AGNICO EAGLE

MELIADINE DIVISION

Meliadine
Bulk Fuel Storage Facility:
Environmental Performance Monitoring Plan

AUGUST 2019

VERSION 1

EXECUTIVE SUMMARY

The Meliadine Gold Project operated by Agnico Eagle Mines Limited - Meliadine Division (Agnico Eagle) is located approximately 25 kilometres (km) north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut. Situated on the western shore of Hudson's Bay, the Project site is located on a peninsula between the east, south, and west basins of Meliadine Lake (63°1'23.8''N, 92°13'6.42''W), on Inuit owned land. The project components include the 28 km All Weather Access Road (AWAR) between Rankin Inlet and Meliadine, the Itivia fuel farm and laydown area, and the mine site.

The current mine plan focuses on the development of the Tiriganiaq gold deposit, which will be mined using both conventional open-pit and underground mining operations. Current mining facilities to support the operations include a plant site, accommodations, tailings storage area, and water management infrastructure. Infrastructure that has been constructed for the operation of the Meliadine Mine Site include process plant, power plant, maintenance facilities, water treatment plants, sewage treatment plant, kitchen facilities and tank farms for fuel storage. This report discusses the design and operation of the Fuel Storage Facilities as specified under Water Licence 2AM-MEL1631 Part I, Item 12.

To adequately assess the environmental performance of the bulk fuel storage tanks at Meliadine, this report provides: a summary of the design, installation, operation and maintenance that follows the CCME (2003) Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum and Allied Petroleum Products; a summary of the location and environmental setting; a summary of the NWB Type A water license requirements; and an environmental assessment to support the recommended environmental monitoring for the ongoing evaluation of the secondary containment.

IMPLEMENTATION SCHEDULE

As required by Water Licence 2AM-MEL1631, the proposed implementation schedule for this Plan is effective upon approval and subject to any modifications proposed by the NIRB and NWB as a result of the review and approval process.

DISTRIBUTION LIST

Agnico Eagle – General Mine Manager

Agnico Eagle – Environment Superintendent

Agnico Eagle – Environmental General Supervisor

Agnico Eagle – Environmental Coordinator

Agnico Eagle – Environmental Technician

Agnico Eagle – Energy and Infrastructures Superintendent

Agnico Eagle – Field Services Supervisor

Agnico Eagle – Warehouse Supervisor

DOCUMENT CONTROL

Version	Date (YMD)	Section	Page	Revision
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Section 1 INTRODUCTION

Agnico Eagle Mines Limited – Meliadine Division (Agnico Eagle) is operating the Meliadine Gold Project. The Project includes the Rankin Inlet Marshalling Area, the All-weather Access Road (AWAR), the Bypass Road and the Meliadine Mine site.

The Meliadine Site consists of the following tanks:

- One 6.0 million litre bulk fuel storage tank;
- One 3.0 million litre bulk fuel storage tank;
- Two 0.25 million litre bulk fuel storage tanks.

To adequately assess the environmental performance of the bulk fuel storage tanks at Meliadine the report provides:

- a summary of the design, installation, operation and maintenance that follows the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (SOR/2008-197). Article 14 (1) of this regulation indicates that for the installation of a fuel storage system, the system has to comply with the applicable requirements set out in CCME Code of Practice (CCME PN1326);
- a summary of the location and environmental setting;
- a summary of the NWB Type A water license 2AM-MEL1631 requirements; and
- an environmental assessment to support the recommended environmental monitoring for the ongoing evaluation of the secondary containment.

Section 2 SITE LOCATION, CONSTRUCTION AND OPERATION

2.1 SITE LOCATION

The Meliadine Bulk Storage Facility is located at Meliadine mine site at two separate locations. One fuel farm is located at the industrial site and contains two above ground storage tanks, 6.0 million litres and 0.25 million litres. This fuel farm is located at 539,364E 6,989,918N (NAD 83 Zone 15). The second fuel farm is located at the mine site and contains two above ground storage tanks, 3.0 million litres and a 0.25 million litres. Both locations have secondary containment. This fuel farm is located at 539,335E 6,989,096N (NAD 83 Zone 17). The general location of the two fuel farms is provided in Figure 2-1 below.

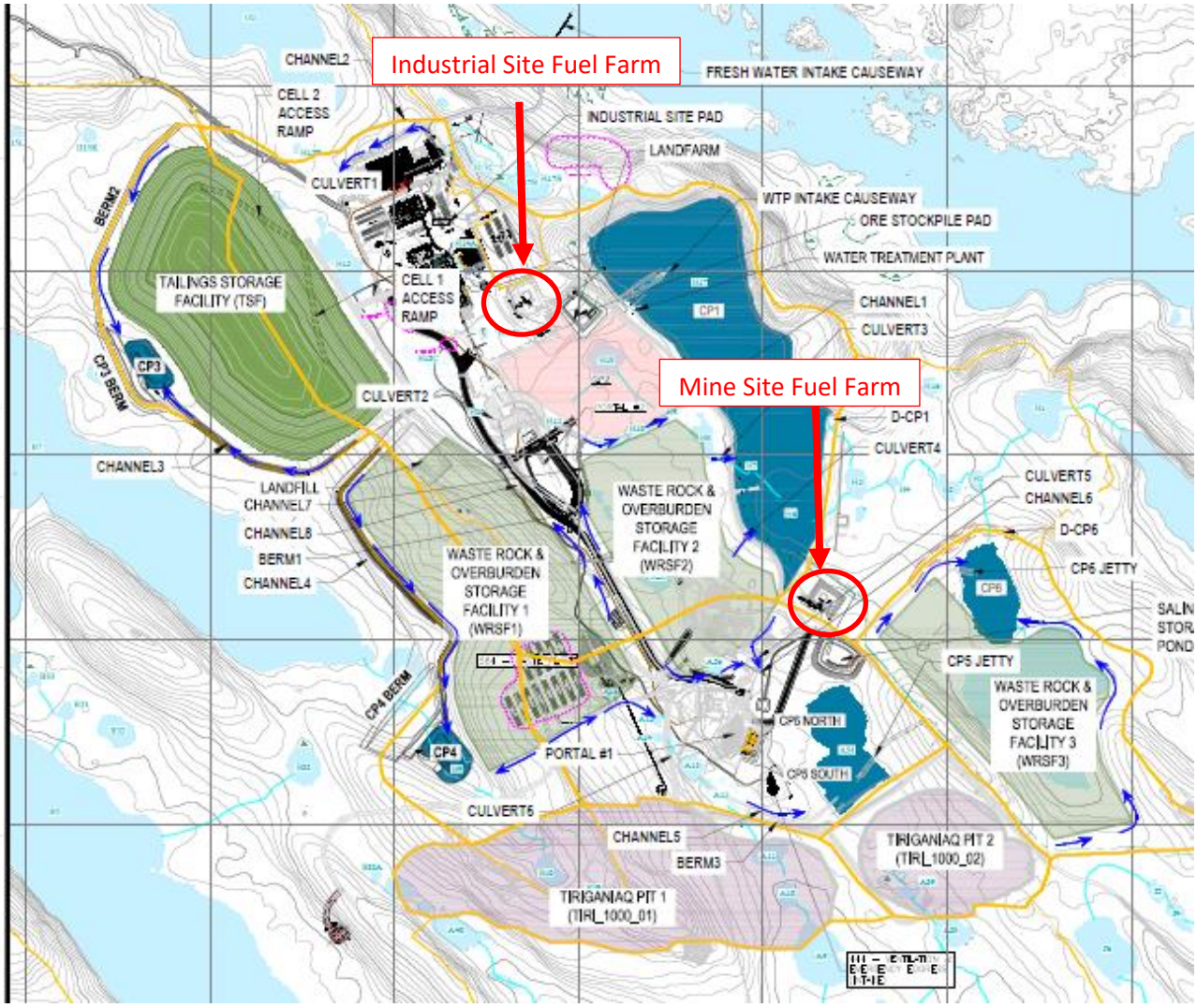

Figure 2-1. Location Meliadine Tank Farms

2.2 DESIGN AND INSTALLATION SUMMARY

Following regulatory approval in 2017, Agnico Eagle built the bulk fuel tank and respective secondary containment at the Mine Site Fuel Storage and Industrial Site Fuel Storage and Containment Facilities. The Mine Site Fuel Tank Storage Facility was completed in October 2017 and the Industrial Site Fuel Storage and associated containment facilities was completed and commissioned by January 2019.

