Appendix 55

Meadowbank Landfill Design and Management Plan Version 6

AGNICO EAGLE

MEADOWBANK MINE

Landfill Design and Management Plan

In Accordance with Water License 2AM-MEA1530

Prepared by:
Agnico Eagle Mines Limited – Meadowbank Division

Version 6
March 2024

EXECUTIVE SUMMARY

This Landfill Design and Management Plan outline the design of the current operational and a conceptual closure industrial waste landfill as part of Agnico Eagle Mines Limited (Agnico Eagle) Meadowbank Mine in Nunavut.

The current landfill is required for the disposal of non-salvageable, non-hazardous solid wastes from mining activities that cannot be incinerated, as well as for disposal of compost from the composting operation. It is located on the Portage Rock Storage Facility and will consist of several sub landfills that evolve with the placement of waste rock. All the sub-landfills will be identified and mapped.

For the remaining life of mine, for progressive closure and for closure, Landfill #1 and Landfill #2 located on top of the Portage RSF could be used for waste disposal, based on capacity requirements and site conditions.

The leachate from the landfill is very weak (diluted) or simply no existent due to the controls on materials placed in the landfill, and therefore specific leachate management is not considered. Any leachate is naturally drained into the Tailing Storage Facility.

At the end of mine life, the landfill waste will be covered by 0.3 to 1 m thickness of rock fill, with an additional 4 m of coarse NPAG waste rock material. The final landfill slopes will be up to 50%. Drainage water will be managed under the current Water Management plan.

To meet NWB guidelines, an environmental overview effects assessment was conducted to characterize environmental resources and determine the anticipated environmental effects of the landfills. The primary potential environmental effects from landfill activities included leachate generation, windblown debris and habitat (vegetation) loss. The operation of the landfill has not shown any such environmental effects.

IMPLEMENTATION SCHEDULE

This plan will be immediately implemented (March 2024) and is subject to any modifications proposed by the NWB as a result of the review and approval process.

DISTRIBUTION LIST

Agnico Eagle – General Mine Manager

Agnico Eagle – Environment & Critical Infrastructures Superintendent

Agnico Eagle – Environment General Supervisor

Agnico Eagle – Environmental Coordinator

Agnico Eagle – Engineering Superintendent

Agnico Eagle – Mine Superintendent

Agnico Eagle – Energy and Infrastructure Superintendent

DOCUMENT CONTROL

Version	Date (YMD)	Section	Page	Revision
1	08/10/08			Amalgamation of original report and supplementary documents (Golder Associates, Doc 562 – *Landfill Design and Management Supplementary Information* and AEM document – *Meadowbank Type A Water License – Response to Pre-Hearing Commitments*, Appendix I)
		4	11	Addition of testing protocol and incinerator criteria; Incorporation of Government of Nunavut Environmental Guidelines
		5	14	Addition of protocols for material placement in the landfills; Confirmation that there are no planned design changes as of October 2008 to Landfill #1 or Landfill #2
2	12/12/18	ALL	ALL	Comprehensive update of entire plan
3	17/03/31	ALL	ALL	Comprehensive update of entire plan
4	18/10/02	1.1 3.1 3.2.1 3.3	1 4 5 6	Addition of composting waste stream to site operations, where applicable. Composter output will be sent to landfill.
5	21/03/06	ALL	ALL	Comprehensive Update to reflect the current landfill operation
6	24/03/06	VI	VI	Acronyms and Units added
		2	3	Section updated
		3.1	4	Section updated
		1.2 3.4 3.5 4.1 4.2 5.2	2 7 7 8 8 12	Added details regarding progressive closure and closure

Approved by:

Eric Haley
Superintendent – Environment & Critical Infrastructures

Table of Contents

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS

Agnico Eagle	Agnico Eagle Mines Limited – Meadowbank Complex
GN	Government of Nunavut
NPAG	Non-Potentially Acid Generating
NWB	Nunavut Water Board
PAG	Potentially Acid Generating
RSF	Rock Storage Facility
VEC	Valued environmental components

UNITS

km	kilometre
km²	squared kilometre
m	metre
m³	cubic meter
Mt	million metric tonnes
t	metric tonnes

SECTION 1 • INTRODUCTION

1.1 PROJECT OVERVIEW

This Landfill Design and Management Plan (Plan) outlines the design, operation and closure for two solid waste landfills as part of the Agnico Eagle Mines Limited (Agnico Eagle) Meadowbank Mine.

The objectives of this Plan are summarized as follows:

1. To define the location, design and operating procedures to be used in the landfill disposal of non-hazardous solid waste generated at the Meadowbank Mine;
2. To define acceptable/non-acceptable types of solid waste to be placed in the Meadowbank landfill; and
3. To define operating and monitoring requirements for the landfill.

This updated version of the Landfill Design and Management Plan was developed in March 2017 in concordance with the water license requirement, updated in March 2021 to include new sub-landfills location and in March 2024 to include information regarding progressive closure and closure. This document will supersede all previous Landfill Design and Management Plans created by Agnico Eagle.

The landfills are required for the disposal of non-salvageable, non-hazardous industrial wastes from standard mining activities that cannot be incinerated.

Hazardous wastes will not be placed in the landfills. Management procedures for hazardous wastes are provided under a separate management plan – Hazardous Materials Management Plan. All other materials considered unsuitable for landfill deposition are packaged for shipment and disposal off site at a licensed facility.

To meet NWB guidelines, an environmental overview effects assessment was conducted to characterize environmental resources and determine the anticipated environmental effects of the landfills. Other applicable regulatory guidelines and criteria were also incorporated into this Plan, as discussed in Section 2.

The overall Meadowbank Mine description, landfill siting options and descriptions, and corresponding environmental overview approach are described in the sections below. The Meadowbank Mine Site facility layout is shown in Figure 1.

At the Meadowbank site and Baker Lake Marshalling Area, hazardous waste materials are stored in secure facilities until they can be backhauled for off-site recycling or disposal in an approved facility.

