24 Hour Baffinland Contact for Mary River Site

Days (7am to 7pm) **647-693-9442 or 647-693-9443**

After Hours (7pm to 7am) **647-693-9455**

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

SPILL CONTINGENCY PLAN

August 2007

Revision 1 (March 2008)
Revision 2 (March 2009)
Revision 3 (March 2010)
Revision 4 (March 2011)
Revision 5 (March 2012)
Revision 6 (July 2012)

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BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

SPILL CONTINGENCY PLAN

PREAMBLE

This Emergency and Spill Response Plan for the Mary River Project is in effect and applies to all licensed elements of the program.

The Plan will be updated and revised as necessary during the course of the Advanced Exploration Project.

Formal distribution of the Plan has been made to:

Department of Environment - Environmental Protection Division
PO Box 1000 Station 1300
Iqaluit, NU, Canada
X0A 0H0
Tel: (867) 975-7700, 1-866-222-9063
Fax: (867) 975-7742

Department of Fisheries and Oceans - Central and Arctic Region
501 University Crescent
Winnipeg, MN, Canada
R3T 2N6
Tel: (204) 983-5000
Fax: (204) 984-2401

Hamlet of Pond Inlet
PO Box 180
Pond Inlet, NU, Canada
X0A 0S0
Tel: (867) 899-8934
Fax: (867) 899-8940

Aboriginal Affairs and Northern Development Canada - Nunavut Regional Office
Land Administration Division
PO Box 2200
Iqaluit, NU, Canada
X0A 0H0
Tel: (867) 975-4280 (Land Administration Manager)

Aboriginal Affairs and Northern Development Canada - Nunavut Regional Office
Water Resources Division
PO Box 2200
Iqaluit, NU, Canada
X0A 0H0
Tel: (867) 975-4550 (Water Resources Manager)

Mittimatalik Hunters and Trappers Organization
PO Box 189
Pond Inlet, NU, Canada
X0A 0S0
Tel: (867) 899-8856
Fax: (867) 899-8095

Nunavut Impact Review Board
PO Box 1360
Cambridge Bay, NU, Canada
X0B 0C0
Tel: (867) 983-4600, 1-866-233-3033
Tax: (867) 983-2594

Nunavut Water Board
PO Box 119
Gjoa Haven, NU, Canada
X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

Qikiqtani Inuit Association
PO Box 1340
Iqaluit, NU, Canada
X0A 0H0
Tel: (867) 979-5391, 1-800-6672742 (Land Administrator)
Fax: (867) 979-3238

Additional copies and updates of this Plan may be obtained from:

Baffinland Iron Mines Corporation
Suite 1016, 120 Adelaide Street West
Toronto, ON, Canada
M5H 1T1
Tel: (416) 364-8820
Fax: (416) 364-0193

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

SPILL CONTINGENCY PLAN

TRACK CHANGES TABLE

An annual routine review and update of the Spill Contingency Plan has been undertaken, with the following salient revisions to the March 2010 Spill Contingency Plan:

Revision 6 (March 2012) and Revision 7 (July 2012)

Modifications/Additions	**Where they appear in the document**	
	Section	**Page Number**
Description of the Mary River Project site was updated to reflect current configuration and site activities	1.0	1
Table 2.1 was updated to reflect the as-constructed capacity of the bulk fuel storage facilities and the approximate current drum fuel inventory.	2.1	6
Title Page and Table 3.1 was updated with the contact details for the project management team responsible for implementing the Spill Contingency Plan	3.0	Title Page and 9
Section 8 was updated with current contact details for third party and regulatory authorities	8.0	21
Figure 1 was updated include the newly constructed five million litre bulk P-50 tank at Milne Inlet as well as the associated spill kit locations.	Appendix B	Appendix B
Appendix D was updated to reflect the complete list of MSDSs on site.	Appendix D	Appendix D

BAFFINLAND IRON MINES CORPORATION
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BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

SPILL CONTINGENCY PLAN

SECTION 1.0 - GENERAL

This Spill Contingency Plan ("Plan") was developed to assist in implementing measures to protect the environment and minimize impacts from potential spill events. It provides a framework and instructions to guide all personnel in emergency spill response situations. The Plan outlines procedures for responding to spills while minimizing potential health and safety hazards, environmental damage, and clean up costs.

The Mary River Project ("Project") is a proposed iron ore mine and associated facilities located on North Baffin Island, in the Qikiqtani Region of Nunavut. Baffinland Iron Mines Corporation (Baffinland) commenced exploration at Mary River in 2004 and has since accomplished a number of field investigations in the region. Camp accommodations have been established at Mary River, Milne Inlet, Mid-Rail (Nivek Lake) and Steensby Inlet to support ongoing field investigations including exploration drilling and resource delineation, geotechnical drilling and engineering planning, and environmental and social data collection.

Field programs and activities are ongoing in support of continued advancement of the Mary River Project. Baffinland submitted its Draft Environmental Impact Statement (DEIS) for the Mary River Project to the Nunavut Impact Review Board on January 21, 2011 and the Final Environmental Impact Statement (FEIS) was submitted on February 13, 2012. The FEIS was accepted by NIRB and is currently in the review process. Based on a review of the Project and commitments made during the DEIS and FEIS process, a work program for 2012 has been developed and is presented below.

Currently, it is anticipated that the 2012 field work program will include the following activities:

- Continued occupation of the Mary River and Milne Inlet camps throughout 2012 and seasonal occupation of Steensby Inlet. Mid-Rail Camp will remain unoccupied throughout 2012.
- Fixed wing aircraft and helicopter to support general site activities including environmental monitoring and ongoing environmental/geotechnical drilling at Deposit No. 1, regional exploration for outlying areas, and scientific data collection to support ongoing integrity of baseline programs.
- Ongoing surface exploration on Baffinland's exploration lands including on Deposits Nos. 6 to 9, incl.
- Continue archaeological surveys at project component areas as required.
- Follow up on the requirements pursuant to the Fisheries Authorization for the Tote Road Not Net Loss and Monitoring Program, QIA lease, and INAC land permit and quarry permit requirements.
- Implementation of a freshet management plan for the Milne Inlet Tote Road to minimize associated environmental risks.

- Continued progressive reclamation of areas of current and past use in association with drilling, bulk sample, and historical exploration programs.
- Sealift resupply at Milne Port and possibly Steensby Port including supplies and equipment to support ongoing permitted activities. Offloading (ship to shore) of bulk fuel is not planned for 2012.
- Transport of needed fuel and supplies stored at Milne Inlet to the Mary River Camp to support the existing permitted activities.
- Commencement of decommissioning of the Milne Inlet fuel bladder storage area that involves the commissioning of the new five million litre steel tank and ancillary facilities and the transfer of remaining P-50 diesel from the bladder farm to the steel tank. The Jet-A fuel currently stored in bladders will remain there for another year.
- Demobilization of equipment and supplies not required for near term activities, as well as the current inventory of hazardous waste and other materials by means of sealift from Milne Inlet and possibly Steensby Inlet.
- Continued deposition of non-hazardous wastes into the constructed landfill in accordance with the landfill operations and maintenance manual.
- Continued implementation of treatment methodologies utilized for the separation of oil and waste from stormwater that is resident in the engineered lined fuel storage containment and hazardous waste areas at Milne Inlet and Mary River.
- Discharge of treated sewage stored in PWSPs at Mary River Camp and Milne Inlet after treatment as required. Two periods of discharge are planned, the first corresponding to freshet (May-June), and the second later in the summer if required.
- Other scientific and engineering studies would be undertaken in support of ongoing baseline and engineering data collection as required from the Project FEIS. Some of these studies will be based out of a research vessel in Steensby Inlet, similar to what was completed last year and include benthic sample collection, bathymetry, and limited geophysical bottom profiling work.