The secondary containment for the Mine Site Fuel Storage area has a capacity of approximately 3,928 m^3, which encloses two fuel tanks with a capacity of 3.0 and 0.25 million litres of fuel. Industrial Site Fuel Storage area has a capacity of approximately 6,631 m^3, which encloses two fuel tanks with a capacity of 6.0 and 0.25 million litres of fuel.

The secondary containment for the aboveground tank farms complies to NFCC standards. The base and walls of the containment basin were constructed to withstand a full hydrostatic head with a permeability of 1 x 10^{-13} cm/s while the required permeability is 1 x 10^{-6} cm/s. These tanks are located entirely within the diked area, with an impermeable membrane covered with a non-combustible material. Both tank facilities have exceeded the minimum requirement of secondary containment equaling or exceeding 110% of the volume of the largest tank in the Fuel Farm.

The construction monitoring of the facility was managed by Agnico Eagle. Several activities were conducted during the construction to ensure the quality of the work. This includes:

- Offsite and Onsite Fabrication Quality Control;
- Industrial Site Fuel Module Quality Control;
- Asbuilt Drawings, Testing and Inspection Test Plans;
- Industrial Site Tank As-Built Inspections which include visual observations and the testing of welds etc.;
- Particle size analysis for the liner system;
- Civil Earthworks and inspection Test Plans; and
- Quality Control Final Report that included destructive and non-destructive testing on the liner to confirm and ensure the quality of the installation of the geosynthetic materials, including welding. This was managed by Texel Geosol who certified that all materials were installed according to the project plans and specifications.

2.3 OPERATION AND MAINTENANCE SUMMARY

Inventory control of transfer and monthly volume inspections using manual or electronic dip reconciliation are conducted at Meliadine by operations staff. Weekly inspections are logged and reported by Agnico Eagle. Weekly visual inspections and inventory reconciliation are used to evaluate and determine bulk fuel tank leakage at the sites.

The bulk fuel storage facilities are maintained in accordance with best management practices. The bulk fuel tanks at Meliadine are re-filled by a fuel truck on a regular basis throughout the year. During the period of re-filling, there is the greatest risk of over-filling. Through regular visual inspections, inventory control and monitoring fuel transfer, the risk of over-filling is significantly reduced. In the case of a spill, the Spill Contingency Plan will be implemented.

Section 3 ENVIRONMENTAL SETTING

3.1 TOPOGRAPHY

The dominant terrain in the Project area comprises glacial landforms, such as drumlins (glacial till), eskers (gravel and sand), and lakes. A series of low relief ridges composed of glacial deposits oriented northwest-southeast control the regional surface drainage patterns. The Tiriganiaq deposit is located on a large peninsula separating the east and west basins of Meliadine Lake.

The Project property is about 60 metres above sea level (masl) in low-lying topography with numerous waterbodies. The surveyed lake surface elevations in the Project area range from about 51 masl at Meliadine Lake to about 74 masl for local small perched lakes. Kettle lakes, and other lakes formed by glacio-fluvial processes or glacial processes, are common throughout the Project area.

3.2 GEOLOGY

The Project is located in the northern portion of the Archean Rankin Inlet Greenstone Belt, which is situated in the Northwest Hearne Sub-domain of the Churchill Structural Province that forms part of the northern Canadian Shield. Supracrustal rocks of this belt consist of mafic volcanic rocks, felsic pyroclastic rocks, sedimentary rocks and gabbro sills of about 2.7 billion years old that have been polydeformed and metamorphosed. These rocks were deformed in both the Archean and Proterozoic eras.

3.3 FLORA AND FAUNA

Vegetation studies have been undertaken since the mid-1990s to establish a baseline prior to the development of the mine. In general, the community types identified within, or in the vicinity of the Project and AWAR areas include upland terrestrial vegetation classes, wetland classes, and un-vegetated classes.

The upland terrestrial vegetation is predominantly heath vegetation. Heath vegetation in this area is defined as land where the soils are not saturated for extended periods of the year. Heath refers to the presence of low growing evergreen shrubs, such as Labrador tea, bearberry, and black crowberry that are typical of these areas. Heath vegetation in the area also consists of heath tundra or heath boulder and bedrock associations.

Wetlands or riparian vegetation are defined as areas that are saturated for most, or all of the growing season. Wetlands or riparian vegetation in the area consists of wet sedge meadows or tussock-hummock areas and low shrubby riparian vegetation along the margins of lakes and rivers.

Wildlife baseline studies were completed for the Project between 1998 and 2009 in support of the environmental assessment. Aerial surveys documented the abundance and distribution of caribou in the RSA. Wildlife baseline is complemented by observations recorded in the Meliadine Camp Wildlife Observation Log and by an annual Hunter Harvest Survey.

Caribou are an important part of Inuit life, providing food, fuel (from caribou fat), and materials for clothing, tools, and traditional crafts. Other land animals important to the communities include ungulates, such as muskox and fur-bearing species, such as foxes, wolves, and wolverines. Birds and bird eggs are also important.

The region includes the major summer range and calving grounds for some of Canada's largest caribou herds. The Qamanirjuaq caribou herd uses the area near the Project. Agnico Eagle has committed to supporting the GN Department of Environment's caribou satellite-collaring program for the Qamanirjuaq herd.

Bird studies have been undertaken for the Project since the mid-1990s and include baseline studies completed from 1998 to 2000, 2008 to 2009, 2011 and these studies have continued to the present. These studies have used a variety of species-specific methods to quantify bird populations with a focus on loons and other waterfowl, upland birds, raptors, and on bird species at risk within the RSA.

Surveys recorded the presence and abundance of upland breeding birds, shorebirds, and water birds in the RSA. Ground and aerial surveys were used to locate swan and loon breeding areas and raptor nests in the RSA.

Arctic char, lake trout, and Arctic grayling, the valued ecosystem components in the assessment of fish and fish habitat, occupy top trophic positions in the Meliadine Lake ecosystem. At the base of the ecosystem phytoplankton in lake water and periphyton on shoreline rocks use nutrients and carbon sources for growth, and provide food to benthic invertebrates and zooplankton. Zooplankton feed directly on phytoplankton, while benthic invertebrates feed on periphyton and decaying organic material that settle on the bottom of waterbodies. Fish feed on zooplankton and benthic invertebrates, and predatory fish feed on smaller fish.

3.4 SURFICIAL GEOLOGY

In general, the local overburden stratigraphy in the Project area consists of a thin layer of topsoil overlying a layer of silty gravelly sand. Cobbles and boulders are observed throughout the entire site and at various depths in the boreholes. The grain angularity is found mainly to be sub-angular and few are identified as sub-rounded. The bedrock surface at site is encountered between 2 to 18 metres below the ground surface.

3.5 WATER QUALITY

Water quality data in the Project area is collected and analyzed for general parameters (field and laboratory), major ions, nutrients (carbon, phosphorus, and nitrogen), total and dissolved metals, and selected organic compounds. Water quality data were compared to the most recent CCME *Canadian Water Quality Guidelines for the Protection of Aquatic Life* (CCME 2012) and Health Canada's *Guidelines for Canadian Drinking Water Quality* (Health Canada 2010).