1.2 LANDFILL SITING

The landfills were positioned considering the following criteria:

- Drainage – sites that drain into areas where water will be collected and monitored as part of the overall mine plan are preferred.
- Avoid Ice Rich Soil Excavation – sites where bedrock is at relatively shallow depth are preferred.
- Disturbed Areas – sites that will be within or near areas that will be disturbed as part of the overall mine plan are preferred.
- Access – sites that are located close to existing access roads are preferred.

The first three criteria are recommendations from the Mine Site Reclamation Guidelines for the Northwest Territories (INAC, 2006).

Based on the above criteria, a landfill is planned at each of the two following locations:

- Landfill #1 is developed in the Portage RSF (Figure 2). This landfill consists of multiple sub landfills that are built and buried according to the evolution of the RSF. As the RSF evolves, the elevation and location of the sub landfills change. Landfill #1 will be used during operation and progressive closure. Based on capacity and site conditions, the Landfill #1 could also be used in closure.; and
- Landfill #2 will be developed at the top of the Portage RSF during Meadowbank closure.

While the preferred landfill location is the top of the Portage RSF (minimizing the disturbed area), such a landfill would hinder waste rock placement during mining activities. Landfill #2 could present less capacity for waste disposal, based on waste rock placement on top of the Portage RSF. Thus Landfill #1 will be developed first and serve as the non-hazardous waste disposal site for the life of operation, for progressive closure and possibly for closure. Landfill #2 will serve as the non-hazardous waste disposal site for closure, based on capacity requirements.

2 REGULATORY SETTING

Waste management in Nunavut is regulated under the Nunavut Public Health Act, the Nunavut Environmental Protection Act, the federal Environmental Protection Act, and the federal Transport of Dangerous Goods Act. Agnico Eagle is also bound by the terms and conditions of its production lease with the Kivalliq Inuit Association and its Water License from the NWB.

In addition to mandatory requirements, several waste management guidelines are commonly used in the Northwest Territories and Nunavut. The most recent of these was developed for municipal solid waste and is titled: “Guidelines for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the NWT” (Ferguson Simek Clark, April 2003, on behalf of the Department of Municipal and Community Affairs, Government of Northwest Territories). Environmental Guideline for Industrial Waste Discharge into Municipal Solid Waste and Sewage Treatment Facilities (GN 2011c) were also used. While not all the recommendations provided in these guidelines are appropriate for the management of industrial waste such as those generated at a gold mine, those principles that are considered applicable have been adopted in the Plan.

The NWB guidelines, *Mine Site Reclamation Guidelines for the Northwest Territories* (INAC 2006) were followed in this current document regarding specific landfill design and mitigation for impacts pertaining to waste. The recommendations from *Implications of Global Warming and the Precautionary Principle in Northern Mine Design and Closure* (BGC 2003) were also incorporated into this document, where appropriate.

3 PLAN FOR THE ON-SITE DISPOSAL OF SOLID WASTE

3.1 APPROACH

The strategy for the disposal of solid waste is to first identify and segregate acceptable disposal items from non-acceptable items. Acceptable items that can be disposed of at the on-site facility are those that are non-hazardous, non-organic, with low leachate and heat generation potential. All other materials are either incinerated, composted prior to landfilling, or hauled off site. This strategy for limiting the materials that can be placed in the landfills greatly reduces the potential for leachate.

All solid wastes that may contain food waste or other organic waste that could attract wildlife are composted in the on-site composter. This includes all organic waste from the camp, camp kitchen, site lunchrooms and offices as well as organic waste from the Whale Tail Mine site. The compost output is then sent to the on-site landfill. Wood and general waste that could attract wildlife are compacted and placed in a sea can for shipment off site.

The second part of the strategy is to concentrate disposal of solid waste at two landfills, Landfill #1 and Landfill #2. Landfill #1 is located in the Portage RSF. It consists of multiple sub landfills that are built and buried according to the evolution of the RSF. As the RSF evolves, the elevation and location of the sub landfills change. It will serve the mine for the life of operation, for progressive closure and possibly closure. Landfill #2 will be located near the top of the Portage RSF, on the last rockfill lift, and would serve the mine for mine closure based on capacity requirements. Demolition waste from the plant site removal / reclamation are planned to be disposed of in Landfill #1 and Landfill #2.

The development of the two landfills minimizes the area disturbed and the re-handling of waste. Landfills at the selected locations allow any leachate that may be generated to be collected, monitored and managed with seepage and runoff water from the Portage RSF. The leachate from the landfills is very weak or simply absent due to the controls on materials placed in the landfill and thus site-specific landfill leachate management is not considered to be required. Any leachate that may become present would runoff into the Tailings Storage Facility which will be capped at the end of mine life.

Based on the above strategy, a liner is not required for the landfills, nor is any special monitoring completed or foreseen to be recommended in the future. However, the landfills conform to the Type A Water License requirements and closure plan for each landfill site for orderly landfill development and to reduce the potential for windblown debris.

The Type A Water License requires the following landfill related monitoring:

- Part I, Item 8 stipulates that the monthly runoff/seepage flow from both Landfill #1 and #2 in cubic meters must be measured, recorded and reported to the Water Board;

- Part I, Item 10 stipulates that the annual geotechnical inspection to be carried out by a geotechnical engineer between the months of July and September should include all earth works including the two landfill sites with the results being included in the report to the Water Board;

- Part I, Item 13 stipulates that seepage and runoff from the landfills is to be observed at a minimum of once per quarter; and

- Part I, Item 14 stipulates that the results and interpretation of the Seepage monitoring required in Part I, Item 13 in the Annual Report required under Part B, Item 2.