In addition to the above activities, site maintenance and minor site upgrades will be undertaken to enhance safety and environment, improve and facilitate existing pre-construction operations.

The Mary River Iron Mine site is located in the northern part of Baffin Island, Nunavut (71° 18' 30" North, 79° 23' 30" West), approximately 160 km south of Pond Inlet. The mine site is approximately 85 km inland and accessible by road from the sealift supply site (i.e., Milne Inlet site) located where Phillips Creek discharges into Milne Inlet. The Milne Inlet site is located on the north-eastern coast of Baffin Island (71° 52' 57" North, 80° 53' 51" West), approximately 131 km south-west of Pond Inlet. The Steensby Inlet Camp (70° 17' 38" North, 78° 29' 13" West) is located to the south of Mary River and Mid-Rail camp (70° 58' 20" North, 78° 22' 15" West) is located midway between Mary River and Steensby Inlet. Maps and locations of camps and fuel storage facilities are provided in Appendix B.

This spill emergency plan has been implemented to ensure that Baffinland respects all applicable laws, regulations and requirements from federal and territorial authorities. Baffinland obtained and complies with all required permits, approvals and authorizations required for the operations. The following applicable Regulations and documents constitute an integral part of the Plan:

The *Canadian Environmental Protection Act* controls hazardous substances from their production and/or import, their consumption, storage and/or disposal.

The federal *Fisheries Act* protects fish and their habitat from pollution and disturbances. Fisheries and Oceans Canada reviews permit applications and restoration plans submitted by other agencies.

The federal *Transportation of Dangerous Goods Act* and *Regulations* ensure the protection of public health and safety, and the environment during the handling and transport of dangerous goods. The Regulations apply to all modes of transportation, by road, by sea, and by air.

The federal *Territorial Land Use Regulations* define regulatory measures to maintain appropriate environmental practices for any land use activities on territorial lands that are under the control, management and administration of the Crown. These regulations require that land use permits be issued for operations such as mineral exploration and mining.

The *Guidelines for Preparation of Hazardous Material Spill Contingency Plans* describe parameters that should be considered in the development of hazardous material spill emergency plans. It also defines the information that should be incorporated into a comprehensive contingency plan.

The CCME *Code of Practice for Used Oil Management* defines appropriate environmental options for handling, storage, collection, recycling, transport, reuse and/or disposal of used oils in Canada. It helps regulatory authorities formulate provincial and/or regional strategies for used oil management.

The *Nunavut Environmental Protection Act* governs the protection of the environment from contaminants. The act defines offences and penalties as well as the powers of government inspectors.

The *Nunavut Spill Contingency Planning and Reporting Regulations* describe requirements for spill reporting and emergency planning.

The *Field Guide for Oil Spill Response in Arctic Waters* developed for the Emergency Prevention, Preparedness and Response Working Group, describes precise response methods and strategies for emergency response operations and provides technical support documentation.

The *Land Transportation Emergency Response Guideline for Petroleum Spills* developed by the Canadian Petroleum Products Institute outlines scope, emergency response code of practice, response time guidelines, response equipment and personnel capability requirements.

Links to *Baffinland Oil Handling Facility* - Oil Pollution Emergency Plan

The *Canada Shipping Act* (CSA), as amended by Chapter 36, stipulates that operators of designated Oil Handling Facilities must have an on-site Oil Pollution Emergency Plan.

Marine spills at the Milne Inlet port site are specifically addressed in *the Baffinland Oil Handling Facility - Oil Pollution Emergency Plan (OPEP)* which is a separate document. The Milne Inlet Fuel Storage Facility OPEP has been designed specifically to compliment this document. The OPEP is not to be construed as to supersede existing contingency plans, rather it is conceived to address the specifics of the Fuel Storage Facility, the bulk incoming transfer of fuel and spill scenarios directly relating to this operation.

The *Milne Inlet Fuel Storage Facility, Oil Pollution Emergency Plan* takes into account the requirements of the CSA 2001, Part 8, Subsections 168. (1), 168. (2) and 168. (3). Due to the facility's location (North of 60'), Subsections 168. (1) (a), 168. (1) (b) (ii), and 168. (1) (b) (iii) do not apply.

The *Canada Shipping Act Response Organizations and Oil Handling Facilities Regulations* (sor/95-405) apply. The oil handling facilities standards, tp12402 applies.

SECTION 2.0 - HAZARDOUS MATERIALS - TRANSPORT AND STORAGE

A variety of petroleum products and other hazardous materials are used as part of ongoing site activities. Large quantities of petroleum products are stored at various sites. Explosives are also stored on site. Other hazardous materials are also used but in smaller quantities. Nonetheless, all these products are considered as potential environmental and safety hazards. The material safety data sheets (MSDS) of all these products are presented in Appendix D. Regular monitoring and inspection of fuel and hazardous material storage areas and the use thereof is undertaken in accordance with the Baffinland's environmental management system and procedures.

2.1 Fuel

Table 2.1 presents the quantity and capacity of bulk fuel storage facilities and their location. Approximate volumes of bulk fuel as well as the drummed fuel inventory on-site as of March 15th, 2012 and their locations are provided.

Fuel required to support ongoing site activities is delivered in bulk by sealift to the Milne Inlet site. From there, the fuel is hauled to the Mary River site by tanker trucks on a 100-km, all-season road. Tanker trucks are equipped with emergency spill response kits. Drums at the Steensby Camp were supplied by sealift in the fall of 2011. Bulk or barrelled fuel will not be supplied to Milne Inlet or Steensby Inlet sites during 2012.

A map of the regional area and layouts of the four (4) main fuel storage locations (i.e., Milne Inlet, Mary River Camp, Mid-Rail Camp and Steensby Inlet) are presented in Appendix B. Appendix B also provides the approximate location of all fuel containers and spill kits as of March 2012. The existing Milne Inlet bladder farm is located approximately 500 m from the ocean; however, the fuel intake line for off-loading is located at the high-water mark. The Mary River Camp tank farm is located approximately 500 m from the nearest lake.

Each bulk fuel storage facility consists of 113,560-litre fuel bladders inside a lined containment area. In 2011, a five million liter steel tank was constructed at Milne inlet for the storage of bulk P-50. The commissioning of the newly constructed tank as well as the transfer of bulk P-50 from the bladders is scheduled for the 2012 field season. The fuel drum cache located at Steensby Inlet consists of drums inside a lined containment area. In addition, lined containment areas are situated at Milne Inlet, Mid-Rail and Mary River camps for the storage of fuel drum caches required for camp operations and field activities. All fuel caches are clearly identified, marked, and protected to prevent damage to drums from vehicles and heavy equipment especially during periods when the drums may be less visible (i.e., at night and during winter).