In the Canadian Shield, concentrations of Total Dissolved Solids (TDS) in groundwater increase with depth, primarily in response to upward diffusion of deep-seated brines. The chemicals that contribute

to TDS in shield brines are typically chloride and calcium, with sodium to a lesser degree. By comparison, seawater is mostly composed of chloride and sodium. At the Project, three groundwater samples were collected in 2011 as follows:

- groundwater sample from about 100 m bgs with a TDS of about 4,700 milligrams per litre (mg/L);
- groundwater sample from about 450 m bgs with a TDS of about 60,900 mg/L; and
- groundwater sample from about 600 m bgs with a TDS of about 61,000 mg/L.

These values are greater than has been observed at other sites in the Canadian Shield at corresponding depths. This difference, together with the relatively high proportion of sodium relative to calcium in groundwater samples likely indicates the presence of relic seawater in bedrock. It is known that this area was largely overlain by seawater during the last period of glaciation. Such occurrences have been observed at other areas where land was submerged by oceans in the past.

Section 4 NWB TYPE A WATER LICENSE CONDITIONS

Agnico Eagle will continue to adhere and will apply the conditions of the Nunavut Water Board (NWB) Type A water license 2AM-MEL1631 requirements, related to the Meliadine mine site bulk fuel storage facility and is committed to achieving all of these requirements.

Section 5 ENVIRONMENTAL PERFORMANCE ASSESSMENT

To adequately assess the environmental performance of the Meliadine bulk fuel storage tanks and facilities, an annual Geotechnical inspection of the facilities occurs on Meliadine bulk fuel storage tanks and facilities. In the summer of 2019, a fuel audit is proposed to occur to look at the operation of the fueling system. In addition to this, environmental staff generally, on a weekly basis, complete a visual inspection of the facility. Other departments, such as Energy and Infrastructure, complete weekly and monthly inspections of the facilities.

5.1 DESK-TOP REPORT REVIEW OF THE MELIADINE BULK FUEL STORAGE FACILITIES

The last Meliadine bulk fuel storage facility was commissioned in January 2019. The installation report of the two facilities (Agnico Eagle, 2009; attached in Appendix A and B) indicates the use of best management practices occurred during the installation of the aboveground fuel storage tank. Following the tank construction, X- Ray testing of horizontal and vertical welds was completed. All of the welds met the specifications outlined in the API Standard 650.

Under the supervision of Agnico Eagle Construction, the construction of the secondary containment for both fuel facilities was completed by MTKSL. The surface of the liner was covered by 30 mm minus aggregate, which was placed on the geotextile placed on the HDPE. The installation of the liner was completed by Texol Geosol with the Quality Control Final Report prepared by Texel Geosol for Nuna Kivalliq Earthworks Inc. Testing, both non-destructive and destructive, was performed to ensure the quality of the installation of the geosynthetic materials, including welding. Texel Geosol certified that all materials were installed according to the project plans and specifications.

A secondary containment volume calculation using AutoCAD Civil 3D was completed to provide verification on the liquid storage capacity of the storage tank system. The CCME Environmental Code of Practice for Aboveground Storage Tanks (2003) states:

> *a storage tank system that consists of more than one storage tank which should have a volumetric capacity of not less than the sum of the capacity of the largest storage tank located in the contained space and 10% of the capacity of the largest tank or the aggregate capacity of all other storage tanks located in the contained space.*

In accordance with the CCME code of practice and National Fire Code of Canada (NFCC) requirements, the Meliadine bulk fuel storage tank facilities meet the volumetric requirements for a storage tank system.

5.2 SECONDARY CONTAINMENT VISUAL INSPECTIONS

A consultant performs a geotechnical inspection annually and inspects the bulk fuel secondary containment structures at the Meliadine Bulk Fuel Storage Facilities, the report is sent to NWB annually.

5.3 ENVIRONMENTAL ASSESSMENT

The management at the site drainage, surface water collection, and water/fuel removal within the secondary containment area is an important measure in the protection of the terrestrial environment, surface water, and ground water from potential sources of contamination. The environmental protection objectives, strategy, and an evaluation of the potential of leaks or seepage that could contaminate the terrestrial environment, surface water and ground water are provided in the following sections. Much of the environmental protection strategies focus on the control of contact water. In this report contact water is defined as any water that may be physically or chemically affected by the nearby operational activities.

At Meliadine, the bermed and lined tank farm provides secondary containment. If fuel escapes from the tanks holding the fuel, the bermed and lined area will not allow the fuel to escape to the receiving terrestrial and aquatic environment. As there is expected to be a high volume of fuel transfer and activity around the modular fuel dispenser and refueling station, inadvertent fuel spills during refueling are expected but will be retained on the impermeable, lined pad at the industrial site. The Mine site facility is proposing to have a lined pad installed in the summer/fall of 2019. The liner is sloped such that any fuel spilled on the pad would flow to a sump where it collects and can be recovered.

5.3.1 Terrestrial Environment

The primary objective of the terrestrial management plan is to minimize any adverse impacts to the terrestrial (soil, flora and fauna) environment. To meet this objective, the Meliadine bulk fuel storage facility structures have been constructed, to minimize the operational footprint and control contact run-off water within the secondary containment area. Due to the site grading, all water that comes into contact with the bulk fuel storage facility (including the modular fuel dispenser) is intercepted and directed into the impermeable HDPE lined secondary containment area.

The ground beneath the secondary containment area has been graded to ensure berm stability.

5.3.2 Surface Water

The objective of water management around the Meliadine bulk fuel storage facilities is to minimize impacts on the quantity and quality of surface water and groundwater. To meet this objective, the bulk fuel storage facility structures have been constructed to intercept and direct contact run-off water to the impermeable HDPE lined secondary containment area. As there is a high volume of fuel transfer and activity around the modular fuel dispenser, the pad below the modular fuel dispenser and refueling station is lined and sloped toward the secondary containment berm. The Mine site facility is proposing to have a lined pad installed in the summer/fall of 2019.

Due to the high compaction of the surrounding mine site pad, natural topography of the site, shallow top soil and predominate bedrock, should contact water reach the natural environment at Meliadine, the ultimate fate of the contaminants is to the CP1 storm water management pond.

5.3.3 Groundwater

It is not expected that groundwater would be impacted as there is no direct pathway for contaminated water to seep from the Meliadine. Due to the site grading, all contact water from the bulk fuel storage facility is directed inside the HDPE lined secondary containment area. Should the integrity of the liner become compromised, there could be leakage into the below grade soil, which is within a zone of continuous permafrost.

Section 6 PERFORMANCE MONITORING PLAN

The environmental performance monitoring plan is a tiered approach with an emphasis on visual and operational inspections; routine surface water sampling to control and monitor the quality of the contact water; and event monitoring (in the case of a spill emergency or occurrence). Management of the Meliadine fuel storage facilities will be guided by the monitoring results.

6.1 VISUAL AND OPERATIONAL INSPECTIONS

Visual and operational inspections are a central component of the environmental performance monitoring plan. Visual inspections of the Meliadine secondary containment structures are important because if the integrity of the berm walls or liner is compromised, this presents the greatest potential for leaks or seepage.

Visual inspections are conducted by the environmental department once per week and monthly manual or electronic dip tests are conducted for inventory reconciliation by the Procurement Department. Staff will inspect the bulk fuel storage facilities pad for: tank and piping condition, secondary containment berm structure and integrity, indicators of liner damage, precipitation/ run-off accumulation, evidence of tampering or misuse, any structural abnormalities and visible sheens on contact water pools and crush material inside the secondary containment. In addition, Energy and Infrastructure (E&I) carry out weekly/monthly inspections at various components of the infrastructure.