3.2 ACCEPTABLE WASTE FOR LANDFILLING

3.2.1 Acceptable waste

The following materials are acceptable for disposal at the landfills:

- Plastic (except expanded polystyrene);
- Steel, copper, aluminum, iron (most of this metal is recycled);
- Wood;
- Fiberglass insulation;
- Fiberglass;
- Roofing;
- Cardboard
- Concrete;
- Carpet;
- Bricks;
- Ceramics;
- Rubber;
- Empty caulking tubes;
- Hardened caulk;
- Clothing;
- Glass;
- Wire;
- Small appliances (with batteries removed);
- Gyproc;
- Ash (provided it has cooled to 60ºC or less and follows procedures laid out in the Incinerator Management Plan);
- Composter output; and
- Vehicles and machinery (provided all liquids, grease, batteries, and electronics have been removed, see Section 3.3.2 for more details on ozone depleting substances).

3.2.2 Asbestos

Asbestos being present naturally in rock formations, asbestos related waste will be generated within the milling and production processes. As such, this type of waste will be disposed of according to the MBK-HSS-IH-PRO Asbestos Waste Management procedure (Appendix A). Once ready for disposal, asbestos waste will be capped quickly to minimize exposure, using mini-landfill type of disposal within the existing Landfills.

3.3 UNACCEPTABLE WASTE FOR LANDFILLING

Materials that are not listed above are unacceptable for placement at the landfills, unless approved in writing by the Meadowbank Environment and Critical Infrastructures Superintendent or General Supervisor Environment. These materials include:

- Organic matter including food, septic tank pumping or sludge from wastewater treatment, dead animals, paper;
- Food containers and wrappings, unless cleaned;
- Whole tires;
- Hazardous waste including mercury, medical waste, batteries, solvents, glues, ethylene glycol antifreeze, adhesives (except empty caulking tubes);
- Electronics;
- Light bulbs or Fluorescent Lamp Tube;
- Petroleum products, including materials contaminated with petroleum products; and
- Expanded polystyrene.

Organic matter is not accepted in the landfill, thus eliminating the attraction to carnivores and/or raptors. This is accomplished by requiring all personnel to dispose domestic waste in designated receptacles and by sending all collected domestic waste (e.g., from kitchens and living quarters) to the composter.

3.3.1 Fluorescent Lamp Tubes

Fluorescent tubes contain mercury phosphor powder and traces of lead and cadmium, which are considered environmental contaminants under the Nunavut *Environmental Protection Act* (EPA). The only disposal method for fluorescent tubes is through an approved hazardous waste recycling or disposal facility (Government of Nunavut, Environmental Protection Service, 2003) and as per the *Disposal Guidelines for Fluorescent Lamp Tubes*.

3.3.2 Ozone Depleting Substances

Ozone depleting substances (ODS) include chlorofluorocarbons (CFCs) or halons; common sources include refrigeration equipment, air conditioning equipment, motor vehicle air conditioners and fire extinguishing equipment (Government of Nunavut, Environmental Protection Service, 2002b). These materials are hazardous in nature; consequently, all disposal of ODS take place at an approved facility.

3.4 TOTAL VOLUME OF WASTE

An estimate of waste volume is required to estimate the approximate size of the landfills; however, an exact waste volume is not a critical parameter in the design because of the flexibility of design to accommodate extensions (larger to accept more waste) or contractions (smaller to accept less waste) of the landfill.

It is expected with the latest life of mine assessment to have sufficient space within the existing planned landfills.

The expected volume of waste produced in closure and required disposal capacity will be presented in the Closure and Reclamation Plan. The required landfill capacity will be calculated based on the estimated amount of demolition material and decommissioned equipment that will need to be landfilled at the end of the mine life, in addition to general waste generated during active closure.

3.5 INCINERATOR ASH TESTING PROTOCOL

The incinerator was dismantled in 2023 and is not expected to be operational for the remaining life of mine, and thus no ash monitoring will be required. Please see the Meadowbank Incinerator Waste Management Plan for all information regarding the disposal of ash at the landfill.

4 LANDFILL LOCATION AND CONSTRUCTION

4.1 LANDFILL #1

The locations of Landfill #1 are shown on Figure 2 within the Portage RSF limits. This landfill will serve as the solid waste disposal facility for the next 2 years of mine life. The design of Landfill #1 does not require imported materials or exacting survey data or measurement. This is due to the restriction on materials that can be landfilled and the location of the landfill within the catchment of the Portage RSF. These factors reduce the need for leachate collection or control or mitigation measures against vectors such as carnivores or raptors. Thus, the main environmental mitigation measure required is a wind screen to reduce windblown debris. As of October 2020, the Landfill #1 has evolved in sub landfills that are built and buried according to the evolution of the RSF. As the RSF evolves, the elevation and location of the sub landfills change.

The area to receive waste is bounded by a rock fill berm. The purpose of the rockfill berm is to act as a wind shield for the waste. The sub landfills have a rectangular shape with the length perpendicular to the prevailing wind direction so that much of the waste could be protected from wind by the rockfill berm.

For the remaining life of mine, for progressive closure and for closure, Landfill #1 is expected to be located at the base, on the south side of the Portage RSF, as presented in Figure 2b. Other sub-landfill locations within the Portage RSF could still be chosen for Landfill#1, based on capacity requirements and site conditions.

Details and the exact location of Landfill #1 for waste disposal during progressive closure and closure will be provided with the Reclamation and Closure Plan.

4.1.1 Landfill #1 Protocol for Placement of Material

Waste is disposed of directly on the ground and compacted with heavy equipment against the berm or existing row. When the sub landfill is either full of compacted waste or the RSF evolution causes the sub landfill to be moved, the waste is compacted and then covered with waste rock. A new sub landfill is then built including rock fill berm to act as a wind shield.

4.2 LANDFILL #2

Landfill #2 will be developed on top of the Portage RSF at closure. Landfill #2 is currently estimated to be a 4 m deep depression in the top of the waste rock pile at the Portage RSF. The depression will be constructed by the waste rock trucks discharging their loads in a controlled manner such that the dimensions of the depression will be approximately as shown on Figure 3 and 4. The area to receive waste will be bounded on the northwest side by a 2 m high rockfill berm. The rockfill berm will act as a wind shield to reduce the amount of wind-blown debris, while providing material for intermediate cover of the landfill. Waste will be placed to a maximum thickness of 4 m, after which it will be covered with a minimum of 0.3 m thickness of rock fill. A final cover of 4.0m of NPAG waste rock will then be placed over the waste.

