environment Canada for Baker Lake to develop estimates of adjusted monthly and annual values for Meadowbank (1949 to 2003). The resulting adjusted mean annual rainfall, snowfall, and precipitation totals are 142.5, 146.8, and 289.2 mm, respectively.

4.2. Permafrost

The Meadowbank Gold Project area is located within the zone of continuous permafrost and, as such, is underlain by continuous permafrost except for lake induced taliks and thaw bulbs. Thermal studies at the site were initiated during the 1996 summer exploration drilling program, with the installation of two thermistor cables in exploration boreholes drilled on Third Portage peninsula. These studies continued with the installation of additional thermistor cables during field investigations in 1997, 1998, 2002, 2003, and 2006. To date, 23 thermistor cables have been installed to characterize and monitor the thermal conditions and permafrost at the project site (Figure 2.6). The thermistors have been located to characterize the thermal regime at the project site both inland (away from the influence of deep lakes), as well as adjacent to lakes.

The depth of the permafrost and active layer are expected to vary based on proximity to lakes, overburden thickness, vegetation, climate conditions, and slope direction. Based on thermal studies and measurements of ground temperatures carried out to date, the depth of permafrost at site is estimated to be in the order of 450 to 550 m, depending on the proximity to lakes. The depth of the active layer ranges from about 1.3 m in areas with shallow overburden, up to about 4 m adjacent to lakes. Based on ground conductivity surveys and compilation of regional data, the ground ice content is expected to be low. Locally on land, ice lenses and ice wedges are present, as indicated by ground conductivity, and by permafrost features such as frost mounds. These areas of local ground ice are generally associated with low-lying areas of poor drainage. Taliks exist below Second Portage Lake and Arm, Third Portage Lake and are expected to extend to the base of the permafrost. Taliks extending to the base of the permafrost are referred to as open taliks.

Surface Water Regime

The Meadowbank Gold Project is located close to the surface water divide between the Back River basin, which flows North to Northeast towards the Arctic Ocean, and the Quoich River basin, which flows East to Southeast into Chesterfield Inlet. All lakes in the project area are connected by streams with boulder channels. Turn Lake drains Southeast into Drill Trail Lake, which drains into Second Portage Lake. Third Portage Lake drains North into Second Portage Lake across a narrow strip of land dividing the two lakes via three distinct outflow channels: a western channel, a center channel, and an eastern channel.

4.3. Mine Waste Geochemistry

The following summarizes the geochemical characteristics of the rock (by deposit), tailings, and till on site based on the results of static and kinetic testing.

4.3.1. Waste Rock

South and north pre-development zone

There are three major lithologies (IF, IV, and UM) present in the Portage and Goose Island pits, as well as a fourth but less common rock type present in these southern deposits (QZ). The characteristics of each lithological unit are described below. Statistical evaluation of results from samples contained within the starter pit (shallow portion of Third Portage pit) indicates that the chemical characteristics of each lithology within the starter pit are generally not statistically different from those of rocks outside the starter pit.

Ultramafic (UM)
The predominant minerals in UM rock include talc, chlorite, and iron-rich carbonate minerals (mostly iron-rich dolomite, some siderite, and calcite). These minerals provide UM rock with a relatively high neutralization potential. Some pyrite and pyrrhotite are present in UM rocks, although sulphide phases are generally sparse in this lithology. UM volcanic waste is considered non-acid-generating (NPAG), with 96% of samples having a neutralization potential ration (NPR) >2. The UM field cell and the two UM rock samples kinetically tested contained available, reactive carbonate minerals, generating neutral drainage throughout the testing period and sustained alkalinity in leachates. This indicates that the bulk of UM rock will not generate ARD.

Iron Formation (IF)
The characteristic mineral assemblage of IF rock includes quartz, magnetite, chlorite, and amphibole, and generally excludes any carbonate minerals. The principal sulphides present in mineralized IF rocks are pyrrhotite and pyrite, both of which are approximately equal in proportion in the Goose Island deposit, with pyrite content increasing toward the North Portage deposit. Trace arsenopyrite and chalcopyrite are also present. Sixty-seven percent of IF rock is

potentially acid generating (PAG) (NPR<2) according to Indian and Northern Affairs guidelines (INAC 1992). Samples have a median total sulphur content of 0.9 and low neutralization potential. The NPAG IF rock also has low neutralization potential, but lower total sulphur (0.2%).

