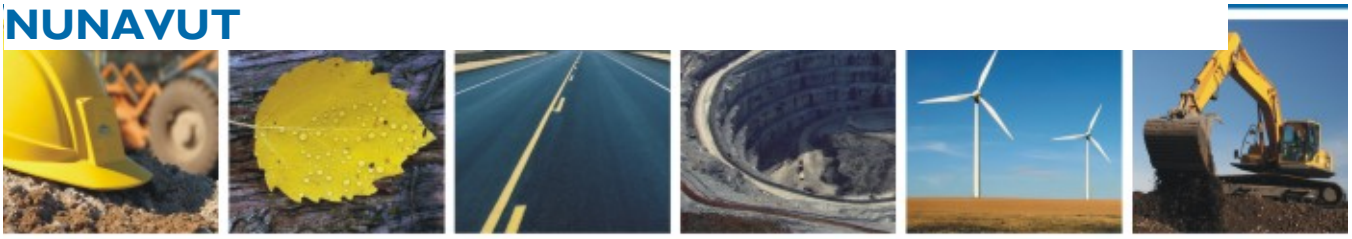
BAFFINLAND IRON MINES CORPORATION

HYDROCARBON IMPACTED SOILS STORAGE AND LANDFARM FACILITY
OPERATIONS, MAINTENANCE AND MONITORING PLAN
MILNE INLET, MARY RIVER PROJECT
NUNAVUT



DECEMBER 2010
ISSUED FOR REVIEW
EBA FILE: E14101092

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1.0 INTRODUCTION

Baffinland Iron Mine Corporation (Baffinland) retained EBA, a Tetra Tech company (EBA) to evaluate hydrocarbon contamination at the Milne Inlet facility of their Mary River Project, located within the Qikiqtani Region of Nunavut.

The original scope-f-work included post-decommissioning characterization of the hydrocarbon-impacted soils in the bladder tankfarm and developing a hydrocarbon remedial action plan. It was anticipated that the fuel-impacted soil would be treated with a landfarm to be constructed on site. Baffinland's requirements changed after the original work scope was developed, and the tankfarm remained in service through 2010. For this reason, the bermed soils were not characterized in 2010.

EBA's work scope for the 2010 period was modified to develop a general landfarm design for Milne Inlet along with an operations and monitoring manual. The landfarm design may require adjustments after the soils have been characterized and the landfarm site location has been assessed. A field sampling and ground truthing program will be necessary to determine the volumes and concentrations of soil requiring treatment, to confirm the location of the facility, and to finalize the design details required to issue construction drawings.

The Milne Inlet landfarm will be a purpose-built facility intended to treat sandy soils that were impacted by petroleum hydrocarbons when a fuel bladder ruptured in 2008. An estimated 8,000 L of Jet A diesel fuel was released into the lined containment berm. Contact water within the berm has been collected and treated since 2008, although no soil remediation has yet been conducted. The residual soil petroleum hydrocarbon concentrations are unknown, but characterization of the soils is planned for 2011.

The landfarm construction has not yet been approved by the Nunavut Water Board (NWB). If approved, terms and conditions relevant to this Landfarm Operations, Maintenance and Monitoring Plan will be reflected in an amendment to Baffinland's existing Water License 2BB-MRY0710.

It is assumed that the petroleum hydrocarbon remediation objectives will be met within two three-month treatment seasons. The landfarm has been sized to accommodate the treatment of half of the affected soils, or 1,800 m^3 each year, with an overall four year remediation timeframe for the entire projected volume of designated soils (3,600 m^3).

2.0 SITE DESCRIPTION

2.1 Project Location

The Milne Inlet facility is located on the northern end of Baffin Island, Nunavut at approximately 71 53' 03" N and 80 54' 12". The nearest communities are Pond Inlet, to the east of the site, and Arctic Bay, to the west. A key plan showing the location of the Milne Inlet Facility is Figure 1. Marine access and shipping through the construction phase and periodically during operation occurs seasonally through Milne Inlet and the existing Milne Inlet Tote Road provides access to the proposed Mary River mine site.

The current facilities at Milne Inlet include an airstrip with tarmack, docking facilities, fuel farm (75 fuel bladders with 113,560 L capacity each), temporary bulk sample ore stockpiles, Shanco Camp, an incinerator, a wastewater treatment facility, a polishing/waste stabilization pond, and laydown areas.

There are currently two locations proposed for the landfarm facility (Figure 2). Both proposed locations are situated south of the camp, within till veneer areas along the tote road from Milne Inlet to Mary River. Proposed Site A is within an existing quarry area approximately 1.3 km along the tote road. Site A is advantageous because it is within a pre-disturbed area. Proposed Site B is closer (0.5 km from camp along the tote road), but it must be sited carefully to ensure that the facility falls within the leased land boundary.

Based on aerial photo interpretation, it appears that the aggregate materials in both locations would be suitable for the construction of a landfarm.