Details and the exact location of Landfill #2 for waste disposal during closure will be provided with the Reclamation and Closure Plan.

4.2.1 Landfill #2 Protocol for Placement of Material

Materials destined for burial in the demolition landfill will be dismantled as safely and efficiently as possible, stacked in a stockpile and will then, if required, be cut into manageable sizes for safe transport and placement in the demolition landfill. The demolition debris will be placed in compacted layers and then buried. Once compacted, waste rock will be placed on the debris to infill voids. Once a continuous layer of waste rock has covered the compacted debris then a final cover of a minimum of 4 m of NPAG rock will be placed over the entire landfill area.

4.3 LEACHATE MANAGEMENT

The leachate from the landfills has a very low strength (dilute) or is simply absent due to controls on materials placed in the landfills, and thus site-specific landfill leachate management is not required. Any leachate generated by the landfill will naturally be directed to the Tailing Storage Facility. Due to the fact that the Portage RSF will cover Landfill #1 and #2, it is not proposed to have a separate water quality monitoring point for leachate.

4.4 LANDFILL ENCAPSULATION WITHIN THE PORTAGE RSF

The Portage Rock Storage Facility contains surplus quantities of waste rock from the Portage and Goose pits. A classification system is used to identify the use and storage for all mine rock[1]. Specifically, this system identifies potentially acid generating (PAG) or non-acid generating (NPAG) rock types, as well as those with the potential to leach metals.

The Portage RSF is constructed as a cell, or series of cells, such that the interior of each cell is composed of PAG and/or ML waste rock, and the exterior of each cell is composed of NPAG waste rock. Thus, PAG and/or ML waste rock within the RSF is encapsulated within NPAG waste rock, thereby limiting its exposure to oxidizing agents such as air and water; and providing a buffer for any drainage from the interiors of the cells. The material within the Portage RSF freezes, which limits internal drainage as infiltrating water becomes frozen. As a further ARD control measure, the Portage RSF will be capped with a minimum 4 m thick layer of coarse acid-buffering ultramafic rock at closure.

Owing to their placement within the Portage RSF, the landfills are/will also become encapsulated within waste rock. Specifically, the slopes of the sub landfills are covered with an advancing waste rock layer during operations such that the sub landfills are covered by a minimum 0.3 to 1 m thickness of waste rock by the end of each sub landfill operations, prior to the final NPAG cover. Agnico Eagle plans to use NPAG waste rock to surround and cover the landfills wherever practical. As noted above, a minimum 4 m thick layer of coarse acid-buffering ultramafic rock would also be placed over the landfill cover as part of planned closure activities for the Portage RSF.

[1] See Operational ARD/ML Testing and Sampling Plan

5 LANDFILL OPERATION

5.1 CONCEPTUAL OPERATIONS PLAN

The following is a conceptual plan for operating the landfills:

a) Materials Acceptable for Disposal

See Section 3.2.

b) Materials Not Acceptable for Disposal

See Section 3.3.

c) Site Development and Landfilling Method

The sub landfills are filled progressively in an orderly manner. Specifically, waste is placed at one end of the sub landfill at full height and then the active waste area progressively advances. Areas where the waste has been placed to full height and leveled are progressively covered by placement of a minimum 0.3 m thickness of rock fill on top of the waste.

d) Staffing and Equipment

The landfills do not require a full-time attendant. Roll off trucks haul waste to the landfills and a dozer is used to spread, compact and level the waste.

e) Leachate Management

The leachate from the landfills is very weak (dilute) or simply absent due to the controls on materials placed in the landfills. Therefore, specific leachate management is not required.

f) Surface Water and Erosion Control

The slopes of the landfills are covered with rockfill, thus protecting them from erosion. Any water that may runoff from the RSF will flow to the TSF.

g) Inspections

The environmental department is conducting periodic inspections to ensure compliance with the permit and operation plan.

5.2 CONCEPTUAL CLOSURE PLAN

The following is a conceptual plan for closing the landfills:

a) Estimate of Total Waste Volumes, Tonnage and Life of Landfills

The expected volume of waste produced in closure and required disposal capacity will be presented in the Closure and Reclamation Plan, as mentioned in Section 3.4. and 4.2.

b) Final Cover Design

- The waste in the landfills will be covered by 0.3 to 1 m thickness of rockfill following waste placement, then covered with an additional 4 m thickness of coarse acid-buffering ultramafic waste rock material;
- The final landfill slopes will be up to 50%; and
- Drainage water if present will be naturally directed to the Tailing Storage Facility.

c) End use of Landfill After Closure

There is no planned end use of the landfills post-closure. They will become part of the waste rock storage facility.

d) Water Management

Contact water from the landfills in closure will continue to be managed under the current Water Management Plan.

e) Inspections and Monitoring

The monitoring plan for the landfills in closure and post-closure will be presented in the Closure and Reclamation Plan.

6 POTENTIAL ENVIRONMENTAL EFFECTS

The landfills are designed and built as part of the Portage RSF. The access road to the Rock Storage Facility is used to access the sub landfills considered as Landfill #1. Access to Landfill #2 will also be by the access road to the Portage RSF.

Landfill activities that were identified to have potential effects on VECs include site preparation and construction, operations, and closure.

Potential effects from the landfills on VECs were assessed as follows:

- Degradation of permafrost;
- Change in surface water and groundwater drainage patterns due to proposed landfill footprint (altered landscape);
- Change in groundwater and surface water quality from leachate percolation, leading to degradation of aquatic habitat;
- Change in air quality from dust and windblown debris;
- Loss of vegetation cover and terrestrial mammal habitat due to proposed landfill footprint;
- Attraction of predatory and small mammals to waste; and
- Loss of sites of heritage significance or traditional ways of life.