Refuelling stations at the Milne Inlet and Mary River sites are equipped with a lined and bermed area to contain minor spills or leaks during refuelling. The liner (40 mil hypolon liner) is protected by sand bedding and vehicles and equipment drive onto the lined area to refuel. Transfer of fuel from supply vehicles to tanks and from tanks to vehicular equipment is performed with the aid of fuel pumps.

Table 2.1: Fuel Storage and Capacity (litres)

1) Milne Inlet Site		Type and number of containers
diesel fuel	2,729,436	60 x 113,560-L fuel bladders
jet A-1 fuel	714,091	12 x 113,560-L fuel bladders 0 x 205-L drums
gasoline	11,480	56 x 205-L drums
diesel fuel	0	1 x 5,000,000-L above ground steel tank
2) Midway Camp (emergency use only along Tote Road)		
diesel fuel		No fuel at Emergency Station
3) Mary River Site		
diesel fuel	764,269 43,000 0	11 x 113,560-L fuel bladders (bulk fuel facility) 1 x 77,000-L fuel bladder (Camp diesel generators supply) 1 Envirotank (75,000 litres) in lined containment
jet A-1 fuel	180,335 15,785	2 x 113,560-L fuel bladders 77 x 205-L drums
gasoline	3,075	15 x 205-L drums
4) Mid-Rail Camp		
diesel fuel		0 x 205-L drums
jet A-1 fuel		0 x 205-L drums
5) Steensby Inlet Camp		
diesel fuel	153,750	750 x 205-L drums
jet A-1 fuel	369,000	1800 x 205-L drums

A variety of intermediate-sized fuel tanks are also used to supply generators (camps and operations) and furnaces. A bladder within lined containment adjacent to the generators at Mary River contains a maximum volume of 77,000 litres. To the extent practicable, hazardous materials in drums are stored within lined areas.

Emergency spill response equipment (i.e., spill kits) is installed at each fuel storage location. All spill kits contain the appropriate type, size and quantity of equipment for the volume and type of product present at the storage location as well as the environment likely to be affected by a spill (i.e., ground, lake, river, or ocean).

2.2 Chemicals

Other chemicals and potentially hazardous materials associated with project operations include:

- Petroleum oils and lubricants for mining and heavy equipment;
- Drilling additives;
- Calcium chloride flakes for drill water;
- Lead acid batteries;
- Cleaning supplies at camp sites;
- Waste oil from equipment and generators.

Lubricants, oils, and batteries, are stored in containers at the workshop and at other work areas. Waste oils are stored in drums in lined containment, and may be used to fuel the camp incinerator. The calcium chloride storage area is located adjacent to the airstrip at the Mary River and Milne Inlet sites.

2.3 Explosives

At the present time, there are no explosives stored at the site. Residual explosives remaining from the 2008 bulk sample program were disposed of at site by means of controlled detonation in the bulk sample pit during July 2010 by qualified blasters recommended by the manufacturer.

SECTION 3.0 - DUTIES AND RESPONSIBILITIES

As part of the spill emergency response plan, Baffinland is responsible for implementing, through its project management team, the following procedures:

- Train site personnel in spill response procedures and the proper use of response equipment and materials.
- In the event of a spill, mobilize required site personnel, equipment and tools.
- Implement the required health and safety procedures at the site of the spill.
- Eliminate the fire hazards and potential ignition sources near the spill area.
- Control the source of the spill (i.e., reduce or stop product discharge).
- Contain the spilled product using the most appropriate methods and equipment (i.e., dykes, ditches, sorbent materials, containment booms, and other barriers).
- Evaluate the possibilities of recovering spilled materials.
- Obtain, if required, assistance from government agencies such as Environment Canada, the Canadian Coast Guard and/or Fisheries and Oceans Canada.
- Obtain, if required, additional assistance by hiring local rangers or residents from the nearest communities and/or firms specialized in spill response operations.
- Comply with applicable guidelines and regulations.
- Conduct a preliminary assessment of environmental impacts to marine, freshwater and terrestrial ecosystems and natural resources.
- Report the spill to the Government of Nunavut Spill Report Line, to QIA, and to the water license inspector within 24 hours of the event, and submit a written spill report using the appropriate form (see below for the list of information required in the report).

Table 3.1 presents the management team responsible for overseeing emergency spill response operations and their contact information.

Table 3.1: Project Management Team Members and Contact Information

Position	Contact
Cliff Pilgrim or Jeff Bush On-site Co-Coordinator	**Emergency After Hours Tel: 647-693-9455** Email: cliff.pilgrim@baffinland.com Mary River Site Tel: 647-693-9442 Email: jeff.bush@baffinland.com Mary River Site Tel: 647-693-9443
Trevor Myers or Allan Knight or David McCann On-site Co-Coordinator (alternates)	**Emergency After Hours Tel: 647-693-9455** Email: trevor.myers@baffinland.com Email: allan.knight@baffinland.com Mary River Site Tel: 647-693-9447 Email: dave.mccann@baffinland.com Mary River Site Tel: 647-693-9441
Brian Larson or Jim Millard Environmental Health & Safety Superintendant	Email : brian.larson@baffinland.com Mary River Site Tel : 647-693-9444 Email : jim.millard@baffinland.com Mary River Site Tel: 647-693-9447 Off-Site Cell: 902-403-1337
Dave McCann Operations Manager	Mary River Site Tel: 647-693-9441 Cell: 416-616-8860 Email: david.mccann@baffinland.com
Erik Madsen Corporate Contact – VP Sustainable Develop.	Office Tel: 416-814-1930 Cell: 416-996-5523 Email: erik.madsen@baffinland.com

As part of the spill response plan, the On-Site Co-Coordinator, acting as incident commander, is responsible for implementing the following procedures:

- Assume authority over the spill scene and personnel involved.
- Activate the Spill Response Plan.
- Evaluate the initial situation and assesses the magnitude of the spill.
- Develop an overall plan of action.
- Prepare a root cause analysis and an incident investigation for major spills.
  - Report to the Operations Manager and provide recommendations on resource requirements (additional manpower, equipment, material, etc.) to complete the cleanup effort. The responsibility of the co-ordinator is to mobilise personnel and equipment to implement the cleanup.

The responsibilities of the Sustainable Development Department on behalf of the Operations Manager include the following:

- Report the spill to NWT 24-hour Spill Report Line at (867) 920-8130, to Qikiqtani Inuit Association Lands Administrator at (867) 975-8422, and INAC Water License Inspector at (867) 975-4289.

- Provide liaison with Management to keep them informed of cleanup activities.
- Collect photographic records of the spill event and clean up efforts.
- Obtain additional required resources not available on-site for spill response and cleanup.
- Act as the spokesperson with government agencies as appropriate.
- Document the cause of the spill and effectiveness of the cleanup effort, and implement the appropriate measures to prevent a recurrence of the spill.
- Prepare and submit follow-up documentation required by appropriate regulators.
- Ensure that the spill is cleaned up and all follow-up communication and reports are filed with the INAC Water License Inspector, and QIA Land Administrator. Ensure that the spill reports submitted to QIA include photographic records and an updated map showing UTM coordinates, date, amount and the nature of spill.

The responsibilities of the Corporate Contact include the following:

- Work with the Sustainable Development Department on regulatory follow-up as necessary.
- Act as the spokesperson with government agencies as well as the public and the media on any significant spill events.