2.2 Authorizations

Existing permits include the Type B Water License 2BB-MRY0710 issued by the NWB and valid between February 20, 2007 to February 28, 2010, extended by amendment to December 31, 2010. This existing Water License may be amended to include the proposed landfarm. Additionally, much of the Mary River site and the land between Mary River and Milne Inlet is located on Inuit-owned land administered by the QIA. Project components on Inuit-owned land include the Milne Inlet ship docking and offloading site, the mine site, and the majority of the Milne Inlet road in addition to the two proposed landfarm locations shown on Figure 2. The existing Baffinland Commercial Lease may require amendment from QIA prior to the construction of the Milne Inlet landfarm.

3.0 FACILITY DESIGN

3.1 Design Intent

Up to 3,400 m^3 of sandy soils were affected when a fuel bladder at the Mine Inlet fuel facility ruptured on June 16, 2008 (Spill Report # 2008-347), spilling an estimated 8,000 L of Jet A fuel in to the containment area. The concentrations of F1 to F4 fractions is unknown, but based on the nature of the fuel spill (Jet A), it is anticipated that the soils require treatment for the F2 and F3 petroleum hydrocarbon fraction.

Figure 3 provides the proposed plan and sections of the purpose-built facility to treat these designated soils. The intended design life is two years. The preliminary design will be finalized to accommodate the actual construction site topography, borrow material properties, and landfarm sizing requirements.

3.2 Landfarm Dimensions and Components

The landfarm is sized to accommodate half of the anticipated materials, assuming a treatment soil depth of 0.3 m. The inner dimensions of the facility are to be 60 m by 100 m. The berm height ranges from 1.3 m to 2.1 m above the natural ground, and the liner will be keyed in to the soils with at least 1 m of soil, as shown on Figure 3. The crest of the berms will maintain a width of 3 m, and slopes will be 2H:1V or less, as shown on the drawings.

Depending on actual site conditions, the foundation base may be constructed directly by grading the natural ground. A liner system will consist of 60 mil textured HDPE between two layers of 12 oz. non-woven geotextile. The protective sand layer over the liner is 0.3 m.

The location and dimensions of the landfarm access will be selected in the field during construction works.

3.3 Contact Water Containment

The foundation base will be sloped at 2% towards a 10 m by 60 m sump. The sump is designed to contain approximately 245 m^3 water, or approximately half the expected snowmelt volume. Based on the landfill dimensions and precipitation assumptions, a narrow strip of soils undergoing remediation adjacent to the sump may be saturated or have free standing water after the freshet. On this design basis, the maximum head on the liner is 1.0 m.

4.0 OPERATION AND MAINTENANCE PROCEDURES

4.1 Safety and Environmental Protection

In addition to adherence to Baffinland's Heath and Safety Plan, staff in charge of operating the landfarm must have valid WHMIS and TDG training and be trained in the procedures associated with landfarm operation, including the use of safety equipment (first aid supplies, eyewash station, fire extinguisher, spill response materials etc), emergency response procedures, soil tilling, record-keeping, soil and water sampling, and groundwater monitoring. It is recommended that activities involving contaminated soils be conducted under the supervision of site staff having a 40-hour Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) or Canadian Hazardous Waste Workers Program.

Before work starts, personnel must be provided with a clear explanation as to the nature of the contamination and the specific personnel protective equipment required to complete the assigned tasks. Personnel should be trained how to decontaminate equipment and personal protective equipment. Personal hygiene, including showering at the end of the day and washing prior to eating, smoking, etc. is important after handling contaminated soils. Workers should be encouraged to watch for and immediately report any unsafe conditions, or to report any damage to the facility, especially any tears in the liner that could occur during operations such as tilling.

If the nature/degree of contamination is such that respiratory protection is required, the workers must be properly fit-tested prior to starting work at the facility. The selection of personal protective equipment is the responsibility of the site Occupational Hygienist, Corporate Safety Officer, or equivalent.

The facility must have warning signs posted in English and local dialect, both to prohibit the dumping of soil materials without the permission of the Site Manager, and to warn personnel of the dangers and risks posed by the facility (slip/trip, hydrocarbon-contaminated material, open water). The sump area should be clearly demarcated to avoid any personnel from breaking through ice at the start and end of the season, when snow cover may conceal the underlying thin ice.

4.2 Soil Acceptance Procedures

No treatability study will be required for the designated soils as it is known that the hydrocarbon source is Jet A, which has been proven to be amenable to cold-climate landfarming treatment in numerous published studies.

Rock exceeding 40 mm in diameter is not acceptable in the landfarm, although the designated soil is not expected to contain any rock since it originates from a lined fuel facility. The soil texture is expected to be sand.

Chemical acceptability criteria include the following parameters:

- Total petroleum hydrocarbons less than 4%,
- Electrical conductivity <4 dS/m; sodium adsorption ratio (SAR) <6,
- pH greater than 5 and less than 10, and
- CCME metals up to Tier 1 values or up to natural background concentrations.