Quartzite (QZ)
Six out of seven QZ samples tested were classified as PAG. Considering the median paste pH of 8.2 and low median total sulphur content (0.35%), it is uncertain whether the apparent potential of the QZ to generate ARD would ever be realized. The small quantity of QZ pit rock excavated during mining will, nonetheless, be considered and managed as PAG material since this lithology contains virtually no neutralization potential.

Intermediate Volcanic (IV)
IV rock in this area consists mainly of quartz and aluminosilicate minerals, mostly muscovite and chlorite, and a variable carbonate mineral content, mainly as dolomite, some of which is iron-rich calcite and some siderite. Carbonate content increases from Goose Island to North Portage. Pyrite and pyrrhotite are the principal sulphide minerals, the average content ranging between 5% and 7% with the proportion of pyrite increasing toward the north. Minor sulphide phases also include arsenopyrite and trace amounts of chalcopyrite. The ARD potential of Portage / Goose Island IV pit rock is variable, with 20% of waste rock designated as PAG and 14% having an uncertain ARD potential.

5. WATER MANAGEMENT

A water management plan for the proposed pre-development work has been prepared to minimize any potential impacts on the aquatic ecosystem of the adjacent water bodies.

The primary objective of the water management plan is to:

- Minimize impacts of the proposed pre-development work on surface water quality.

The water management strategies to implement this objective are as follows:

- Surface drainage from the working areas will go through the silt fences to remove the fine particles.

- All contact water with the overburden piles will be controlled to avoid watercourse sedimentation.

- All water accumulated within the pit perimeter in contact with the waste rock will be analysed.

- All water within the pit perimeter will be controlled and, if necessary, treated before discharge to comply with the MMER water quality requirements

- Sediment mobilization will be minimised by implementing best management practices (BMPs) during construction.

- Water management practices will be adjusted through adaptive management based on the monitoring results of the discharge quality and the discharge criteria.

5.1. WATER USAGE

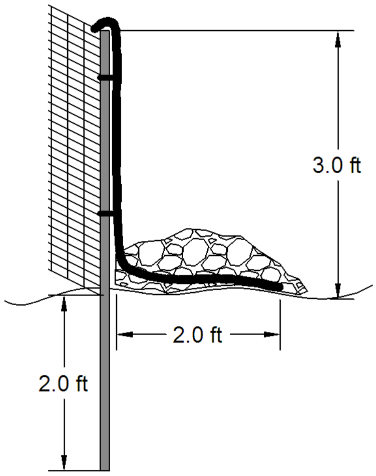
The primary water usage on site is for domestic use. This pre-development work will not generate new water usages.

5.2. BEST MANAGEMENT PRACTICES

The following best management practices (BMPs) will be used during pre-development work to prevent sediment from reaching the non-contact water diversion channels:

- Silt Fencing: Silt fencing will be placed along the edges of all areas where soils are disturbed until completion of all construction activities. Silt fences will follow the contour as much as possible.

In order to prevent sediments reaching the nearby water body during the spring thaw, all working areas will be surrounded by silt fences. These barriers will reduce the risk of sediments (coming from work areas or stockpiles) reaching the water. These silt fences are comprised of a permeable membrane held in place with steel spikes which will let water go through while retaining the sediments. The required silt fence is 4.04 km long (plus 0.84 km if North overburden stockpile option #2 is selected) and its locations are shown in green in Figure 2 below. To deal with the site extreme weather conditions, the silt fences will be reinforced with a wire backing and steel spikes. The total membrane width will be 5 feet. Three feet of the membrane will be above ground level (reinforced with wire backing) while the remaining 2 feet will be placed horizontally and secured by rocks. This extra two feet will prevent water passing under the membrane. To ensure that the fence will not be torn off by the wind, 6 feet tall spikes will be used (with 3 feet in the soil). The installation of these spikes will be done by drilling a 3 feet hole in the soil, each one spaced at 10 feet apart.



Typical Proposed Silt Fence Cross Section

5.3. CONTACT WATER COLLECTION SYSTEM

Water that accumulates within the pre-development pits will remain in place unless the volume becomes too great. If the volume of water accumulating in the South pre-production zone pit is great enough to prevent blasting operations, then this water will be pumped to attenuation pond #1 (see Figure 2), which will then drain into Tear Drop Lake which is slated to become the Stormwater management pond for the project. In the North pre-production zone, if water accumulation becomes problematic, similar actions will be taken: water will be pumped to attenuation pond #2 (see Figure 3) which will then drain through a ditch into Lake #2. Overflowing water will pass from the Lake #2 into Second Portage Lake.

