



AGNICO EAGLE

Meadowbank Division

Whale Tail Pit Expansion Project Landfill Design and Waste Management Plan

**APRIL 2019
VERSION 2_NWB**

EXECUTIVE SUMMARY

Agnico Eagle Mines Limited – Meadowbank Division (Agnico Eagle) is proposing an expansion to the Whale Tail Pit and Haul Road Project, a Meadowbank satellite deposit located on the Amaruq property. As an expansion to the Approved Project (Nunavut Impact Review Board (NIRB) Project Certificate No. 008 and Nunavut Water Board (NWB) Type A Water License 2AM-WTP1826) Agnico Eagle is proposing to expand and extend the Whale Tail Pit operations to include a larger Whale Tail open pit, development of the IVR open pit, and underground operations while continuing to operate and process ore at the Meadowbank Mine.

A landfill will be required for the disposal of non-salvageable, non-hazardous, non-putrescible solid wastes from the construction, operations, and closure of the Project. Reduce, reuse, and recycle initiatives will be developed at the Project to minimize the quantity of waste generated. Waste segregation will be used to capture wastes suitable for reuse or recycling, while managing hazardous waste appropriately. The proposed landfill will be located within the Whale Tail Waste Rock Storage Facility (WRSF) located to the northwest of the mine infrastructure. The landfill will be filled progressively and in an orderly manner.

Wastes will be disposed directly on the landfill floor and compacted with heavy equipment against the berm or an existing row of debris that was compacted earlier. Controlling the materials that can be placed in the landfill is a strategy aimed to reduce the concentration of constituents in potential leachate and to minimize the attraction of wildlife to the landfill. Landfill operation will also conform to best management practices to reduce the potential for windblown debris.

Leachate from the landfill is anticipated to be weak due to the controls placed on materials acceptable for landfilling. Moreover, drainage from the landfill is largely expected to freeze within the Whale Tail WRSF with little to no seepage water reporting to the WRSF pond or collection infrastructure. However, in the event there is leachate from the landfill due to periods of heavy rainfall or spring freshet, the runoff will be collected in the WRSF Pond and pumped to the Whale Tail Attenuation Pond for further management.

During closure, the Whale Tail landfill will be covered with non-potentially acid generating waste rock to isolate it from the environment and physically stabilize it. The landfill will be encapsulated within the Whale Tail WRSF.

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TABLE 3.1 ESTIMATED WASTE IN LANDFILL9

DOCUMENT CONTROL

Version	Date	Section	Page	Revision
1	January 2017			Landfill and Waste Management Plan as Supporting Document for Type A Water Licence Application, submitted to Nunavut Water Board for review and approval
2_NIRB	December 2018			Landfill and Waste Management Plan as Supporting Document submitted to the Nunavut Impact Review Board for review and approval as part of Whale Tail Pit – Expansion Project
2_NWB	April 2019			Landfill and Waste Management Plan as Supporting Document submitted to the Nunavut Water Board for review and approval as part of Whale Tail Pit – Expansion Project Add design to address GN IR #23

Prepared by:

Agnico Eagle Mines Limited – Meadowbank Division

ACRONYMS

Agnico Eagle	Agnico Eagle Mines Limited – Meadowbank Division
GN	Government of Nunavut
NPAG	Non-Potentially Acid Generating
NWB	Nunavut Water Board
WRSF	Waste Rock Storage Facility

UNITS

km	kilometre
km ²	squared kilometre
m	metre
m ³	cubic metre
Mt	million metric tonnes
t	metric tonnes

SECTION 1 • INTRODUCTION

1.1 Project Overview

Agnico Eagle Mines Limited – Meadowbank Division (Agnico Eagle) is proposing an expansion to the Whale Tail Pit and Haul Road Project, a Meadowbank satellite deposit located on the Amaruq property. As an expansion to the Approved Project (Nunavut Impact Review Board (NIRB) Project Certificate No. 008 and Nunavut Water Board (NWB) Type A Water License 2AM-WTP1826) Agnico Eagle is proposing to expand and extend the Whale Tail Pit operations to include a larger Whale Tail open pit, development of the IVR open pit, and underground operations while continuing to operate and process ore at the Meadowbank Mine. This plan has been updated in support of the Nunavut Water Board (NWB) review process.

The Landfill and Waste Management Plan outlines the design, operations, and closure of the solid waste landfill as part of Whale Tail's Project. It also highlights the waste segregation strategies that have been implemented to minimize the quantity of waste to be placed in the landfill.

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-salvageable, non-hazardous, non-putrescible solid waste generated at the Project.
2. To define acceptable/non-acceptable types of solid waste to be placed in the proposed landfill.
3. To describe plans to reduce/reuse/recycle Project wastes.
4. To define monitoring requirements for the proposed landfill.

A landfill is required for the disposal of non-salvageable, non-hazardous, non-putrescible solid industrial wastes that cannot be incinerated and that result from construction, operations, and closure of the Project. It will also be used to dispose of incinerator ash and compost. The Project will be operated totally independent of, and will not use, any municipal facilities or services for waste management.

1.2 Landfill Siting

The proposed landfill will be sited within the Whale Tail Waste Rock Storage Facility (WRSF), which is located north of the Mammoth Lake (Figure 1.1). The following criteria were considered in determining its location:

- Drainage – sites that will drain into areas where water will be collected and monitored as part of the overall site plan were preferred.
- Disturbed areas – sites within or near areas that will be disturbed as part of the future overall mine plan were preferred to minimise the environmental footprint of the Project.

- Access – sites located close to existing service or haul roads were preferred.
- The landfill site had to be large enough to accommodate non-salvageable, non-hazardous, non-putrescible solid industrial wastes for the life of the Project, including the closure period.

The first three criteria are recommendations from the *Mine Site Reclamation Guidelines for the Northwest Territories* (CIRNAC 2007).

As a result, the landfill will be developed within the Whale Tail WRSF.

1.3 Schedule

The landfill, to be built in Q2 2019, will be used for the construction, operations and closure phases. It will be one of the last mine infrastructures to be closed as it will be used to landfill demolished waste. It will not be required for post-closure.