4.3 Landfarming Operations

Landfarming is an ex situ bioremediation treatment that uses naturally-occurring microorganisms to metabolize or breakdown petroleum hydrocarbons in impacted soils. This is achieved by spreading contaminated soil in a thin layer across the landfarm area.

End products of bioremediation are microorganism protein, carbon dioxide and water. Stimulation of microbial growth and activity for hydrocarbon removal is accomplished primarily through the addition of air and nutrients. Metabolism of hydrocarbon is mediated predominantly through aerobic microbes.

The effectiveness of landfarming depends on three main parameters:

- Soil characteristics; grain size, soil texture, bulk density, moisture content and permeability;
- Type of petroleum hydrocarbon; and
- Climatic conditions.

Climatic conditions including rainfall, snow, wind effects and temperature influence landfarm efficiency. Rain and snow melt will change the moisture content of the treated soil. Runoff and wind also has the potential to cause soil erosion.

The anticipated operational period of the landfarm will depend on the weather conditions, but it is anticipated to be from June to the end of September. Based on the assumption of treating half the designated soils for up to two treatment seasons, the annual scale of operations over four years is as follows:

- Year 1: Construct landfarm, haul up to 1,800 m^3 of soils to the site, treatment through the remainder of the frost-free months.
- Year 2: Treat soils through the frost-free months (three to four months), haul soils to designated accepting area.

- Year 3: Haul up to 1,800 m^3 of soils to the site (can be done at the end of Year 2), treatment during the frost-free months.
- Year 4: treatment through the frost-free months, haul soils to designated accepting area. Decommission landfarm.

After excavation and transport of contaminated soil to the landfarm area, the soil should be dumped and spread with a front-end loader or bulldozer. The soil should be tilled as it is spread, continuing until all of the soil has been deposited to ensure that the material is well-mixed and aerated. Material placement should maintain a minimum 2 m offset from the inside berm toe.

Soils will be placed in a layer of approximately 0.3 m and should not exceed 0.45 m in any location. At the start of season, the soils should be evaluated for optimal nutrient, moisture and pH conditions. Microorganisms that degrade hydrocarbons require optimal quantities of water, oxygen, and macronutrients (carbon, nitrogen, hydrogen, oxygen, sulphur, phosphorus, potassium, and magnesium), and the soil pH should be between 6 and 8. In addition, excessive salt compounds reduce the osmotic potential and can slow or even halt biodegradation. Salts that are harmful to biodegradation in excessive concentrations include sodium chloride as well as fertilizer amendments.

Most soil microorganisms that breakdown petroleum hydrocarbons on a landfarm require an aerobic environment. Tilling is conducted to aerate the soils and enhance microbial degradation. The landfarmed soil should be loose and moist. During the summer months, the soils should ideally be tilled every week.

Optimizing the moisture content will enhance biodegradation and to avoid dust generation. Very dry soils should not be tilled. If soils are excessively dry, the landfarm should be irrigated prior to tilling to increase the soil moisture content to 40% to 85% of the water-holding capacity.

Soils that are wet also do not benefit from tilling. Passing equipment over wet soils could compact the material. If the soil appears muddy, or sticks to the tires of the tilling equipment, it is too wet to process.

Tilling could damage the underlying liner so it should be carried out with care by an experience operator. Only tilling equipment should be permitted on the landfarm soil, and only during tilling. Trucks or other vehicles should not drive on the landfarm soil as this will pack the soil down making it difficult to handle, and may prolong the soil remediation timeframe.

During the winter months, soil can be stockpiled to minimize contact with freshet water, although the piles should be no higher than 5 m.

5.0 WATER MANAGEMENT PLAN

5.1 Plan Considerations

All irrigation water, precipitation and snowmelt that collects in the landfarm sump is considered contact water. Average monthly temperatures that are above 0°C occur between July and September, so it is expected that runoff will need to be managed for these three months of the year. Based on historical climate data for Pond Inlet, it is expected that 190 mm of precipitation will fall annually, approximately

50% of which will accumulate as snow. The entire landfarm could accommodate over 4,000 m^3 of water while maintaining a minimum 0.5 m of freeboard.

The yearly monthly wind speed averages are between 5 and 6 m/s during the frost-free months, and the average monthly relative humidity is between 70% and 80%. Ignoring losses (evaporation) or gains to the landfarm (snow drifts), it is expected that approximately 1,150 m^3 of precipitation (snow and rain) will collect annually in the landfarm. The annual quantity of contact water may be higher depending on whether external irrigation water is required to maintain optimal soil moisture conditions during the period of active treatment. The sump is designed to contain approximately 245 m^3 of water, or approximately half the volume of the expected snowmelt.

5.2 Contact Water Recycling and Water Use Minimization Procedures

During the treatment process, contact water that accumulates in the sump may be recycled as irrigation water to add nutrient amendments, to increase soil moisture or to supress dust within the landfarm area during dry periods. Recycled water from the sump should preferably not contain any petroleum hydrocarbon sheen, which could be removed by using absorbents, or avoided by drawing water from beneath the water surface.