The Environment staff will follow-up with the E&I Department if any non-compliances are observed. A weekly written inspection sheet will continue to be completed and signed by the E&I supervisor and is available upon request.

6.2 ROUTINE CONTACT WATER MONITORING

Due to snow accumulation, melting and precipitation, contact water is unavoidably collected inside the secondary containment area. Contact water from inside the secondary containment area is sampled as described below before being discharged. The water accumulated in the Meliadine secondary containment will be released in accordance with the Type A Water License 2AM-MEL1631.

During visual inspections, the quantity of contact water collected inside the secondary containment area and sump will be evaluated. If there is a visible sheen on the contact water or if water withdrawal to the environment is deemed necessary, water samples will be collected and analyzed as per Water License 2AM-MEL1631. If the contact water exceeds the licensed limits, a portable oil-water separator can be used to treat the water. Prior to withdrawal, samples are analyzed at a certified laboratory and a 10-day notice is sent to the inspector if the water is discharged to the environment.

In addition, water samples from lakes and rivers near the Meliadine Project site are collected as part of the Aquatics Ecosystem Monitoring Program (AEMP). The results of these analyzes will continue to be included in the annual report. These samples are used to evaluate the performance of the overall water management plan for the Meliadine Site.

6.3 EVENT MONITORING

In the event of a spill occurrence at fuel storage facilities, the Spill Contingency Plan will be followed. As a follow-up to the spill response, the environmental staff will conduct an environmental assessment to determine the extent of impacts of the spill occurrence on the nearby environment. This will include the identification of the potential environmental pathways of concern that may result in impacts to surface water (i.e. channels and containment ponds around site), soil or groundwater.

6.3.1 Soil Sampling

Following the unlikely event where a spill is not contained within the secondary containment area or on the lined pad, soil sampling may be required to locate and prevent further impact to the terrestrial and aquatic receiving environment. Depending on the quantity of the spill, the organic surface soils and shallow till are a likely sink for hydrocarbons, thus soil samples will be taken at selected locations to horizontally and vertically delineate the impacted areas. Furthermore, the soil samples will provide valuable information used to determine the necessity of installing groundwater wells (see Section 6.3.3 below).

6.3.2 Water Sampling

Following a spill event escaping secondary containment, an environmental assessment will be conducted. Similar to routine contact water sampling (inside the secondary containment area or on the lined pad), water samples will be collected and analyzed as per Water License 2AM-MEL1631. If the contact water exceeds the licensed limits, a portable oil-water separator can be used to treat the water before it was disposed to the management ponds. Prior to withdrawal, samples will be analyzed at a certified laboratory. As part of the licence conditions and AEMP, receiving environment surface and at-depth water samples will be taken from selected locations around the site depending on the location of the spill and the migration of the contaminant.

6.3.3 Assessment of the Need for Groundwater Well Installation

Following a spill event escaping secondary containment, if soil sample results identify elevated concentrations of contaminants (i.e. exceeding the CCME Canada-Wide Standard (CWS) for Petroleum Hydrocarbons (PHC) in Soil) and/or if water samples identify elevated receiving environment water samples (i.e. exceeding licensed limits caused as a result of the spill event), an assessment of the need for groundwater wells will be conducted. The assessment, and if required, design for installation, monitoring and maintenance of vertical ground water monitoring wells will be in accordance with CCME (2003) procedures.

Section 7 REFERENCES

Tetra Tech (2018). Construction Summary (As-Built) Report for Mine Site Storage and Containment Facilities Meliadine Project, Nunavut.

Tetra Tech (2019). Construction Summary (As-Built) Report for Industrial Site Storage and Containment Facilities Meliadine Project, Nunavut.

2018 Annual Geotechnical Inspection, Meliadine Gold Project, Rankin Inlet, Nunavut

Agnico Eagle (2019). Meliadine Spill Contingency Plan.

Golder Associates (2015). Aquatic Effects Monitoring Program (AEMP) Design Plan 6513-REP-03 Version 1.

CCME (2003). Canadian Council of Ministers of the Environment: Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products. ISBN 1-896997-33-3.

CEPA (2008). Canadian Environmental Protection Act. Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations. June 12, 2008.

Appendix A

Construction Summary (As-Built) Report for Mine Site Fuel Storage and Containment Facilities Meliadine Project, Nunavut

CONSTRUCTION SUMMARY (AS-BUILT) REPORT FOR MINE SITE FUEL STORAGE AND CONTAINMENT FACILITIES MELIADINE PROJECT, NUNAVUT

PRESENTED TO

Agnico Eagle Mines Ltd.

APRIL 2018
ISSUED FOR USE
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EXECUTIVE SUMMARY

Tetra Tech was retained by Agnico Eagle Mines Limited (Agnico Eagle) to prepare a construction summary (as-built) report for the Mine Site Fuel Storage and Containment Facilities at the Meliadine Gold Project, Nunavut. Tetra Tech and WSP Canada Inc. previously prepared the construction drawings and specifications as well as the design report for the Fuel Storage and Containment Facilities for the Project (AEM No 6515-E-132-004-132-REP-003). The facilities include two (2) main fuel storage tanks located at Rankin Inlet Itivia site and four (4) fuel storage tanks located at the Meliadine site.

This report presents the work executed at Meliadine site where the construction of the Mine Site Fuel Storage secondary containment and the commissioning of the field erected fuel storage Tank #3 (3ML) and Tank #5 (250kL) was completed in October 2017.

Tetra Tech was not involved in the construction of the Fuel Farm Facilities. The information presented in this report was provided by Agnico Eagle.

The construction monitoring and quality assurance was managed by Agnico Eagle.

APPENDICES

ACRONYMS & ABBREVIATIONS

ACRONYMS	
API	American Petroleum Institute
CCME	Canadian Council of Ministers of the Environment
CEC	Canadian Electrical Code
CL	Centerline
CSA	Canadian Standards Association
HDPE	High-Density Polyethylene
ITP	Inspection Test Plan
NAD83	North American Datum of 1983
NBCC	National Building Code of Canada
NFCC	National Fire Code of Canada
NFPA	National Fire Protection Association
NWT	Northwest Territories
PLC	Programmable Logic Controller
RRNWT	Revised Regulations of the Northwest Territories
RTD	Resistance Temperature Detector
UTM	Universal Transverse Mercator
V:H	Vertical : Horizontal
VSD	Variable Speed Drive

UNITS	
km	Kilometer
m	Meter
cm	Centimeter
mm	Millimeter
ft	Feet
in	Inches
ML	Megaliter
kL	Kiloliter
s	Second
V	Volt
mA	Milliamp

1.0 INTRODUCTION

Agnico Eagle Mines Limited (Agnico Eagle) retained the services of Tetra Tech and WSP Canada Inc. to carry out the design works associated with the surface infrastructures for the Meliadine project, a gold mine located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut. These works include the fuel storage and containment facilities at the Rankin Inlet Itivia site and Meliadine site.

Tetra Tech and WSP Canada Inc. previously prepared the design report and drawings for construction related to the Fuel Storage and Containment Facilities for the Project including one fuel storage facilities at the Rankin Inlet Itivia site and two at the Meliadine site.

Tetra Tech was retained by Agnico Eagle to prepare a construction summary (as-built) report for the Mine Site Fuel Storage and Containment Facilities. Reports detailing the other fuel storage facilities will be covered under different reports.

The 250 kL tank number was changed from Tank #6 to Tank #5 after the submittal of the design report at the Mine Site Fuel Storage and Containment Facilities.