The role of these ponds is to retain the contact water for water quality monitoring and treatment, if necessary, prior to discharge into Second Portage Lake. The ponds will also act as sedimentation ponds for the contact water.

Figure 2 South Pre-development zone water management

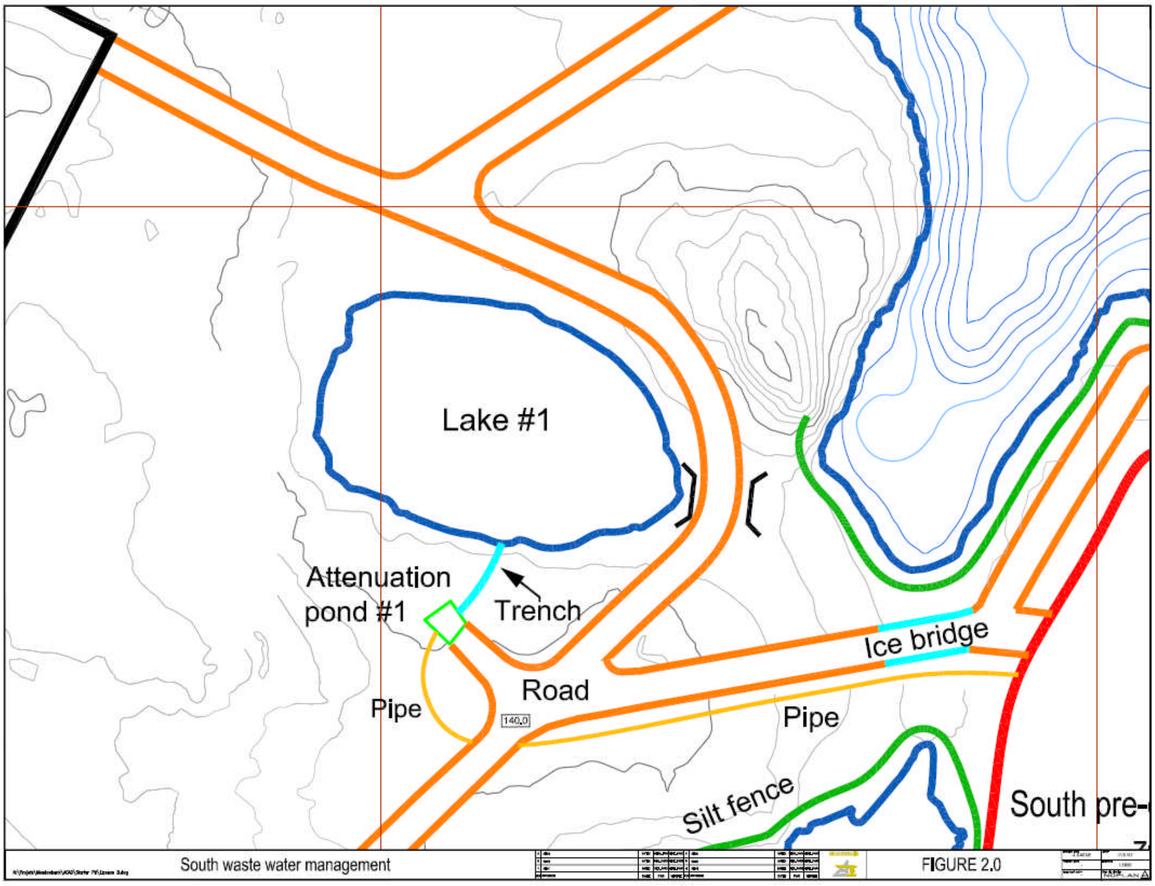
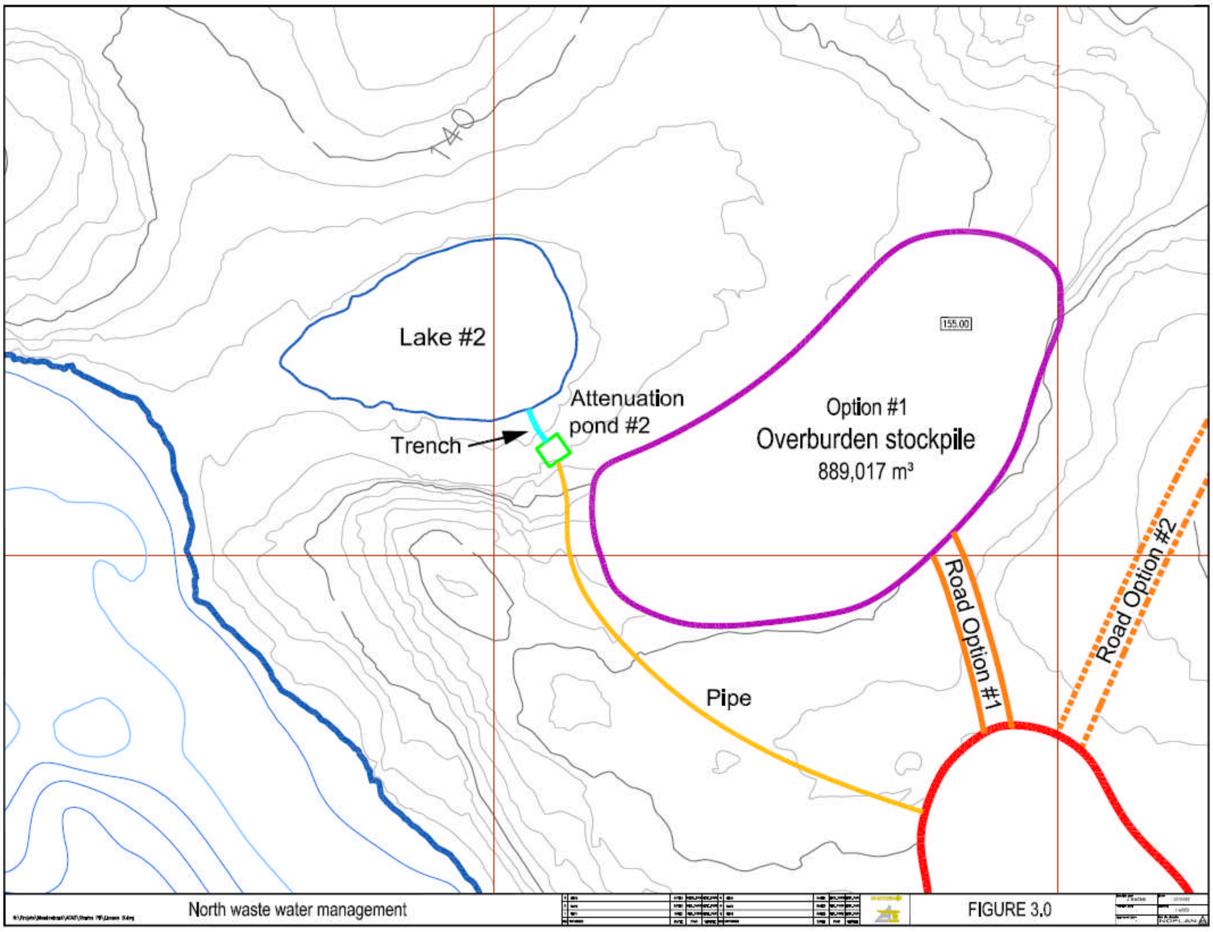


Figure 3 North pre-development zone water management



5.4. CONTACT WATER MONITORING

Once a week, water accumulated (if any) in the pre-development zones will be monitored using a pH meter and a turbidity meter.

In the event that this accumulated water needs to be pumped to the sumps and Lakes, water quality monitoring will be done every day for the same two parameters. In addition, the water quality of the Lakes will be monitored for metals on a weekly basis.

5.5. CONTACT WATER STORAGE AND TREATMENT SYSTEM

In the event that water is pumped from the pre-development zones into Lake #1 or Lake #2, water quality monitoring will be able to detect if water treatment is necessary prior to discharge. If the water quality problem is an excess of suspended solids, a coagulant will be added using a temporary addition system with a metering pump. If the water quality problem is a low pH value or metal concentrations in excess of the limits, lime will be added. Both types of treatments would be done in the attenuation pond to allow sufficient time for sedimentation to occur in Lakes #1 and #2.