Should external water inputs be required during the landfarm soil treatment operations, consumption of fresh water at Milne Inlet could be minimized by recycling water from other processes, such as waters from the sewage lagoon polishing cell. Treated wastewater is potentially a valuable source of nutrients (especially nitrogen), and reclaimed water irrigation of the landfarm could reduce or possibly eliminate dry chemical nutrient amendment requirements. In addition to reducing freshwater consumption, recycling nutrients already available in treated sewage use benefits the environment by offsetting greenhouse gas emissions that otherwise would have been generated in the production and shipment of dry chemicals to site.

Such use of reclaimed water would require authorization from the NWB and other stakeholders. The water would need prior characterization for suitability, including the COD:N:P ratios and routine chemistry parameters.

5.3 Contact Water Discharge

To maintain adequate freeboard and avoid flooding the soils undergoing treatment, the landfarm sump contact water should be removed prior to freeze up in September. Water that does not meet the discharge requirements provided in the amended Water Licence 2BB-MRY0710 requires treatment or off-site disposal. Nunavut Water Board (NWB) landfarm discharge limits for mine sites are provided in Section 7.3, as well as monthly testing of chemical parameters.

If reclaimed wastewater is used during the treatment process, the contact water discharge parameters would need to meet the BOD_5 maximum average concentration of 30 mg/L and faecal coliforms of 1,000 CFI/100 mL in addition to the standard Water Licence discharge requirements.

After water analyses confirm the water is suitable for release and the INAC Inspector has been notified of the intended discharge, the water will be released to a nearby Monitoring Station, the location of which will be confirmed on the as-built drawing. The landfarm Monitoring Station discharge point should be at least

30 m away from any surface waterbody, and water discharges should be conducted in a manner that avoids soil erosion.

6.0 SOIL QUALITY REMEDIATION OBJECTIVES

Remediation objectives for the F1 to F4 hydrocarbon fraction will depend on the subsequent use of the treated soils. Unless there are specific justifications to adjust values, soils will be treated to generic Tier 1 criteria for petroleum hydrocarbons as provided in the Nunavut Guideline for Contaminated Site Remediation (2009). Industrial criteria are suitable if the treated soils are to remain in place until the landfarm is decommissioned or the term of the commercial lease expires. Without a site-specific risk assessment, agricultural/wildland Tier 1 F1 to F4 hydrocarbon criteria must be met if the soils are to be returned to the environment, or at such time that the commercial lease expires.

Soils that do not respond to bioremediation treatment may be disposed of off-site or, with prior approval, the materials could be used as intermediate fill within an engineered on-site facility (landfill).

7.0 MONITORING PROGRAM

7.1 Soil Sampling

Soil sampling will be conducted to determine acceptability criteria, to monitor the progress of soil remediation, and to verify that soils meet the remediation objectives at the end of treatment.

Chemical analyses for soil acceptance at the landfarm were listed in Section 4.2. For the designated soils, analysis of F1 to F4 hydrocarbon fractions will not be required if sufficient data density is obtained during the soils characterization. Soil bulk density, moisture content, field capacity, and nutrients (nitrogen, phosphorus) are also required testing parameters.

Unless the soils are chemically unsuitable for bacteriological growth, it is highly unlikely that there will not be sufficient microorganisms in the accepted soil to initiate effective bioremediation. For this reason, heterotrophic plate count analyses are generally not necessary.

Soil sampling to verify interim treatment includes the CCME F1 to F4 soil fraction and soil nutrients. Periodic measurement of hydrocarbon vapour emissions by measuring headspace, using a small quantity of soil and a photoionization detector (PID), is a useful indicator of the progress of remediation but should not be substituted for remediation verification sampling.

Soil sampling to verify the completion of the treatment process includes the CCME F1 to F4 soil fraction. Testing for metals is not required at the end of remediation since soils will be tested prior to acceptance at the landfarm, and any landfarm treatment inputs will have known chemistry.

Other soil sample parameters may be added, such as PAH, if the landfarm is retained after the two-year remediation program, or for treatment of other types of hydrocarbon-impacted materials.

7.2 Contact Water Sampling

During the frost-free months, and only if contact water is present in the sump, one or two sets of water samples will be collected and submitted to an accredited laboratory and for the analysis of the following parameters:

- Oil and grease and visual observations of sheen
- F1 and F2 hydrocarbon fraction and BTEX
- Phenols
- Dissolved nutrients: ammonia, nitrate, nitrite, phosphate
- Total nutrients: total phosphorus, total kjeldahl nitrogen
- Solids: total suspended solids, total dissolved solids
- Major Ions/Anions: calcium, magnesium, sodium, potassium; hardness, chloride, sulphate
- Routine chemistry pH, alkalinity, conductivity
- Metals: CCME list including As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mo, Ni, Sb, Se, Ag, Tl, Sn, V, Zn, Hg
- Routine Physical : turbidity, temperature

Parameters including temperature, pH, TDS, and electrical conductivity are to be measured in the field as well as the laboratory.