Once a spill event is reported, the On-Site Co-Coordinator establishes a specific strategy for containing and controlling the spill and to initiate the clean up activities. Other site personnel such as the Fire chief, Health and Safety Officer, and Operations Manager may act as technical advisers prior to and during the intervention. The trained Spill Response Team will conduct all emergency spill response operations under the leadership of the On-Site Co-Coordinator. During the cleanup phase of the intervention other site personnel (e.g., heavy equipment operators, labourers, etc.) may be involved in the intervention. Figure 3.1 presents an organization chart of the Spill Response Team.

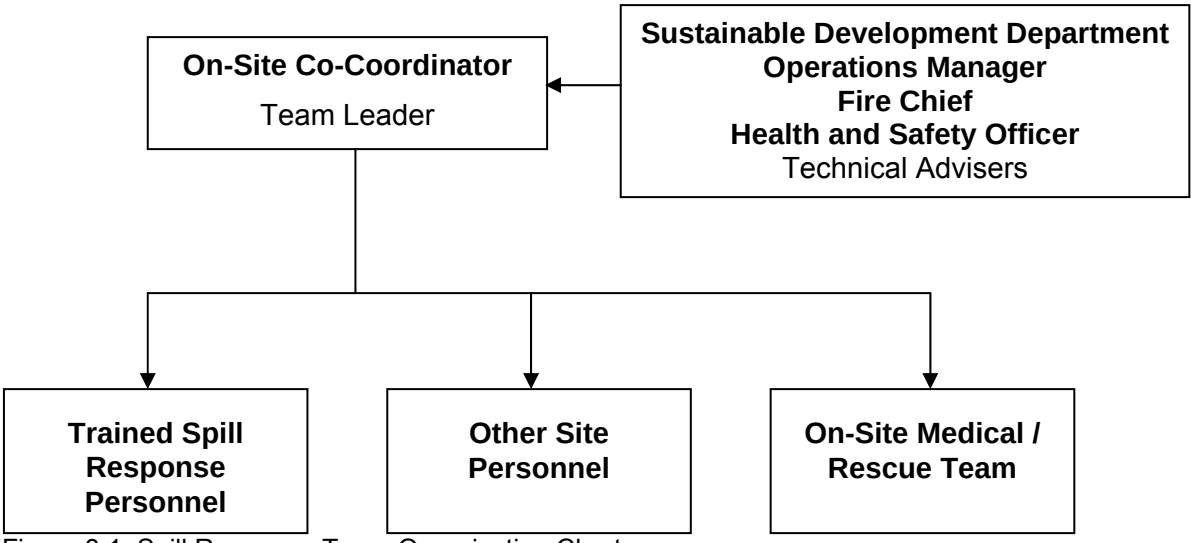


Figure 3.1: Spill Response Team Organization Chart

Baffinland ensures that all contracted shipping companies have their own spill contingency plan to respond to spill events during the course of their operations. When shipping hazardous materials to and from the site transport companies are required to carry out their operations in accordance with federal and international Transport of Dangerous Goods Regulations (i.e., TDGR - Clear Language, IMDG, IATA).

In the event of a spill of hazardous materials (exceeding the quantities listed in Part 8.1 (1) of the TDGR) during transport, the shipping company will immediately report the incident to the local police and the Nunavut Emergency Services at 1-800-693-1666 (as stated in Part 8.1 (5), TDGR). The immediate report must include as much of the information listed in Part 8.2, TDGR, as is known at the time of the report. A follow-up report must be made, in writing, to the Director General within 30 days after the occurrence of the accidental release, the "dangerous goods accident" or the "dangerous goods incident". The follow-up report must include the information listed in Part 8.3, TDGR.

If a spill occurs on water during transport or during the transfer of hazardous materials from ship to land, the shipping company is responsible to implement the appropriate spill response measures in accordance to their spill contingency plan. If needed, the Baffinland Spill Response Team can be available to assist the shipping company in their emergency response operations.

SECTION 4.0 - TRAINING AND DRILLS

As part of site orientation and ongoing awareness training, all site personnel are informed that any spill of fuel or other hazardous liquids or solids, whatever the extent, has to be reported immediately to the On-Site Co-Coordinator.

An appropriate number of site personnel are selected and appropriately trained to form the Spill Response Team. Crew members are trained in emergency spill response procedures and operations. Training includes knowledge in the:

- Properties of hazardous materials used on site;
- Common causes of spills;
- Environmental effects of spills;
- Worker health and safety during emergency interventions;
- Personal protective equipment and clothing;
- Spill response procedures and techniques on land, water, snow and ice, and during all four seasons;
- Spill response equipment and materials.

Training also includes analysis of potential spill events that are more likely to occur during the Mary River Project operations. Fuel spills are more likely to be caused by:

- Human error during fuel transfer operations (e.g., tank farm to tanker-trucks, drums to helicopters, etc.);
- Rupture of tanks, supply lines, or valves from accidental damage, deterioration or equipment failure; or
- Road accidents involving tanker-trucks.

Training includes spill response field drills and classroom training.

SECTION 5.0 - MATERIALS AND EQUIPMENT

In order to prevent spills and to provide adequate response in case of spill events, Baffinland maintains on-site the appropriate type and quantity of response equipment and materials.

Spill kits are strategically placed primarily in areas of fuel handling to facilitate immediate first response in the event of a hydrocarbon release to land. To facilitate response to fuel spills to water, two (2) sea-can containers will be positioned at Milne Inlet. Appendix C provides a list of the different spill kits and their contents (as purchased) that are available on-site. Note that over the course of operations, when materials in spill kits have been utilized, replacement materials may differ from that originally present in kits. Substituted spill kit materials will be of sufficient quality and quantity as appropriate to their locations and potential use.

In addition to the spill response material listed in Appendix C, a variety of mobile heavy equipment including excavators, front-end loaders, bull-dozers, haul trucks, a Zodiac boat for in-land water use, and an ocean support boat is available to aid in spill response and recovery efforts.

SECTION 6.0 - SPILL RESPONSE PROCEDURES

A spill is defined as the discharge of a hazardous product out of its containment and into the environment. Potential hazards to humans, vegetation, water resources, fish and wildlife vary in severity, depending on several factors including nature of the material, quantity spilled, location and season. Fuel is the main product that may be spilled and therefore spill response procedures focus on this hazardous material. Other chemicals that may be spilled include sewage water, calcium chloride flakes and small quantities of lubricants and oils.

All site personnel are briefed on the procedures to be followed to report a spill and initiate spill response. The first person to notice a spill takes the following steps:

1. Immediately warn other personnel working near the spill area.
2. Evacuate the area if the health and safety of personnel is threatened.
3. Notify the On-Site Co-Coordinator, who will initiate the spill response operations.
4. In the absence of danger, and before the spill response team arrives at the scene, take any safe and reasonable measure to stop, contain and identify the nature of the spill.

All spill response interventions carried out by the spill response team follow these general procedures:

Source Control - Reduce or stop the flow of product without endangering anyone. This may involve very simple actions such as turning off a pump, closing a valve, sealing a puncture hole with almost anything handy (e.g., a rag, a piece of wood, tape, etc.), raising a leaky or discharging hose at a level higher than the product level inside the tank, or transferring fuel from leaking containers.

Control of Free Product - Prevent or limit the spread of the spilled material. Accumulate/concentrate spilled product in an area to facilitate recovery. Barriers positioned down-gradient of the spill will slow or stop the progression of the spill. Barriers can consist of absorbent booms, dykes, berms, or trenches (dug in the ground or in ice).