Several mitigation measures, including management and monitoring plans were implemented as part of the overall Meadowbank Mine and are also incorporated into landfill construction, operations, and closure. The plans that set out detailed site-specific protection measures and procedures that serve to protect the VECs include:

- Water Management Plan;
- Air Quality and Dustfall Monitoring Plan;
- Terrestrial Ecosystem Management Plan;
- Hazardous Materials Management Plan;
- Interim Closure and Reclamation Plan; and
- Water Quality and Flow Monitoring Plan.

6.1 EFFECTS SUMMARY

The primary potential environmental effects from landfill activities included leachate generation, windblown

debris and habitat (vegetation) loss. Given the effective implementation of mitigation plans, no residual environmental effects to VECs from construction, operation or closure of the landfills are anticipated. See summary below:

- The leachate that will be generated by the landfills is of very low strength (dilute) or simply absent due to restrictions on the materials that is placed in the landfills. Water drainage from the landfill area would naturally be directed to the Tailing Storage Facility and would be managed under the Water Management Plan during operations and closure.

- Rockfill berm acts as a wind shield to reduce amount of windblown debris.

- Habitat loss is minimized because the landfills is designed and built within the footprint of the Portage RSF. With the implementation of terrestrial habitat reclamation strategies, the final surfaces of the landfills are graded to blend into the existing topography and enhance conditions for wildlife. Terrestrial habitat reclamation strategies will be incorporated as part of the Closure and Reclamation Plan.

7 PLAN REVIEW AND CONTINUAL IMPROVEMENT

The Landfill Design and Management Plan will be reviewed regularly by the Meadowbank Environmental Department in consultation with the engineering department and updated if necessary. Improvements suggested through these reviews would be implemented in consultation with the Nunavut Water Board.

8 REFERENCES

BGC (BGC Engineering Incorporated), 2003. Implications of Global Warming and the Precautionary Principle in Northern Mine Design and Closure. Prepared for Indian and Northern Affairs Canada, March 27, 2003.

Cumberland Resources Ltd. 2006. Meadowbank Gold Project No-Net-Loss Plan (NNLP). Meadowbank EIS Support Document. Final Report November 2006.

Cumberland Resources Ltd., 2005a. Meadowbank Gold Project Final Environmental Impact Statement. Final Report October 2005.

Cumberland Resources Ltd., 2005b. Meadowbank Gold Project Baseline Physical Ecosystem. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005c. Meadowbank Gold Project Air Quality Impact Assessment. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005d. Meadowbank Gold Project Noise Impact Assessment. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005e. Meadowbank Gold Project Baseline Aquatic Ecosystem Report. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005f. Meadowbank Gold Project Baseline Fish Habitat. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005g. Meadowbank Gold Project Baseline Terrestrial Ecosystem. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005h. Meadowbank Gold Project Baseline Archaeology Report. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005i. Meadowbank Gold Project Baseline Traditional Knowledge Report. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005j. Meadowbank Gold Project Air Quality & Noise Management. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd. 2005k. Meadowbank Gold Project Aquatic Effects Management Program. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005l. Meadowbank Gold Project Metal Mining Effluent Regulations (MMER) Plan. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005m. Meadowbank Gold Project Terrestrial Ecosystem Management Plan. Meadowbank EIS Support Document. Final Report October 2005.

Cumberland Resources Ltd., 2005n. Meadowbank Gold Project Socioeconomic & Archaeology Management Plan. Meadowbank EIS Support Document. Final Report October 2005.

Department of Sustainable Development (D of SD), 2002. Environmental Guideline for Industrial Waste Discharges. January 2002.

Ferguson Simek Clark Engineers and Architects, 2003. Guidelines for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the NWT. Prepared for Indian and Northern Affairs Canada, April 21, 2003.

Government of Nunavut, Environmental Protection Service, 2002a. Environmental Guideline for Waste Asbestos.

Government of Nunavut, Environmental Protection Service, 2002b. Environmental Guideline for Ozone Depleting Substances.

Government of Nunavut, Environmental Protection Service, 2003. Disposal Guidelines for Fluorescent Lamp Tubes.

INAC (Indian and Northern Affairs Canada), 2006. Mine Site Reclamation Guidelines for the Northwest Territories.

MMC (Meadowbank Mining Corporation), 2007a. Meadowbank Mine Waste and Water Management. Final Report August 2007.

MMC (Meadowbank Mining Corporation), 2007b. Water Quality and Flow Monitoring Plan. Final Report August 2007.

MMC (Meadowbank Mining Corporation), 2007c. Meadowbank Gold Project Hazardous Materials Management Plan. Final Report August 2007.

MMC (Meadowbank Mining Corporation), 2007d. Meadowbank Gold Project Preliminary Closure & Reclamation Plan. August 2007.