Other water sample parameters may be added, such as PAH, if the landfarm is retained after the remediation program, for treatment of hydrocarbon-impacted materials that do not originate from the fuel bladder farm.

7.3 Contact Water Discharge Limits

Contingent on the acceptance proposed landfarm and future amendment of the Water Licence, the proposed contact water discharge limits are as follows:

Table 1: Landfarm Contact Water Discharge Limits

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of any Grab Sample (mg/L)
pH	6.0-9.0	9.0
Total Suspended Solids	15	30
Oil and Grease	5 and no sheen	15
Total Ammonia-N	2.0	4.0
Total lead	0.01	0.02
Benzene	0.37	
Toluene	0.002	
Ethylbenzene	0.090	

Since the design life of the landfarm is four years, the installation of permanent groundwater monitoring facilities is not warranted. Instead, temporary drive point (sand point) wells may be installed in the unconsolidated material using a hardened drive point and a screen (perforated pipe). The point is hammered into the ground, usually with a tripod and "driver" (weighted pipe that is repeatedly dropped).

Experience in similar latitudes in the Arctic indicates that free water will not be available for sampling until mid to late August. Groundwater will be monitored once per year in two downgadient and one upgradient location.

Water samples are to be collected and submitted to an accredited laboratory for the analysis of the following parameters

- F1 and F2 hydrocarbon fraction and BTEX
- Dissolved nutrients: ammonia, nitrate, nitrite, phosphate
- Total nutrients: total phosphorus, total kjeldahl nitrogen
- Solids: total suspended solids, total dissolved solids
- Major Ions/Anions: calcium, magnesium, sodium, potassium; hardness, chloride, sulphate
- Routine chemistry: pH, alkalinity, conductivity
- Routine Physical : turbidity, temperature

Parameters including temperature, pH, TDS, and electrical conductivity are to be measured in the field as well as the laboratory.

7.4 QA/QC

The general quality assurance and quality control are to follow *QA/QC Guidelines for Use by Class "B" Licensees in Meeting SNP Requirements* (INAC, 1996). All samples are to be collected using best industry practices and shall be submitted under a Chain-of-Custody protocol. Sampling protocols adhered to include the following:

- Disposable sampling gloves to be worn during the collection of samples, and discarded between sampling events. Sampling tools are to be decontaminated between sampling points.
- Any sampling and inspection events should be documented in field notes including identification of the person conducting the work. It is beneficial to photograph any work that is conducted.
- For small batches of soil samples (less than 10 samples), at least one blind duplicate should be analyzed per batch of samples. For larger batches of soil samples (greater than 10 samples), 10% duplicates should be analyzed. For groundwater samples, a blind duplicate and field blank sample should be collected and analyzed with each batch of samples tested.
- Samples collected for laboratory analysis are to be placed in coolers and transported to the laboratory via courier.

- Sample holding times are to be adhered to, and water samples are to be preserved for specific analyses.
- All water and soil samples are to be collected in laboratory-supplied bottles and jars, and analyzed at a Canadian Association of Environmental Analytical Laboratories (CAEAL) accredited laboratory. All analytical reports are to include QA/QC reports.

7.5 Summary of Inspections and Reporting

Table 2 provides a summary of inspections and reporting associated with the operation of the landfarm:

Table 2: Monitoring Summary and Documentation

Item	Purpose	Frequency	Type of Record(s)
Landfarm Treatment Operations Inspection	Record keeping of treatment operations and berm performance for due diligence.	Once per day during spring freshet and after rainfall events. Weekly at other times.	• Inspection checklist and field notes including date, weather, facility condition including, any repairs required, odour noted, quantity of water in sump and amount of freeboard. • Record of berm performance with emphasis on observations of cracking or any signs of instability. • Check soils to see if they are too dry or too wet to till. • Record of any unauthorized discharges and follow-up action taken. • Photographic record.
Soil Sampling for Soils Acceptance at Facility	To determine if soils are acceptable for treatment at facility.	For this purpose-built facility, only one time per year at the start of season. Otherwise as circumstances require.	• Soils origin and associated spill report number, • Field notes including frequency of sampling, soil texture, moisture content, colour, odour. • Laboratory-issued reports including QA/QC • Summary tabulation of results. • Documentation of fate of rejected soils. • Record of any treatability tests done.