Protection - Evaluate the potential dangers of the spill in order to protect sensitive ecosystems and natural resources. Block or divert the spilled material away from sensitive receptors. This can also be achieved by using various types of barriers.

Clean up the Spill - Recover and containerize as much free product as possible. Recover and containerize/treat contaminated soil, water, and snow. Pressure-wash contaminated bedrock surfaces, shorelines, ice and recover as much as possible oily water for containerization and/or treatment.

Report the Spill - Provide basic information such as date and time of the spill, type and amount of product discharged, photographic records, location and approximate size of the spill, actions already taken to stop and contain the spill, meteorological conditions and any perceived threat to human health or the environment. Reporting requirements are presented on Section 8.

Response procedures specific to spills on land, water, snow and ice are presented in the following sections. Procedures vary depending on the season. Spill response operations, techniques, equipment and materials are further detailed in the spill response training course manual.

6.1 Spills on Land

Response to spills on land will include the general procedures previously detailed. The main spill control techniques involve the use of two types of barriers: dykes and trenches. Barriers should be placed down-gradient (down-slope) from the source of the spill, and as close as possible to the source of the spill. Barriers slow the progression of the fuel and also serve as containment to allow recovery of the fuel.

Depending on the volume spilled, the site of the spill as well as available material, a dyke may be built with soil, booms, lumber, snow, etc. A plastic liner should be placed at the foot of and over the dykes to protect the underlying soil or other material and to facilitate recovery of the fuel. Construct dykes in such a way as to accumulate a thick layer of free product in a single area (V-shaped or U shaped).

Trenches are useful in the presence of permeable soil and when the spilled fuel is migrating below the ground surface. A plastic liner should be placed on the down-gradient edge of the trench to protect the underlying soil. Liners should not be placed at the bottom of the trench to allow water to continue flowing underneath the layer floating oil.

The use of large quantities of absorbent materials to recover important volumes of fuel should be avoided. Large volumes of free-product should be recovered, as much as possible, by using vacuums and pumps, and containerized. Mixtures of water and fuel may be processed through an oil-water separator. Absorbent sheets should be used to soak up residual fuel on water, on the ground (soil and rock), and on vegetation. Peat moss may also be sprinkled on vegetation to absorb films of petroleum products.

6.2 Spills on Water

Response to spills on water includes the general procedures previously detailed. Various containment, diversion and recovery techniques are discussed in the following sections. The following elements must be taken into consideration when conducting response operations:

- Type of water body or water course (lake, ocean, stream, river)
- Water depth and surface area
- Wind speed and direction
- Presence and range of tides
- Type of shoreline
- Seasonal considerations (open-water, freeze-up, break-up, frozen)

Containment of an oil slick on the **ocean** requires the deployment of mobile floating booms to intercept, control, contain and concentrate (i.e., increase thickness) the floating oil. One end of the booms is anchored to shore while the other is towed by a boat and use to circle the oil slick and return it close to shore for recovery using a skimmer. Reducing the surface area of the slick increases its thickness and thereby improves recovery. Mechanical recovery equipment (*i.e.,* skimmers and oil/water separators) will be mobilized to site if required.

If oil is spilled in a **lake** it may not be possible to deploy booms using a boat. In this case, measures are taken to protect sensitive and accessible shoreline. The oil slick is monitored to determine the direction of migration. In the absence of strong winds the oil will likely flow towards the discharge of the lake. Measures is taken to block and concentrate the oil slick at the lake discharge using booms where it will subsequently be recovered using a portable skimmer, a vacuum, or sorbent materials.

In small slowly-flowing rivers, **streams**, channels, inlets or ditches, inverted weirs (i.e., siphon dams) is used to stop and concentrate moving oil for collection while allowing water to continue to flow unimpeded. In the case of floating oil, in a **stream**, heading for a culvert (i.e., at a road crossing) a culvert block is used to stop and concentrate moving oil for collection while allowing water to continue to flow unimpeded. In both cases oil will then be recovered using a portable skimmer or sorbent materials.

In the case of spills in larger **rivers**, with fast moving currents, diversion booming is used to direct the oil slick ashore for recovery. Single or multiple booms (i.e., cascading) may be used for diversion. Typically, the booms are anchored across the river at an angle. The angle will depend on the current velocity. Choosing a section of a river that is both wider and shallower makes boom deployment easier. Diversion booming may also be used to direct an oil slick away from a sensitive area to be protected.

6.3 Spills on Snow and Ice

In general, snow and ice will slow the movement of hydrocarbons. The presence of snow may also hide the oil slick and make it more difficult to follow its progression. Snow is generally a good natural sorbent, as hydrocarbons have a tendency to be soaked up by snow through capillary action. However, the use of snow as a sorbent material is to be limited as much as possible. Snow and frozen ground also prevent hydrocarbons from migrating down into soil or at least slow the migration process. Ice prevents seepage of fuel into the water.

Response to spills on snow and ice includes the general procedures previously detailed. Most response procedures for spills on land may be used for spills on snow and ice. The use of dykes (i.e., compacted snow berms lined with plastic sheeting) or trenches (dug in ice) slow the progression of the fuel and also serve as containment to allow recovery of the fuel.

Free-product is recovered by using a vacuum, a pump, or sorbent materials. Contaminated snow and ice is scraped up manually or using heavy equipment depending on volumes. The contaminated snow and ice is placed in containers or within plastic lined berms on land. If

required, a contaminated snow storage site is to be located in close proximity to one of the four (4) main work sites to facilitate inspection and monitoring, in an area which is still easily accessible once it is time to remove the snow (i.e., spring or summer), and at least 30 m away from any body of water or ditch. Once enough snow has melted, the oily water is removed from the storage and processed through an oil-water separator that would be mobilized to site. Hydrocarbons recovered will be burned in the camp incinerator or shipped off-site for processing.

6.4 Disposal of Spilled Material

Plastic ore sacks, steel drums, or other appropriate container as approved by the Environmental Health & Safety Superintendent are used to contain and transport contaminated soil for removal from site to a licensed southern disposal facility by either air or by road followed by sealift. Alternatively, a lined containment facility may be constructed on-site for the treatment of the contaminated soils. Such a facility requires regulatory approval and an amendment to Baffinland's water license. Temporary storage of contaminated materials is to be within plastic lined berms. Used sorbent material is burned in the site incinerators.