Figure 1: Meadowbank Mine Site Facility Layout

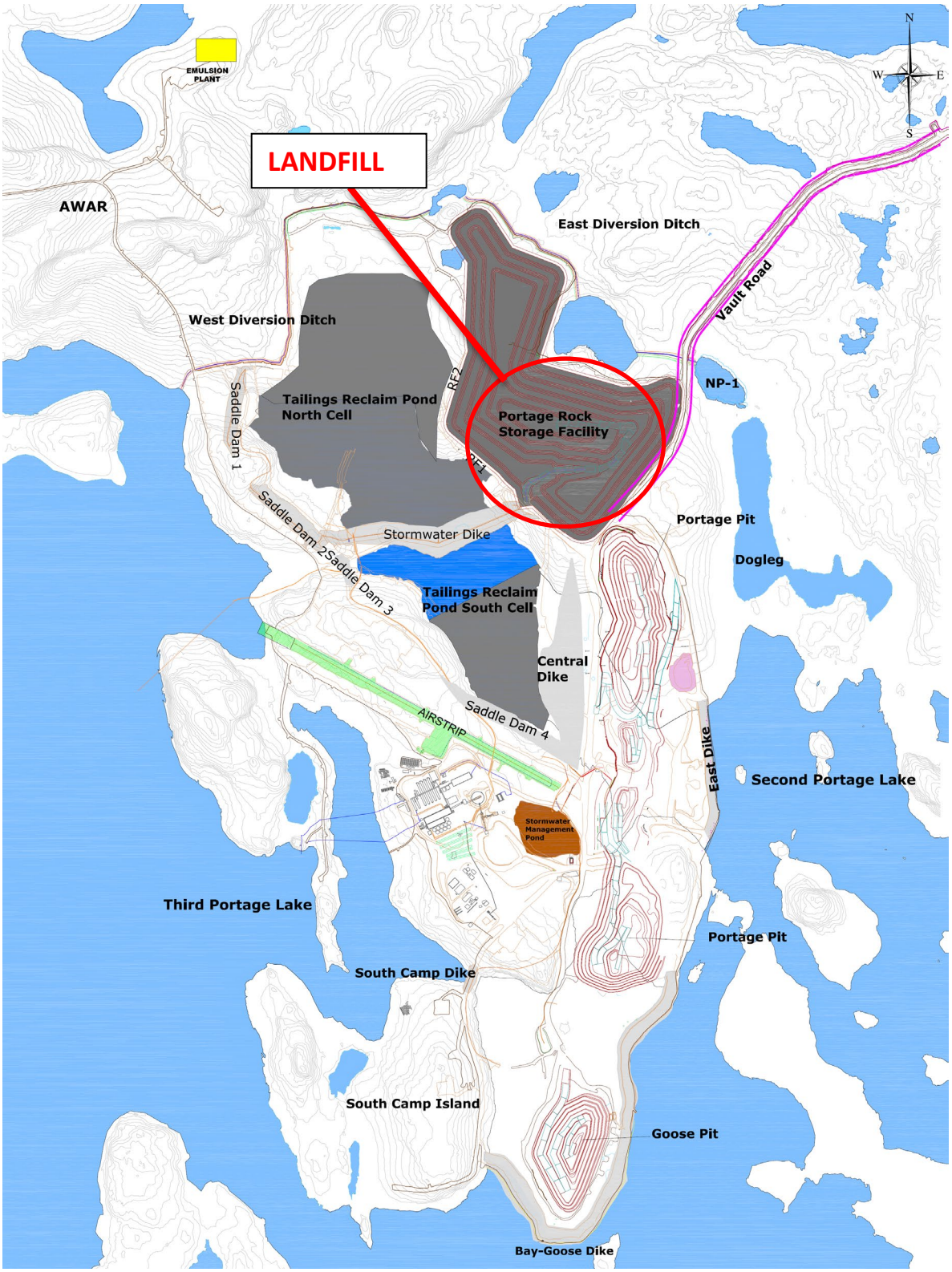


Figure 2: Landfill #1 with sub-landfill Locations

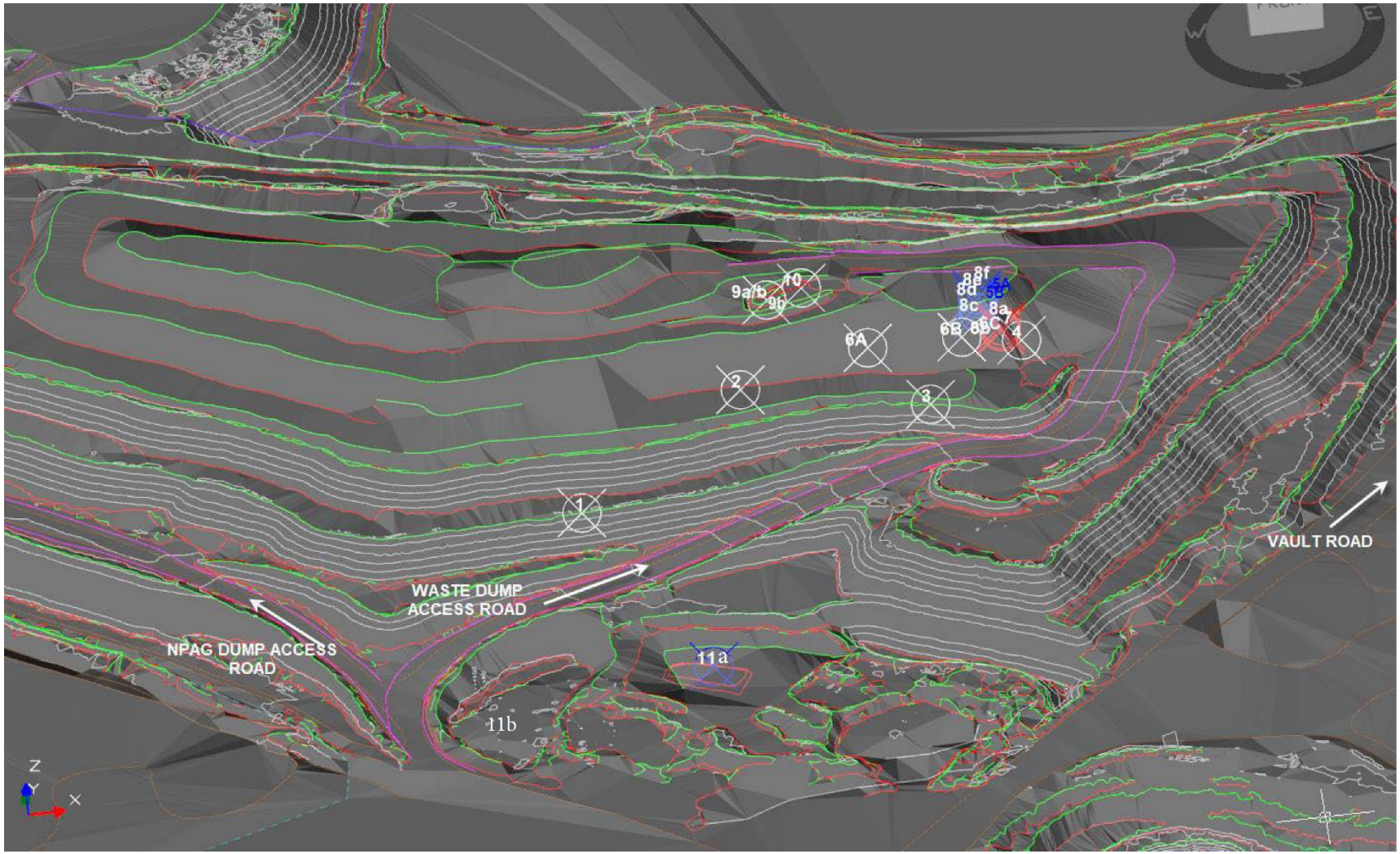
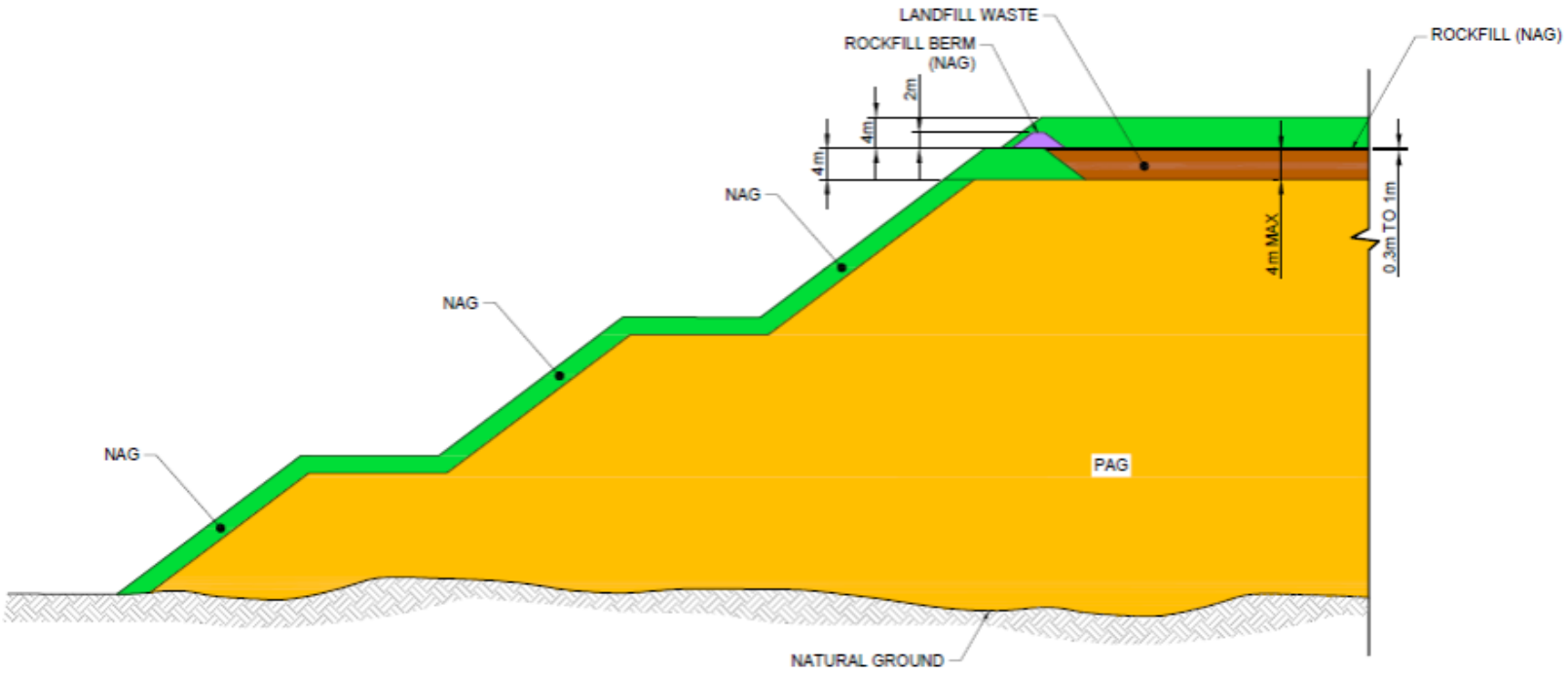


Figure 3: Approximate location of the Landfill #2 on top of Portage RSF

Figure 4: Landfill #2 Conceptual Cross Section



APPENDIX A

MBK-HSS-IH-PRO ASBESTOS WASTE MANAGEMENT PROCEDURE

Asbestos Waste Management

PROCEDURE NUMBER: MBK-HSS-IH-PRO Asbestos Waste Management

People concerned	• **Agnico-Eagle employees, contractors**	**Prepared by**	**Health and safety**
		Authorized by **Reviewed by**	**Norman Ladouceur** **Health and safety assistant Superintendent** **Rick Maunu – OHSC rep.**
Effective date :	April 29, 2013	***"Safety First, Safety Last … Safety Always!"*** ***"No Repeats" – Our Stepping Stone to ZERO HARM***	

This procedure corresponds to the required minimum standard. Each and everyone also have to comply with the rules and regulations of the Nunavut Government in terms of health and safety at work.

Objective: To ensure a safe means of disposing of Asbestos containing materials.

Concerned departments:	**Required equipment:**
Health and Safety, Energy and Infrastructure, Mine, Engineering and Environment	• HEPA Vacuum cleaners • Proper Protective Equipment (PPE) • Properly labeled Refuse Bins

Risks /Impacts legend


Health & Safety


Process/Quality


Costs


Environment

Procedure	Risks/ Impacts
Background With the recent safety and protective measures put in place on site to protect the worker's health and overall exposure to asbestos, several additional waste streams have been identified that require special care when being disposed of. Therefore some new procedures have been developed for implementation. These procedures are designed to minimize workers from exposure to asbestos and also to prevent uncontrolled discharge to the surrounding environment.	Avoid personal injury. Follow established procedures for proper disposal of asbestos containing materials.
Disposal Procedures 1) All used HEPA vacuum filters, HVAC filters, Tyvek coveralls and respirator cartridges/filters are to be place in a designated refuse bin near the HEPA vacuum cleaning stations. These materials will be treated as asbestos waste. Any Asbestos Containing Dust or materials suspected of being contaminated with asbestos that	Dispose of asbesos containing materials as per established procedures.