Table 2: Monitoring Summary and Documentation

Item	Purpose	Frequency	Type of Record(s)
Soil Sampling for Remediation Progress Monitoring	To provide interim indications of how remediation is progressing.	Monthly during the frost-free months.	• Field notes and sketch of location/depth of samples taken. • Photographic record. • Laboratory-issued reports including QA/QC and chain of custody. • Summary tabulation of results. • Analysis of percent removal of hydrocarbon constituent treated and treatment time, evaluation should include weather information, soil texture and soil moisture.
Soil Sampling for Verification of Remediation	To determine if remedial objectives have been met.	For this purpose-built facility, only one time per year at the end of season. Otherwise as circumstances require.	• Field notes and sketch of location/depth of samples taken. • Photographic record. • Laboratory-issued reports including QA/QC • Summary tabulation of results. • Analysis of percent removal of hydrocarbon constituent treated and treatment time. • Documentation of fate of treated soils. • Annual quantities in cubic metres of all soil and types of contaminants.
Contact Water Sampling During Remediation	Due diligence operations monitoring.	One or two times per treatment season	• Field notes and observations made at time of sampling. • Laboratory-issued reports including QA/QC and summary tabulation of results.
Contact Water Sampling prior to Discharge	To conform to Water License Requirements.	As required prior to discharge.	• Document notification of INAC Inspector (written notification at least 10 days prior to discharge). • Record depth of water in sump. • Calculate approximate water volume to be discharged. • Laboratory-issued reports including QA/QC and summary tabulation of results.
Groundwater Monitoring and Sampling	Date, time, weather, water level, in-well parameters (temperature, pH, electrical conductivity), visual observations of water colour and turbidity, odour.	Water sampling one time per year, between mid-August to mid-September.	• Laboratory-issued reports including QA/QC and summary tabulation of results, trend analysis (after a minimum of four years of data, if applicable).

Table 2: Monitoring Summary and Documentation

Item	Purpose	Frequency	Type of Record(s)
Construction Summary Report	As-built and construction report as per Water Licence.	Submit to Nunavut Water Board within 90 days of completion of construction	• Construction field notes and observations • Record and as-built drawings • Monitoring well installation details. • Summary of any geotechnical testing, compaction, moisture content, particle size analysis.
Site Safety Inspections	To identify any new or previously unnoticed physical/chemical hazards.	Monthly, or when conditions change, or when an unsafe condition is reported by a worker.	• Any unsafe condition/near-miss/incident reports and records. • Any unsafe conditions reported by workers must be reported to the Site Manager immediately for prompt action.
Geotechnical Inspection	To ensure facility has not been degraded or damaged, and to identify any maintenance requirements.	Annually	• Inspection of geotechnical performance of facility. • Document recommendations of any repair/maintenance work. • Record of any repair work made to the facility.

8.0 CLOSURE

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

EBA, A Tetra Tech Company

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FIGURES

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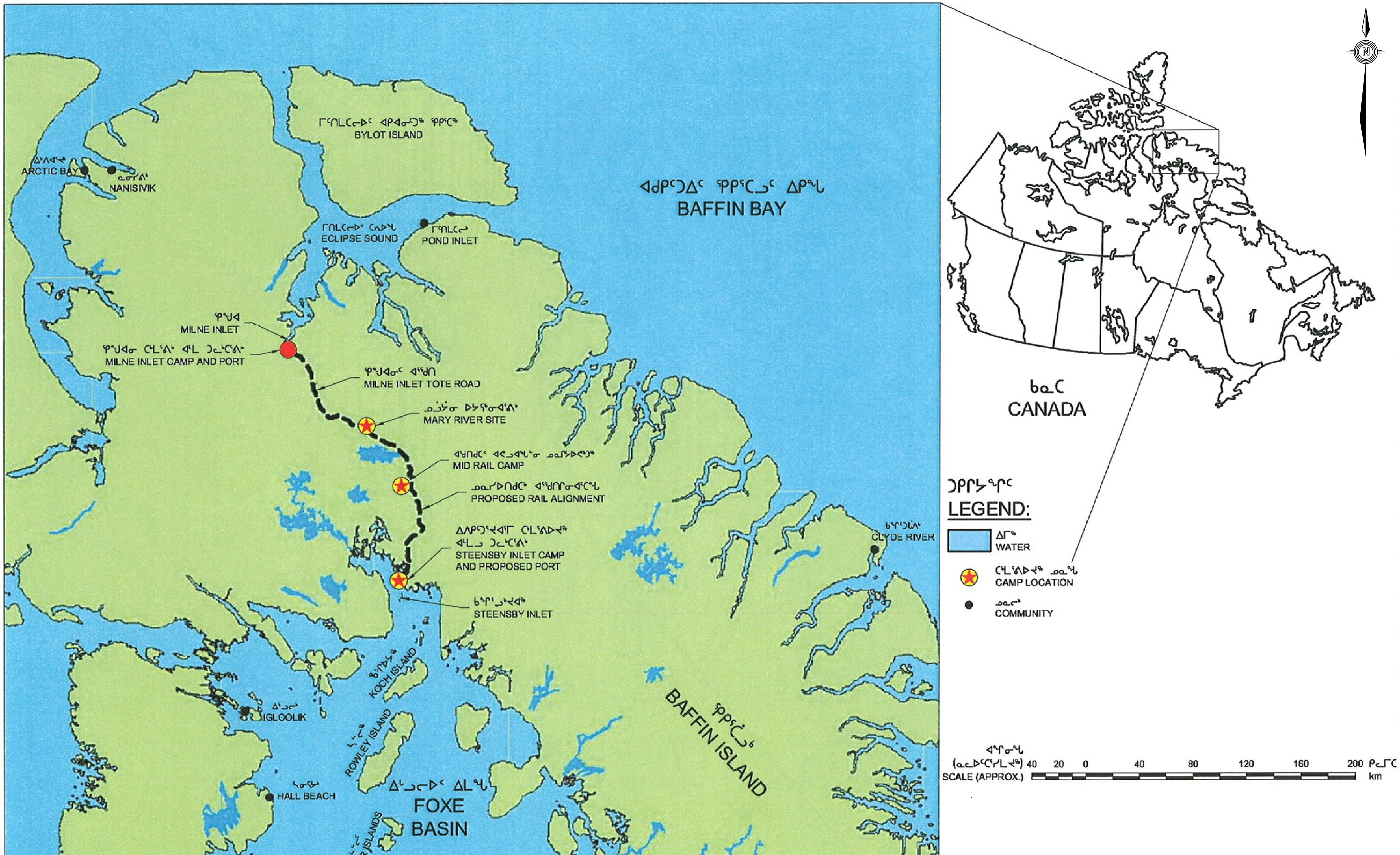