SECTION 7.0 - POTENTIAL SPILL ANALYSIS

In order to prepare for emergency spill response, potential spill analysis was conducted on various worst case scenarios. The exercise serves to identify potential risk areas, as well as to determine the fate of spilled products and their environmental effects. Four (4) potential spill scenarios were identified for the Mary River Project:

1. Mary River Camp Area - Spill of a fuel bladder to the ground
2. Road between Milne Inlet and Mary River - Spill of the contents of a tanker truck
3. Milne Inlet Camp – Transfer of fuel from bladders to five million litre steel tank using 50 m^3 tanker truck.
4. Rotating Biological Contactor at Milne Inlet - Spill of sewage
5. Rotating Biological Contactor at Mary River - Spill of sewage

These four (4) spill scenarios are analysed in detail in the following pages. Note that scenario 1 and 2 are

Scenario #1: Mary River Camp Area Spill

Description of incident: Spill of the contents of one of the 13 fuel bladders (within the tank farm) to the ground during fuel transfer from a tanker truck. Spillage of fuel by gravity. Spill occurs at the south-western end of the tank farm.
Potential causes: equipment malfunction (valve, pump), human error, accident.
Hazardous products spilled: Diesel fuel, Jet-A Fuel.
Maximum volume spilled: 113,560 litres.
Estimated time to spill entire volume: 90 minutes.
Immediate receiving medium: soil.
Most probable direction of slick migration: west, towards the lake.
Distance and direction to nearest receiving body of water: approximately 400 m west of the tank farm.
Resources to protect: lake and shore.
Estimated emergency spill response time: 15 minutes after spill is noticed.
Spill response procedures: Contain and recover oil spill using dykes or trenches as described in section 6.1. Prevent the oil from reaching natural drainage paths leading to the lake. Collect free-product for temporary storage. Excavate contaminated soil and/or snow, store and manage appropriately.

Scenario #2: Road Accident Tanker Truck Spill

Description of incident: Spill of the contents of a tanker truck to a stream. Spill occurs in an isolated area between Milne Inlet and Mary River.
Potential causes: accident, human error.
Hazardous products spilled: Diesel fuel, Jet-A Fuel.
Maximum volume spilled: 50,000 litres.
Estimated time to spill entire volume: 45 minutes.
Immediate receiving medium: stream.

Most probable direction of slick migration: downstream and into a river named Phillips Creek; the road between Mary River and Milne Inlet follows Phillips Creek, and crosses many streams (that discharge into Phillips Creek) over a distance of approximately 50 km. Phillips Creek eventually discharges into the ocean at Milne Inlet.
Distance and direction to nearest receiving body of water: N/A.
Resources to protect: streams, Phillips Creek and the ocean.
Estimated emergency spill response time: 60 minutes after spill is reported to site personnel (assuming truck driver is injured and cannot commence spill response procedures).
Spill response procedures: Contain and recover oil slick downriver as described in section 6.2, protect shorelines using sorbent booms. Collect free-product for temporary storage. Clean-up soiled shorelines. If the response crew arrives before the complete spill, seal the leak where feasible, contain and recover oil spill on ground using dykes and trenches as described in 6.1. Also, if the truck driver is not injured, he will act as a first responder and immediately initiate the spill contingency plan as defined in section 6 using the spill kit kept in the fuel trucks.
Spill response procedures: Once the treatment is achieved, the content of the reservoir is normally pumped by a vacuum truck to be discharged elsewhere. Therefore a vacuum truck is available in the area. In case of a spill of non-treated wastewater (sewage), the slick would be pumped using the vacuum truck. The piping would be repaired and the content of the truck would be discharged back in the RBC treatment unit. Impacted soils (if any) would be excavated and placed within the landfill.

Scenario #3: Milne Inlet Camp Spill During Fuel Transfer

Description of incident: Spill of the partial contents of 50m^3 capacity tanker truck to the ground surface within the lined containment of the on-loading offloading areas of the bladder farm and steel tank. Spillage of fuel by gravity. Spill occurs at the fuel transfer module adjacent to the new 50 million litre steel tank.
Potential causes: equipment malfunction (valve, pump), human error, accident.
Hazardous products spilled: P-50 diesel fuel
Maximum volume spilled: 50,000 litres.
Estimated time to spill entire volume: 60 minutes.
Immediate receiving medium: soil within fuel transfer module engineered containment area.
Most probable direction of slick migration: The containment area for the transfer module should have enough capacity to contain the spill, however in the event the containment area overflows or is breeched, the slick would migrate north east.
Distance and direction to nearest receiving body of water: approximately 200 m north of the fuel transfer module, Milne Inlet.
Resources to protect: marine environment and shoreline.
Estimated emergency spill response time: 15 minutes after spill is noticed.
Spill response procedures: Contain and recover oil spill using dykes or trenches as described in section 6.1. Prevent the oil from reaching natural drainage paths leading to the ocean. Collect free-product for temporary storage. Excavate contaminated soil and/or snow, store and manage appropriately. In the event that there is a potential for the slick to impact the ocean environment or shoreline, contain and recover the product and protect the shoreline with sorbent booms as described in Section 6.2,

Scenario #4: Milne Inlet sewage spill

Description of incident: Spill from the Rotating Biological Contactor reservoir. A pipe is accidently being dislodged and non treated wastewater escape the reservoir
Potential causes: pipe failure
Products spilled: sewage
Maximum volume spilled: 15,000 litres.
Estimated time to spill entire volume: 15 minutes.
Immediate receiving medium: soil
Most probable direction of slick migration: downstream and into a local depression east of the RBC wastewater treatment facility. That local depression dries in the summer and intercepts the maximum spilled volume.
Distance and direction to nearest receiving body of water: 150 m
Resources to protect: one stream and the ocean.
Estimated emergency spill response time: 15 minutes after spill is noticed.
Spill response procedures: Once the treatment is achieved, the content of the reservoir is normally pumped by a vacuum truck to be discharged elsewhere. Therefore a vacuum truck is available in the area. In case of a spill of non-treated wastewater (sewage), the slick would be pumped using the vacuum truck. The piping would be repaired and the content of the truck would be discharged back in the RBC treatment unit. Impacted soils (if any) would be excavated and placed within the landfill.

Scenario #5: Mary River sewage spill

Description of incident: Spill from the Rotating Biological Contactor reservoir. A pipe is accidently being dislodged and non treated wastewater escape the reservoir
Potential causes: pipe failure
Products spilled: sewage
Maximum volume spilled: 15,000 litres.
Estimated time to spill entire volume: 15 minutes.
Immediate receiving medium: soil
Most probable direction of slick migration: downstream and into a local depression east of the RBC wastewater treatment facility. That local depression dries in the summer and intercepts the maximum spilled volume.
Distance and direction to nearest receiving body of water: 200 m
Resources to protect: one stream and Camp Lake.
Estimated emergency spill response time: 15 minutes after spill is noticed.
Spill response procedures: Once the treatment is achieved, the content of the reservoir is normally pumped by a vacuum truck to be discharged elsewhere. Therefore a vacuum truck is available in the area. In case of a spill of non-treated wastewater (sewage), the slick would be pumped using the vacuum truck. The piping would be repaired and the content of the truck would be discharged back in the RBC treatment unit. Impacted soils (if any) would be excavated and placed within the landfill, once constructed.

SECTION 8.0 - REPORTING REQUIREMENTS

Quantities of hazardous substances spilled which require reporting are listed in schedule B of the Nunavut Spill Contingency and Reporting Regulation.

After the initial field emergency response to the spill event, spills are reported to the 24-hour Spill Report Line:

24-Hour Spill Report Line
spills@gov.nt.ca
Tel. (867) 920-8130 or
Fax (867) 920-8127

Failure to report a spill can lead to fines. The Qikiqtani Inuit Association Lands Administrator will also be immediately notified at (867) 975-8422. Similarly, the INAC Water Resources Officer will be immediately notified of the spill event at (867) 975-4289. In the event of a spill on the ocean, the incident will be reported to the Canadian Coast Guard (Arctic region) 1-800-265-0237 (24-hour).