As required by the Water Licence A (No. 2AM-MEL1631), this report summarizes the construction work of the Mine Site Fuel Storage and Containment Facilities, including the secondary containment for the fuel farm, pumping station and ancillaries, field erection, and commissioning of Tank #3 (3 ML) and Tank #5 (250 kL). Included in this report is:

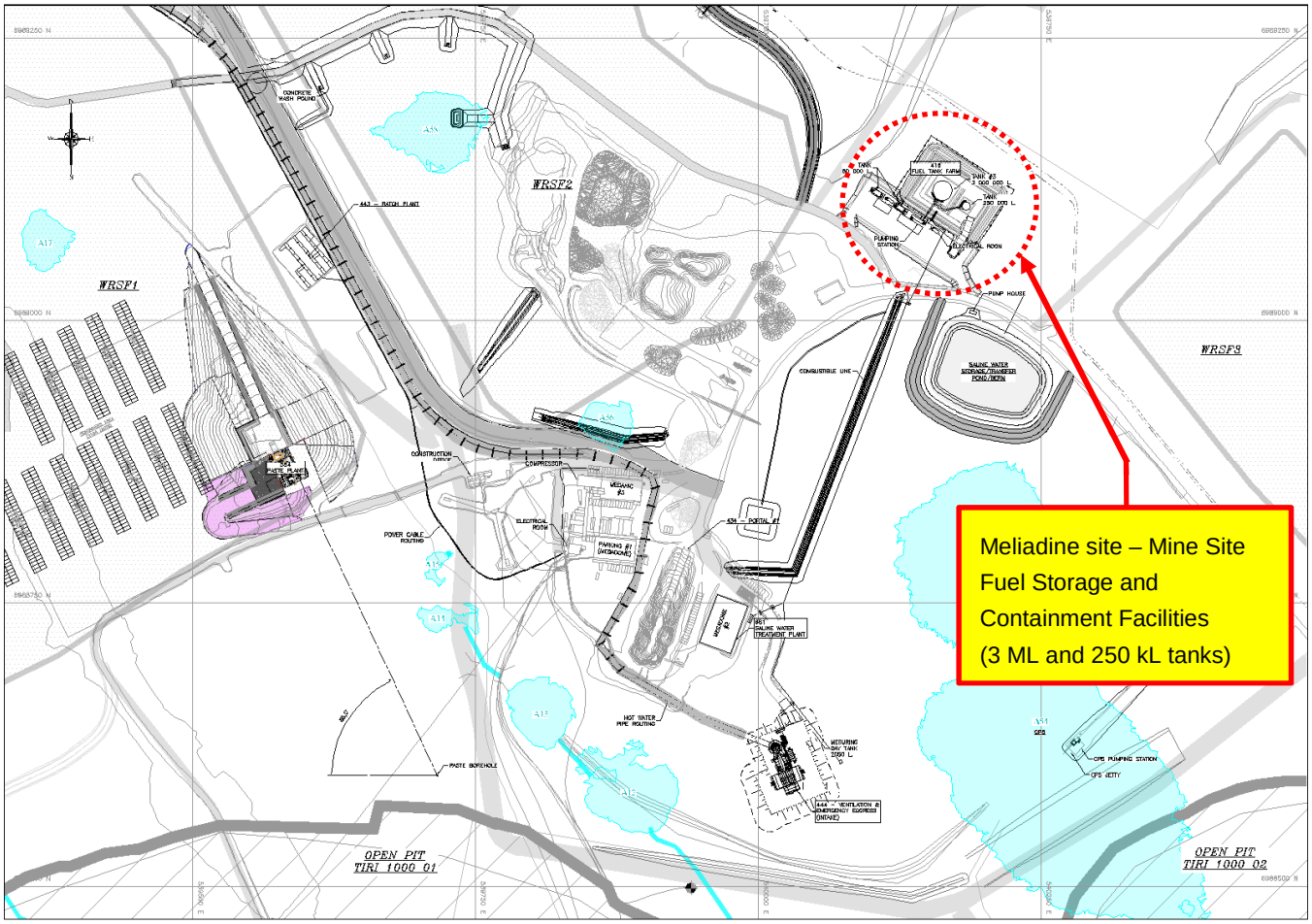
- A summary of the characteristics of the Mine Site Fuel Storage and Containment Facilities;
- Documentation on field decisions that deviate from original plans;
- As-built drawings;
- Survey drawings conducted during and after the construction of the Mine Site Fuel Storage and Containment Facilities;
- Photographs of the Mine Site Fuel Storage and Containment Facilities;
- Inspection Reports and Quality Control Documents for the Portal#1 Offsite and Onsite Fabrication and Fuel Modules;
- Inspection reports for the Inspection Test Plan (ITP), and Handover Package of Tank #3 and Tank #5;
- Inspection reports for the Quality Control for Geomembrane Installation;
- Particle Size Summary of 30 mm minus material;

2.0 SUMMARY OF THE CONSTRUCTION

2.1 Site Location Plan

The figure below presents the site location plan for the Mine Site Fuel Storage and Containment Facilities and pumping station located northeast of Portal #1 around a UTM (NAD83, Zone 15) coordinate of 539,335E and 6,989,096N.

Figure 2.1: Site Location Plan



2.2 Construction Schedule

Construction activities at the Mine Site Fuel Storage and Containment Facilities for the commissioning of Tank #3 and Tank #5 were conducted between June and December 2017. Construction was completed according to the milestone dates shown in Table 2.1.

Table 2.1: Mine Site Construction Milestone Dates

Item	Date
Site Preparation	June 2017
Under Liner Material Placement	June 5th, 2017 to July 17th, 2017
Containment Berm	September 13th, 2017 to October 12th, 2017
Liner System Installation	July 18th, 2017 to October 12th, 2017
Tank #3 Erection	July 31st, 2017 to September 13th, 2017
Tank #5 Erection	August 29th, 2017 to September 13th, 2017
Overliner Material Placement	July 19th, 2017 to October 18th, 2017
Mine Site Facility Testing	November 15th, 2017 to December 6th, 2017
Commissioning of Tank #3 and Tank #5	September 23rd, 2017
Pumping Station Installation	September 16th, 2017 to December 6th, 2017
Piping Interrelated to Pumping Station	September 16th, 2017 to October 7th, 2017
Electrical Construction	September 16th, 2017 to December 6th, 2017
System Operational for Tank #3 and Tank #5	December 6th, 2017

2.3 As-built Drawings and Photographs

As-built drawings are presented in Appendix A.

Survey drawings conducted during and after the construction of the Mine Site Fuel Storage and Containment Facilities can be found in Appendix B.

Photographs of the Mine Site Fuel Storage and Containment Facilities during and after construction are shown in Appendix C.

3.0 CODES AND STANDARDS

3.1 Compliance for Field Erected Fuel Tanks

The systems comply with all codes and standards related to the project (Federal, Territorial, Municipal, NBCC, NFCC, CEC, CSA, NFPA, and API) as well as the directives of the authorities having jurisdiction over the project., including specific codes such as R-125-95 NWT, Mine Health and Safety Act and RRNWT 1990, C F-12 Fire Prevention Regulations. See Table 3.1 below.

Table 3.1: Mine Site Field Erected Fuel Tanks As-built Compliance

Fuel Farm Description	Mine Site Fuel Storage Containment Facilities Compliance	
	Tank #3	Tank #5
Comply with CCME	Yes	Yes
Equipped with Overfill Protection	Yes	Yes
Underground Piping Double Wall	Yes	Yes
Underground Piping Installed to Collect Leak into an Accessible Sump	Yes	Yes
Connections for Filling/Emptying Storage Tanks Kept Close	Yes	Yes
Material	G40.21M-260WT	G40.21M-260WT
Product	Diesel	Diesel
Volume	3 ML	250 kL
Diameter	18.6 m	8.2 m
Height	11.2 m	4.7 m

3.2 Compliance for Secondary Containment

The secondary containment for aboverground storage tanks complies to NFCC standards. The base and walls of the containment basin were constructed to withstand a full hydrostatic head and has a permeability of 1_E^{-13} cm/s while the required permeability is 1_E^{-6} cm/s. The tanks are located entirely within the diked area, with an impermeable membrane covered with a non-combustible material.