NOTES
BASED ON DRAWING PROVIDED BY BAFFINLAND IRON MINES CORPORATION

STATUS
FOR INTERNAL USE ONLY

CLIENT
Baffinland Iron Mines Corporation

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Hydrocarbon Impacted Soils Storage and Landfarm Facility

Site Location Plan

PROJECT NO.	DWN	CKD	REV
E14101092	RH	DF	0

OFFICE	DATE
EDM	December 23, 2010

Figure 1

NOTES
BASED ON 2005 AERIAL PHOTOGRAPH

STATUS
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0 250
Scale: 1: 5 000 (metres)

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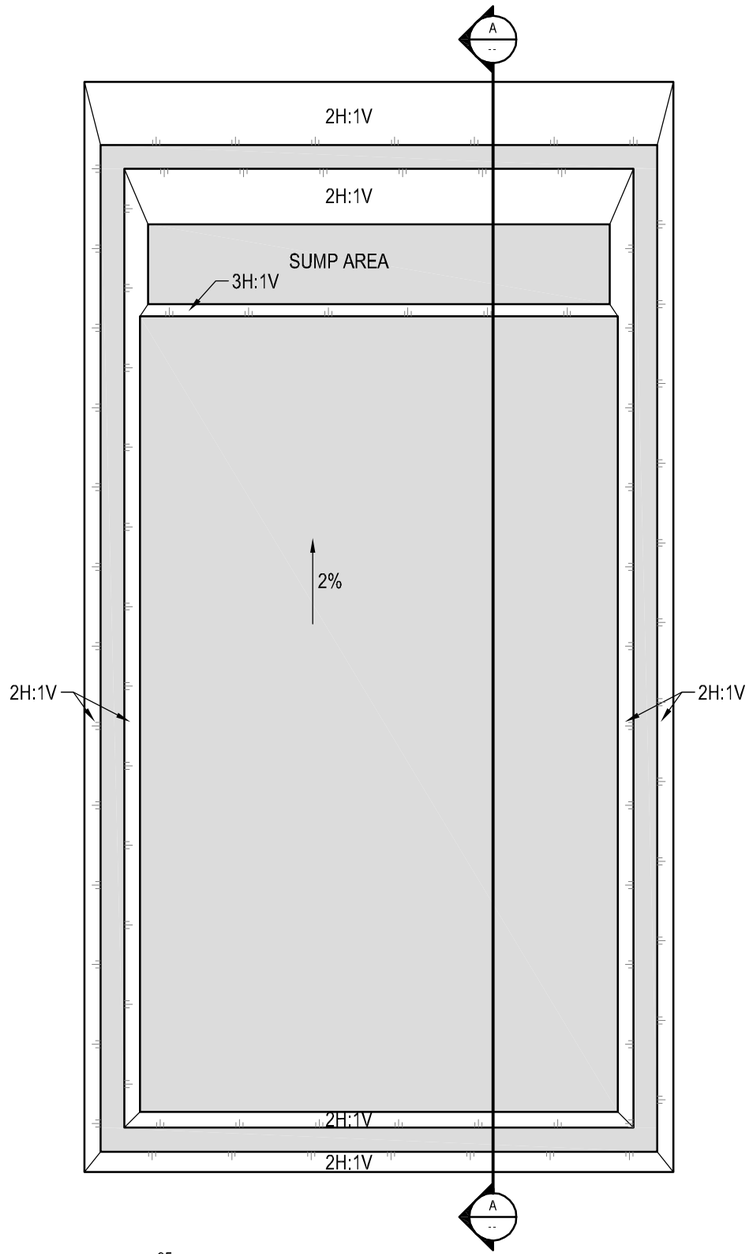
Hydrocarbon Impacted Soils Storage and Landfarm Facility