It is the responsibility of the Sustainable Development Department on behalf of the Operations Manager to prepare the proper reports and transmit them to regulatory authorities. Table 8.1 presents an additional contact list for spill reporting. The Environmental Health & Safety Superintendent will determine who is to be contacted on the list on a spill by spill basis.

Table 8.1: Contact List for Spill Reporting

Department	Person	E-mail	Telephone
INAC-Waters (Iqaluit)	Kevin Buck	buckk@ aandc-aadnc.gc.ca	(867) 975-4550
INAC- Water Resources Inspector	Melissa Joy	Melissa.Joy@aandc-aadnc.gc.ca	(867) 975-4288
INAC-Field Operations	Andrew Keim	Andrew.keim@aandc-aadnc.gc.ca	(867) 975-4289
DFO-Iqaluit	Georgina Williston	Georgina.Williston@dfo-mpo.gc.ca	(867) 979-8011 or (613) 925-2865 ext. 131
EC-Iqaluit	Curtis Didham	Curtis.Didham@ec.gc.ca	(867) 975-4644
GN-DOE	Robert Eno	reno@gov.nu.ca	(867) 975-7729
Qikiqtani Inuit Association	Stephen Bathory	swbathory@qia.ca	(867) 975-8400
Qikiqtani Inuit Association	Salamonie Shoo	landadmin@qia.ca	(867) 975 8422
Pond Inlet Health Clinic			(867) 899-7500 (867) 899-8431

Department	Person	E-mail	Telephone
Pond Inlet RCMP			(867) 899-1111 (867) 899-6055
Qikiqtani General Hospital (Iqaluit)			(867) 979-7300

Afterwards, the spill event is reported in writing using the standard Spill Report Form presented in Appendix A.

The written report includes the following information:

- Date and time of the incident;
- Location or map coordinates and direction of spill movement if not at steady-state;
- Party responsible for the spill;
- Type and estimated quantities of spilled contaminant(s);
- Specific immediate cause of the incident;
- Status of the spill indicating if spilled materials are still moving or now at steady-state;
- Approximate surface of contaminated area;
- A photographic record of the spill event and clean up efforts;
- Factors affecting spill or recovery such as temperature, wind, etc.;
- Status on containment actions indicating whether a) naturally, b) booms, dykes or other, c) no containment has been implemented;
- Corrective action taken or proposed, to clean, contain or dispose spilled material;
- Whether assistance is required and in what form;
- Whether the spill poses a hazard to persons or property (i.e., fire, drinking water);
- Comments and recommendations;
- Name, position and employer of the person reporting the spill; and,
- Name, position department of the person to whom the spill is reported.

In the event of a spill involving the marine carrier delivering bulk fuel, Baffinland will ensure that the subcontractor reports any spill event under its responsibility.

The QIA Lands Department and INAC Water Resources Officer, and others (as appropriate) will be updated as per the terms and conditions of Water Licence, QIA Commercial Lease, and other permits / authorizations with regard to development and implementation of environmental actions that address basic causes of spills and clean-up activities.

FIGURES

XREF FILE(S): IMAGE FILE(S): 4 Baffinland logo-big corp NORTH BAFFINLAND

grQ/q5
LEGEND:

wu6
WATER

b4m3=sJ6 kNz
CAMP LOCATION

kNo4
COMMUNITY

xqiz
(NMs5b3ymJ6# 40 20 0 40 80 120 160 200 rMub
SCALE (APPROX.) km

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	28MAR'12	ISSUED WITH SPILL CONTINGENCY PLAN	TM	ASM	TM	JM

Baffinland Iron Mines Corporation

k]l]yi s/C4ys3g5 MARY RIVER PROJECT

WoE=sJ6 kNzb kNaxz
PROJECT LOCATION MAP

Knight Piésold CONSULTING

P/A NO.	REF.	REV.
NB102-181/32	NB12-00131	0

ttCs/3ymJ6 **FIGURE** **1.1**

NORTH BAY ON SAVED: I:\1\02\00181\32\A\Acad\FIGS\A03_r0_3/28/2012 9:43:22 AM PRINTED: 3/28/2012 9:43:49 AM A_Landscape, amoore

Baffinland
Iron Mines Corporation

APPENDICES

APPENDIX A

STANDARD NUNAVUT SPILL REPORT FORM

(Page A-1)

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR	REPORT TIME	☒ ORIGINAL SPILL REPORT, OR	REPORT NUMBER -
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME	☐ UPDATE # TO THE ORIGINAL SPILL REPORT	
C	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM THE NAMED LOCATION	REGION ☐ NWT ☒ NUNAVUT ☐ ADJACENT JURISDICTION OR		
E	LATITUDE DEGREES MINUTES SECONDS	LONGITUDE DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION		
G	ANY CONTRACTOR INVOLVED	CONTRACTOR ADDRESS OR OFFICE LOCATION		
H	PRODUCT SPILLED	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
I	SPILL SOURCE	SPILL CAUSE	AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY	DESCRIBE ANY ASSISTANCE REQUIRED	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS			

L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION **Station operator**	EMPLOYER	LOCATION CALLED **Yellowknife, NT**	REPORT LINE NUMBER **(867) 920-8130**

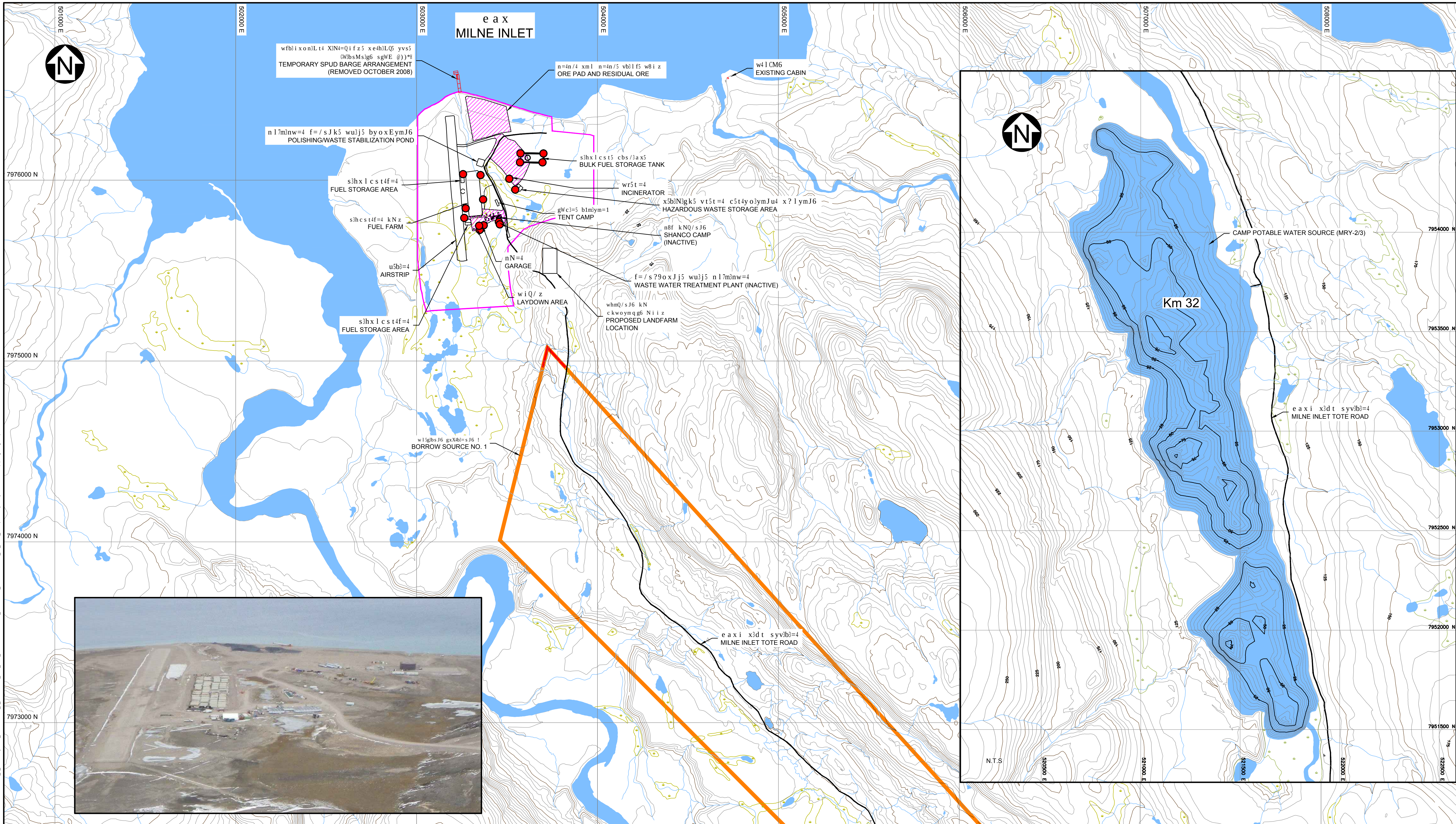
LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC	SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN	FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