Table 3.2: Mine Site Secondary Containment As-built Compliance

Parameters	Description		Compliance
Enclosed Tanks	Tank #3	Tank #5	-
Volume	3 ML	250 kL	-
Secondary Containment Requirement / Actual Containment Capacity (for both tanks)	3 300 m^3 / 3 928 m^3		Yes
Base and Wall Membrane to Withstand Hydrostatic Head	HDPE		Yes
Permeability (1_E^{-6} cm/s min.)	1_E^{-13} cm/s		Yes
Tanks Located Entirely Within the Diked Area	-		Yes

As shown in Table 3.2 above, the actual volume capacity of 3 928 m^3 complies with the legal requirement which states that the minimum required capacity is 110% of the volume of the larger tank for the operation of the fuel farm. The actual versus designed capacity was reduced by 182 m^3 but the actual volume capacity is still greater than the required capacity of 3 300 m^3.

3.3 Distance Restrictions As-built

The minimum clearances that were required or recommended by the Design Rationale for Fuel Storage and Distribution Facility by Public Works and Services of the Government of the Northwest Territories and NFPA-30 were met and are listed on Table 3.3 below:

Table 3.3: Distance Restrictions

Item	Required	Tank #3	Tank #5
Distance Between Tanks	¼ (D3 + D5) = 6.7 m D3=18.6 m, D5=8.2 m	11.17 m	
Distance Between Tank and Toe of the Dike	1.50 m Min.	9.81 m	9.14 m
Distance Between Tank and CL of the Dike	½ (Height of Tank) = 5.6 m / 2.35m H3=11.2 m, H5=4.7 m	13.90 m	12.98 m
Distance Between Property Limit (that can be built upon) and Tank	Tanks with less than 3 000 000 gallons: 165 ft. = 50.29 m	> 985 m	> 1 000 m
Distance Between Property Limit and Exterior Toe of the Dike	3.0 m Min.	> 950 m	
Distance Between Tank and Public Roads	55 ft. = 16.76 m	≈ 30 km	≈ 30 km

4.0 FIELD DECISIONS FOR THE FIELD ERECTED FUEL TANK #3 AND TANK #5 AND SURROUNDING FACILITIES (STRUCTURAL, MECHANICAL, AND ELECTRICAL)

4.1 Documentation on Field Decisions that Deviate from Original Plans

This section documents variations from original design which were approved by the designer and/or the field engineer on site for the field erected fuel tanks and piping systems. The designed intent of the structure was not compromised with the changes to the original design.

A construction summary was prepared for the Meliadine Mine Site Tank Farm Area and is located in Appendix D.

The construction work led to slight variations from the original design in the structural, mechanical, and electrical aspects of Tank #3 and Tank #5 of the Mine Site Fuel Farm.

4.1.1 Structural

- The inspection test for leaks in Tank #3 and Tank #5 was a liquid penetrating test which complies with the API standard 650. Additional equipment including a 12 inch pressure vacuum, shell brackets, and vents were installed.
- The handrails were changed to steel angle of 55 mm x 55 mm x 6 mm instead of a pipe handrail.
- All manholes will be painted with Thermarust paint to prevent rust damage. Painting for both tanks will be done in summer 2018.
- The pumping station container was changed from a 20 feet to a 40 feet container.

4.1.2 Mechanical

- Vent valves were installed at the top of the dike section in the pipeline for Tank #3 and Tank #5.
- The loading arm manufacturer was changed from Emco to OPW due to time constraints of the delivery.

4.1.3 Electrical

- One switch per variable speed drive (VSD) was installed per pump. The 600 V power junction boxes were removed, and control cables were installed between cabinets and the VSD.
- Additional lighting and fixtures were installed. One emergency lighting fixture and one 120 V receptacle in each operator room.
- Installation of one strobe light on Tank #3.
- To avoid adding a resistance temperature detector (RTD) card to the programmable logic controller (PLC), a 4-20 mA signal from the RTD temperature sensor was added.
- A temperature sensor was installed on Tank #3 and Tank#5.
- An Ethernet cable network between the Microload PLC will replace the BMXEAE0300 and MBXFTB2000.

4.2 Maintenance, Inspection, Construction Monitoring, and Inspection Reports

The construction monitoring was managed by Agnico Eagle. Several activities were conducted during construction to ensure the quality of the work. Here is a description of the reports prepared to summarize the quality control, monitoring, or inspection performed during the construction of key activities.

- Portal #1 Offsite and Onsite Fabrication Quality Control Documents dated June 9th, 2017 prepared by Nuqsana Promec Mining, see Appendix E. Quality control was done throughout the construction and fabrication the project, including but not limited to, the catwalk, piping, and mechanical fixtures.
- Fuel Module Quality Control Documents dated July 10th, 2017 prepared by Nuqsana Promec Mining, see Appendix F. Documentation for inspection and test plan for mechanical, piping, and also red line are included in this document.
- Civil Earthworks Inspection Test Plan (ITP) dated October 20th, 2017 prepared by MTKSL, see Appendix G.
- Handover Package of Tank #3 dated October 20th, 2017 prepared by Inukshuk Construction Limited, see Appendix H. Testing and Inspection Test Plans (ITP) were done throughout the erection of Tank #3 and the installation of the mechanical and electrical systems and are included in this document.
- Handover Package of Tank #5 dated November 15th, 2017 prepared by Inukshuk Construction Limited, see Appendix I. Testing and Inspection Test Plans (ITP) were done throughout the erection of Tank #5 and the installation of the mechanical and electrical systems and are included in this document.

All of the inspections done during and after the construction of Tank #3 and Tank #5 at the Mine Site Storage Containment Facilities were shown to comply with API standard 650. No leaks were found using diesel and liquid penetration tests, and all welds were deemed acceptable under multiple tests. Table 4.1 below shows some of the inspections that were done during the fabrication and erection of the tanks as provided in the Handover Packages.

Table 4.1: Mine Site Tank As-built Inspections

Description	Test Method	Tank #3 Result	Tank #5 Result
Tank Pedestal Foundation	Measurement	Acceptable	Acceptable
Floor Weld	Visual	Acceptable	Acceptable
Floor Weld	Vacuum Test	Acceptable	Acceptable
Shell to Floor Weld	Visual	Acceptable	Acceptable
Shell to Floor Weld	Diesel Test	Acceptable	Acceptable
Horizontal Welds	Visual	Acceptable	Acceptable
Vertical Welds	Visual	Acceptable	Acceptable
Vertical Plumbness	Measurement	Acceptable	Acceptable
Shell Plate	Diesel Test	Acceptable	Acceptable
Horizontal and Vertical Welds	Diesel Test	Acceptable	Acceptable
Compression Ring Weld	Visual	Acceptable	Acceptable
Roof Weld	Visual	Acceptable	Acceptable
Roof Weld	Vacuum Test	Acceptable	Acceptable
Column Plumbness	Measurement	Acceptable	Acceptable
Shell Nozzle Weld	Visual	Acceptable	Acceptable
Tank Leak	Air Test	Acceptable	Acceptable
Shell Manway Welds	Visual	Acceptable	Acceptable
Roof Manway Welds	Visual	Acceptable	Acceptable
Shell Neck Welds	Diesel Test	Acceptable	Acceptable
Stairs and Platforms	Visual	Acceptable	Acceptable

5.0 FIELD DECISIONS FOR THE SECONDARY CONTAINMENT FACILITY

5.1 Documentation on Field Decisions that Deviate from Original Plans

This section documents variations from original design which were approved by the designer and/or the field engineer on site. The designed intent of the structure was not compromised with the changes to the original design.