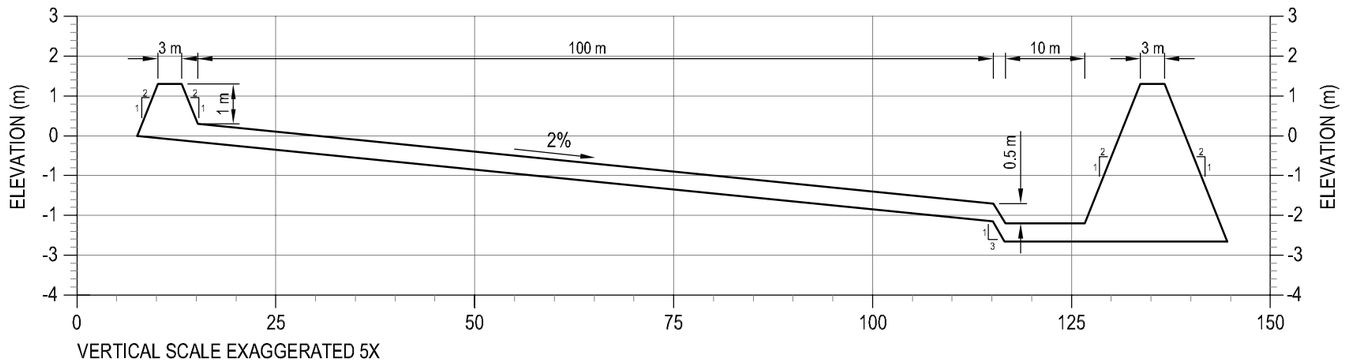
Proposed Landfarm Locations

PROJECT NO.	DWN	CKD	REV
E14101092	RH	DF	0

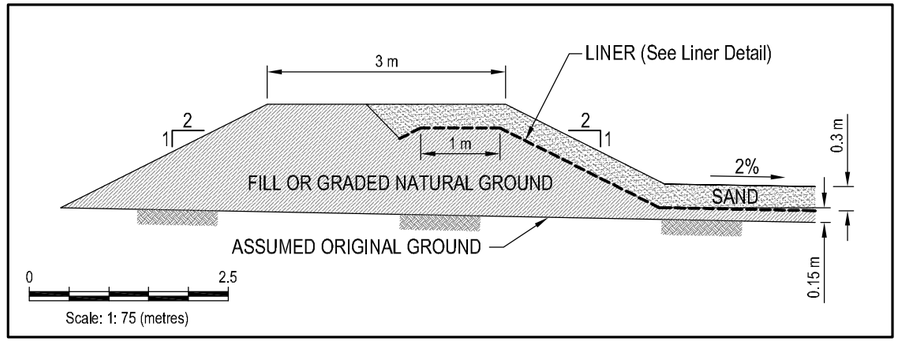
OFFICE: EDM
DATE: December 23, 2010

Figure 2

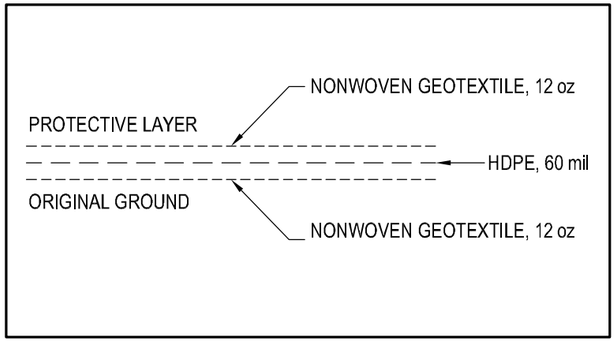




SECTION A --



TYPICAL SECTION DETAIL



LINER DETAIL

NOT FOR CONSTRUCTION

NOTES
BERM HEIGHTS AND GRADES TO BE ADJUSTED BASED ON ACTUAL TOPOGRAPHY

STATUS
FOR INTERNAL USE ONLY

CLIENT
Baffinland Iron Mines Corporation

Hydrocarbon Impacted Soils Storage and Landfarm Facility

Landfarm Facility

eba A TETRATECH COMPANY

PROJECT NO.	DWN	CKD	REV
E14101092	RH	DF	0

OFFICE: EDM
DATE: December 23, 2010

Figure 3

APPENDIX A

APPENDIX A EBA'S GENERAL CONDITIONS

GENERAL CONDITIONS

GEO-ENVIRONMENTAL REPORT

This report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This report pertains to a specific site, a specific development, and a specific scope of work. It is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site or proposed development would necessitate a supplementary investigation and assessment.

This report and the assessments and recommendations contained in it are intended for the sole use of EBA’s client. EBA 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 EBA’s Client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA’s instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA’s instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. The Client warrants that EBA’s instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client’s current or future software and hardware systems.

3.0 NOTIFICATION OF AUTHORITIES

In certain instances, the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed and the client agrees that notification to such bodies or persons as required may be done by EBA in its reasonably exercised discretion.

4.0 INFORMATION PROVIDED TO EBA BY OTHERS

During the performance of the work and the preparation of the report, EBA may rely on information provided by persons other than the Client. While EBA endeavours to verify the accuracy of such information when instructed to do so by the Client, EBA accepts no responsibility for the accuracy or the reliability of such information which may affect the report.