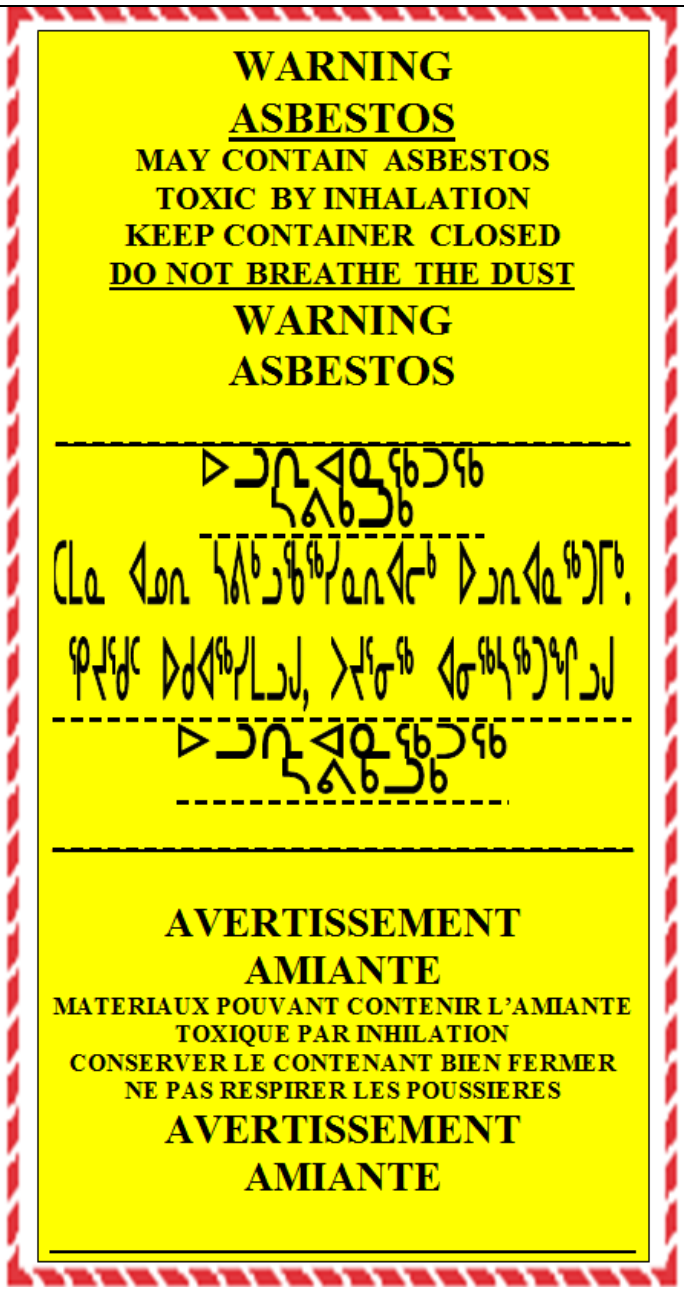
cannot be thoroughly cleaned and that do not have any substantial value, should be placed in the designated garbage bins as well.

2) The designated bins will be labeled with the proper workplace label for asbestos (See below). The bin will contain double layered, 6 mil polyethylene (plastic) bags. After placing any asbestos containing materials into the bags, workers are requested to tighten the inner bag by hand twisting it and folding it over. The refuse bin lid should then be closed. The bin lid does not have to be air tight as long as the bags are tightened. When the inside bag is full, trained workers (wearing PPE) shall replace the full bags with new double layered (one inside the other) bag.

3) The full bags are to be placed in a labeled sea can by the waste generator. The used filters from the Process Plant HVAC system will be put into cardboard boxes, and placed into the labeled sea can by the Site service department.

4) When the sea cans (4) are full (every 2 to 3 weeks), Field Service Supervisor/Lead Hand is to make arrangement with Mine Operations Supervisor or Auxiliary Supervisor 24 hours in advance to arrange for the cover of asbestos waste. Once a time is determined Field Services will haul the material to a location that is determined by the Mine Production Engineer. The chosen location for asbestos waste disposal must be in the Portage Rock Storage Facility. The asbestos waste should be dumped in the Pag dump ONLY since the N-Pag might be re-used for closure purposes. The Mine Production Engineer will arrange to have this location surveyed. Once the Asbestos Wastes is dumped, a Haul Truck with waste rocks is going to bury the Asbestos Wastes and a dozer will

ensure it is well covered. Persons handling Asbestos Waste shall be trained in the safe handling and shipping for waste asbestos, have access to material safety data sheets and be provided with appropriate PPE. Only trained asbestos personnel should have access to the designated AW storage area.	
Asbestos Work Place Label – to be used on all containers, refuse bins, garbage cans containing possible asbestos. 	Ensure proper asbestos workplace labels are used on all containers containing or may contain asbestos.


WARNING
ASBESTOS
MAY CONTAIN ASBESTOS
TOXIC BY INHALATION
KEEP CONTAINER CLOSED
DO NOT BREATHE THE DUST
WARNING
ASBESTOS
AVERTISSEMENT
AMIANTE
MATERIAUX POUVANT CONTENIR L'AMIANTE
TOXIQUE PAR INHILATION
CONSERVER LE CONTENANT BIEN FERMER
NE PAS RESPIRER LES POUSSIERES
AVERTISSEMENT
AMIANTE

Map of the Asbestos Waste Sea-Cans (4)