A construction summary was prepared for the Mine Site Fuel Storage and Containment Facilities by the Agnico Eagle construction team. This summary is available in Appendix J.

The construction work led to slight variations from the original design in the geometry of the Mine Site Fuel Farm. The Mine Site Fuel Storage Containment Facilities geometry and characteristics were adjusted to site conditions. Table 5.1 below presents the changes between the proposed and final works.

5.1.1 Tank Foundation As-built

- A slope of 1V:120H was required under the tanks, sloping from the center of the tank to the edge of the tank foundation pad.
- Adjustments were done on the sloping of the floor of the secondary containment to improve the flow directions towards the sump.

5.1.2 Dike and Secondary Containment

- The dimensions of the dike centerline (CL) to centerline (CL) are greater by 0.2 m length and 0.5 m width.
- The average top width of the dike crest is 1.0 m which is an increase of 0.4 m from the original 0.6 m design.
- The containment height was reduced by 0.12 m to a height of 1.53 m.
- The depth of fill placed over the liner was increased by 0.1 m to a depth of 0.4 m.
- The average height of the dike crest decreased by 0.13 m to an average of 1.67 m.
- A detail for the sump area was provided by the designer.
- The rip-rap was removed from the ditch. The geometry of the ditch was changed due to constructability issues and approved by the field engineer. The overall water management of the containment facility was unaffected, sloping toward the sump area where the clean water will be pumped out of the fuel farm.

5.1.3 Fence

- It was decided to not install the fence surrounding the Mine Site Fuel Storage and Containment Facility as originally planned because access to the site is already restricted to authorized personnel only.

Table 5.1: Mine Site Fuel Storage and Containment Facilities Geometry and Characteristics

Item	Proposed		Actual		Difference
	Tank #3	Tank #5	Tank #3	Tank #5	
Secondary Containment Permeability (max.)	1_E^{-6} cm/s		1_E^{-13} cm/s		- 9.9_E^{-7} cm/s
Dike: length, width (CL to CL) (avg.)	64.6 m x 46.2 m		64.8 m x 46.7 m		+ 0.2 m / + 0.5 m
Dike height (avg.)	1.8 m		1.67 m		- 0.13 m
Containment Height (avg.)	1.65 m		1.53 m		- 0.12 m
Dike flat top width (avg.)	0.6 m		1.0 m		+ 0.4 m
Dike embankment slope (avg.)	1V:2H		1V:2H		-
Impervious area	3 055 m^2		3 478 m^2		+ 423 m^2
Tank Foundation Pad (avg.)	21 m x 21 m	11 m x 11 m	21 m x 21 m	11 m x 11 m	-
Tank Foundation Thickness (min.)	900 mm	900 mm	900 mm	900 mm	-
Tank Foundation Shoulder (min.)	1.2 m	1.2 m	1.2 m	1.2 m	-
Tank Foundation Pad Embankment Slope (avg.)	1V:2H	1V:2H	1V:2H	1V:2H	-
Tank Foundation Pad Slope (avg.)	1V:120H	1V:120H	1V:120H	1V:120H	-
Tank foundation pad thickness, above surrounding ground (avg.)	0.4 m	0.4 m	0.4 m	0.4 m	-
Depth of Liner Under Fill (avg.)	0.3 m		0.4 m		+ 0.1 m
Containment Capacity	4 110 m^3		3 928 m^3		- 182 m^3

5.2 Inspection, Construction Monitoring, and Inspection Reports

The construction monitoring was managed by Agnico Eagle. Several activities were conducted during construction to ensure the quality of the work. Here is a description of the reports prepared to summarize the quality control, monitoring, or inspections performed during the construction of key activities.

- Several particle size analyses were conducted for the 30 mm minus produced from Run of Mine and Esker material to be used for the liner system. It was approved by the field engineer and the results and summaries can be found in Appendix K and Appendix L, respectively.
- Civil Earthworks Inspection Test Plan (ITP) dated October 20th, 2017 prepared by MTKSL, see Appendix G.
- Quality Control Final Report prepared by Texel Geosol for Nuna Kivalliq Earthworks Inc, see Appendix M. Testing, both non-destructive and destructive, was performed to ensure the quality of the installation of the geosynthetic materials, including welding. Texel Geosol certified that all materials were installed according to the project plans and specifications.

6.0 EARTHWORKS

A shortage of granular material led to slight changes in the materials:

- The layer of 200 mm minus granular material that was specified was replaced with Class A Borrow Pit or 600 mm minus granular fill graded to a particle size of ≤ 200 mm for the Mine Site Fuel Storage Containment Facility.
- The fill thickness of the 30 mm minus granular fill over and under the liner system was changed to 300 mm and 200 mm respectively, approved by the designer. This change was to allow the heavy equipment required for construction to access the site. This change did not affect the total material quantities.

Due to the location of the Tank Farm being outside the CP1 containment area, rockfill for all material underneath the liner and the service area was sourced from “clean” sources:

- 600 mm minus granular material (within the tank containment area) was obtained from the remnants of the Temporary Water Treatment Pad and access road (previously placed in 2016 and therefore subject to multiple flushings) and Portal #2 drill/blast operations for the initial surface open cut.
- 600 mm minus granular material (for the service area) was obtained from the Meliadine Esker.
- 200 mm minus granular material was sourced from material crushed during winter 2016 (and therefore subject to multiple flushings).
- 30 mm minus granular material placed underneath the liner was sourced from processed esker material (Meliadine Esker).

The as-built material quantities for the Mine Site Fuel Storage Containment are presented in Table 6.1 below.

Table 6.1: Earthworks As-built Material Quantities

Item*	Proposed*	Actual	Difference
Sand	50 m^3	35 m^3	- 15 m^3
Riprap (50-300 mm)	30 m^3	-	- 30 m^3
30 mm minus	1 752 m^3	2 606 m^3	+ 854 m^3
50 mm minus	1 229 m^3	920 m^3	- 309 m^3
Borrow Pit CL-A or Granular Fill (Graded to < 200 mm)	3 114 m^3	937 m^3	- 2 177 m^3
Borrow Pit CL-A or Granular Fill (600 mm minus)	15 617 m^3	17 844 m^3	+ 2 227 m^3
Total of fill	**21 792 m^3**	**22 342 m^3**	**+ 550 m^3**
540 g/m^2 Non-woven geotextile	10 180 m^2	7 190 m^2	- 2 990 m^2
HDPE Geomembrane	5 090 m^2	3 595 m^2	- 1 495 m^2

* The proposed item names and values in the table have been taken from the latest drawing that was issued for construction, 65-000-230-225 revision 1.

7.0 ERRATA

In the inspection and testing plan forms, part of the Portal #1 Offsite and Onsite Fabrication Quality Control Documents (Appendix E), the area is shown as Rankin Inlet while it should be Mine Site Fuel Farm.

8.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Agnico Eagle Mines Ltd. and their agents. Tetra Tech does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Agnico Eagle Mines Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in Tetra Tech's Services Agreement.

9.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech

PERMIT TO PRACTICE
TETRA TECH INDUSTRIES, INC.
O/A TETRA TECH
Signature
Date 2018.04.17
PERMIT NUMBER: P 1029
NT/NU Association of Professional Engineers and Geoscientists

REGISTERED PROFESSIONAL ENGINEER
J.M.I.F. ALARIE
LICENSEE
NT/NU

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APPENDIX A

As-built Drawings of Mine Site Fuel Storage and Containment Facilities

NO. DESSIN DRAWING NO. 65-000-230-225TO227_R3

FORMAT ARCHD

QUANTITY CONSTRUCTION CHART			
	TANK FARM (AREA : 5090m²)	SERVICE PAD (AREA : 5210m²)	TOTAL
Aggregate material	placed (m³)	placed (m³)	placed (m³)
Sand	35	0	35
30mm MINUS	2606	0	2606
50mm MINUS	0	920	920
200mm MINUS	937	0	937
ROM or CL. A	15661	2183	17844
TOTAL	19239	3103	22342

DIKE CONTAINMENT AREA:
1. DIKE CONTAINMENT VOLUME REQUIRED: 3 300m³
2. DIKE CONTAINMENT CACULATED CAPACITY: 3 894m³

3

TEL QUE CONSTRUIT
AS BUILT
AGNICO EAGLE DATE : 2018-03-31

LIMIT OF FUEL FARM AND SERVICE PAD 2017 CIVIL WORK

FUEL TANK FARM AREA FOOTPRINT: 5090m²

REFUELING SERVICE PAD AREA FOOTPRINT: 4385m²

AREA = ±1395 m²

TK #3 3 M L

TK #5 250 000 L

TANK PAD

TANK PAD SEE DETAIL ON DRAWING 65-000-230-227

DITCH L: 28m @ S:0.6% SEE DRAWING 65-000-230-227 FOR DETAILS

PIPING AND EQUIPEMENT (BY OTHERS)

L:30m @ S:1.7%

L:7m @ S:0.7%

L:27m @ S:0.38%

CATWALK (BY OTHERS)

SUMP AREA BOTTOM ELEV.: 66.49 (SEE NOTE 6)

PUMPING STATION (BY OTHERS)

ELECTRICAL ROOM (BY OTHERS)

ACCESS RAMP

50000L TANK FOR LIGHT VEHICLE (BY OTHERS)

DIKE SEE DETAIL ON DRAWING 65-000-230-227

ACCESS RAMP SEE DRAWING 65-000-230-227 FOR DETAILS

AREA BETWEEN THE TOE OF THE REFUELING SERVICE PAD AND THE EXISTING ROAD TO BE BACKFILLED WHEN RUN OF MINE MATERIAL IS AVAILABLE

SEE DRAWING 65-000-230-227 FOR PAD STRUCTURE DETAIL

CONNECTION TO GENTLY MERGE

CONNECTION TO GENTLY MERGE WITH EXISTING ROAD

EXISTING ROAD

0+000 A 000-230-227

0+100

0+120

F.G.: 68,38 E: 540157.512 N: 6989141.628

F.G.: 69,91

F.G.: 69,86

F.G.: 68,52 E: 540205.034 N: 6989110.380

F.G.: 68,11

F.G.: 68,08

F.G.: 67,67

F.G.: 68,21

F.G.: 68,45

F.G.: 68,56

F.G.: 68,19

F.G.: 67,60

F.G.: 67,51

F.G.: 68,02

F.G.: 67,47

F.G.: 68,32 E: 540136.411 N: 6989109.537

F.G.: 69,93

F.G.: 67,33 E: 540101.712 N: 6989124.997

F.G.: 70,00

F.G.: 66,36 E: 540190.356 N: 6989064.731

F.G.: 67,35 E: 540121.712 N: 6989109.867

F.G.: 66,96 E: 540128.617 N: 6989105.325

F.G.: 68,08 E: 540144.049 N: 6989095.180

F.G.: 66,96 E: 540182.479 N: 6989052.354

F.G.: 67,18 E: 540087.321 N: 6989109.782

F.G.: 68,03 E: 540133.629 N: 6989079.333

F.G.: 67,26 E: 540172.263 N: 6989037.215

F.G.: 67,53 E: 540088.457 N: 6989090.125

F.G.: 67,35 E: 540079.648 N: 6989098.112

F.G.: 67,48 E: 540077.443 N: 6989088.052

F.G.: 67,52 E: 540085.878 N: 6989081.962

F.G.: 67,48 E: 540125.956 N: 6989067.664

F.G.: 67,26 E: 540176.954 N: 6989027.330

F.G.: 67,02 E: 540192.927 N: 6989023.518

56.8

107.0

33.0

37.8

21.0

11.5

9.0

11.0

65.00

66.50

67.00

67.00

-0.72%

-1.61%

-0.50%

-0.84%

-1.60%

-10.82%

-5.27%

-1.65%

-0.88%

-1.63%

-1.84%

-4.13%

-1.91%

1V: 2H

1V: 2H

PLAN CLÉ KEY PLAN

WORK AREA

TETRA TECH

NOTES GÉNÉRALES / GENERAL NOTES

1. EXISTING GROUND DTM PROVIDED BY AEM.
2. ALL UNITS ARE IN METERS.
3. ELEVATIONS IN DRAWING PROVIDE FINISHED GRADE ELEVATIONS AT THE TOP OF THE SURFACE GRAVEL LAYER.
4. TYPICAL FILL SLOPES TO BE 1V: 3H EXCEPT FOR TANK FARM DIKE 1V: 2H. FILL SLOPES TO BE CONFIRMED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.
5. TANK DIAMETERS AND LOCATIONS ACCORDING TO THE LATEST REVISION OF DRAWING 65-000-210-000.
6. SUMP AREA MADE FROM THE BOTTOM PART OF A 205L STEEL DRUM OR EQUIVALENT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY SECURITY AND SLOPES OF ALL EXCAVATIONS, BACKFILL AND SHALL ABIDE BY ALL RELEVANT STANDARDS AND REGULATIONS. THE STABILITY, DEWATERING AND MAINTENANCE OF ALL EXCAVATIONS OR BACKFILL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
8. THE CONTRACTOR MUST COORDINATE WITH THE MECHANICAL CONTRACTOR RESPONSIBLE FOR THE FUEL TANKS, PIPES, ETC. BEFORE FINALIZING THE CIVIL WORKS.
9. GRANULAR MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS. BORROW PIT MATERIAL, GRANULAR FILL MATERIAL 0-600mm, OR OVERBURDEN MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 600mm AND COMPACTED TO A MINIMUM OR 90% STANDARD PROCTOR MAXIMUM DRY DENSITY UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS. MOISTURE CONDITIONING MAY BE REQUIRED.
10. AN AS-BUILT DRAWING SHALL BE PROVIDED AFTER CONSTRUCTION.

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG
_	_
_	_
_	_
_	_
_	_
GA-IND. SITE – NORTH SECTION	65-000-210-200

AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
3	2018-03-31	ISSUED AS-BUILT	C.M.	J.A.	
2	2017-11-03	ISSUED AS-BUILT	C.M.	J.A.	

REVISIONS

PERMIT TO PRACTICE
TETRA TECH INDUSTRIES, INC.
D/A TETRA TECH
Signature
Date 2018-04-05
PERMIT NUMBER: P 1029
NT/NU Association of Professional Engineers and Geoscientists

REGISTERED PROFESSIONAL ENGINEER J.M.I.F. ALARIE LICENSEE 2018-04-05

TITRE / TITLE
AGNICO-EAGLE – MELIADINE DIVISION
000-SITE PREP
230-GENERAL EARTH WORKS
PLAN VIEW
MINE SITE FUEL TANK FARM
FINISHED GRADE ELEVATION

DESSINÉ PAR DRAWN BY	DANIEL ROSALES	DATE 2017-03-28
VERIFIÉ PAR CHECKED BY	RENÉ PANAZAN	2017-03-28
APPROUVÉ PAR APPROVED BY	JOSÉE ALARIE	2017-03-28
ÉCHELLE SCALE	1:250	DATE 2016-12-19
NO. DESSIN DRAWING NO.	65-000-230-225	
NO. PROJET PROJECT NO.	6515/28920	REVISION 3
FEUILLE / SHT	1 / 1	

AE-CART-ARCH D

C:\Users\christopher.morin\Desktop\65-000-230-225to227_R3.dwg