APPENDIX B

LAYOUT OF CAMPS, FUEL STORAGE AND SPILL KIT LOCATIONS

(Pages B-1 to B-4)



LEGEND:

- WATER
- WETLAND
- LAYDOWN AREA
- BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND
- EXISTING BORROW AREA (IOL COMMERCIAL LEASE)
- RIVER/STREAM/DRAINAGE
- MILNE INLET TOTE ROAD
- ROAD
- APPROXIMATE SPILL KIT LOCATION

NOTE(S):

1. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. CONTOURS ARE IN METRES. CONTOUR INTERVAL IS 5 METRES.

SCALE 200 100 0 200 400 600 800 1000 m

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	28MAR'12	ISSUED WITH SPILL CONTINGENCY PLAN	TM	ASM	TM	JM

Baffinland Iron Mines Corporation

MARY RIVER PROJECT

MILNE INLET CAMP AND PORT LAYOUT
APPROXIMATE SPILL KIT LOCATION

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P/A NO.	REF.	REV.
NB102-181/32	NB12-00131	0

FIGURE 1

XREF FILE(S): Contours-5m_Interval-01-Sep_18_2008; Infrastructure-Milne-Detailed-01-Oct_7_2008; Laydown_Areas-01-Oct_7_2008; Milne_Inlet_Tote_Road-As-Built-From_Genivar-KP_Modified-02-Oct_06_2008_2; Topo Bathymetry IMAGE FILE(S): logo-big corp Milne Inlet 2011

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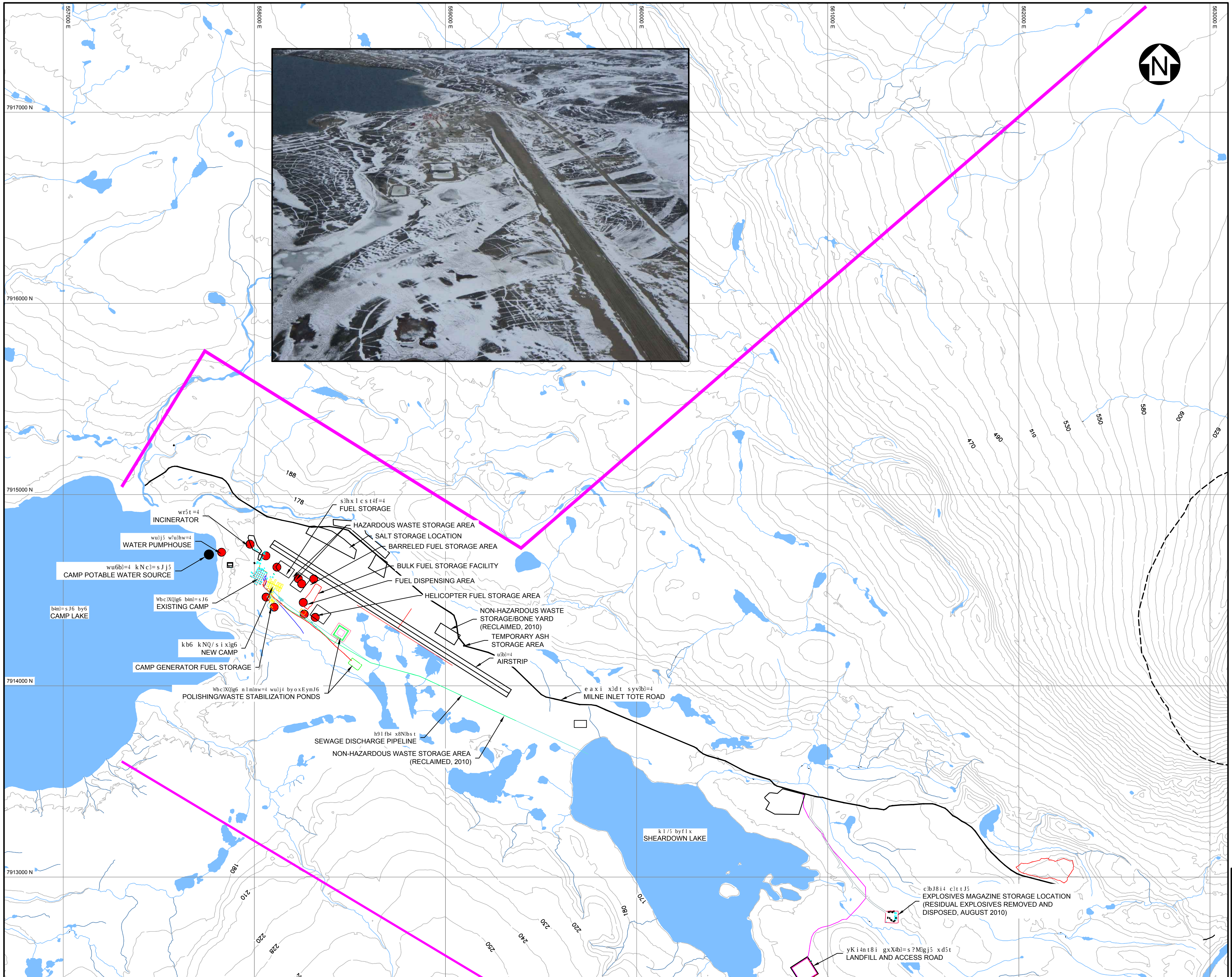


LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- SURFACE RIGHTS AREA (IOL COMMERCIAL LEASE)
- CAMP POTABLE WATER SOURCE
- APPROXIMATE SPILL KIT LOCATION

NOTE(S):

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).

SCALE A 200 100 0 200 400 600 800 1000 m

Baffinland Iron Mines Corporation

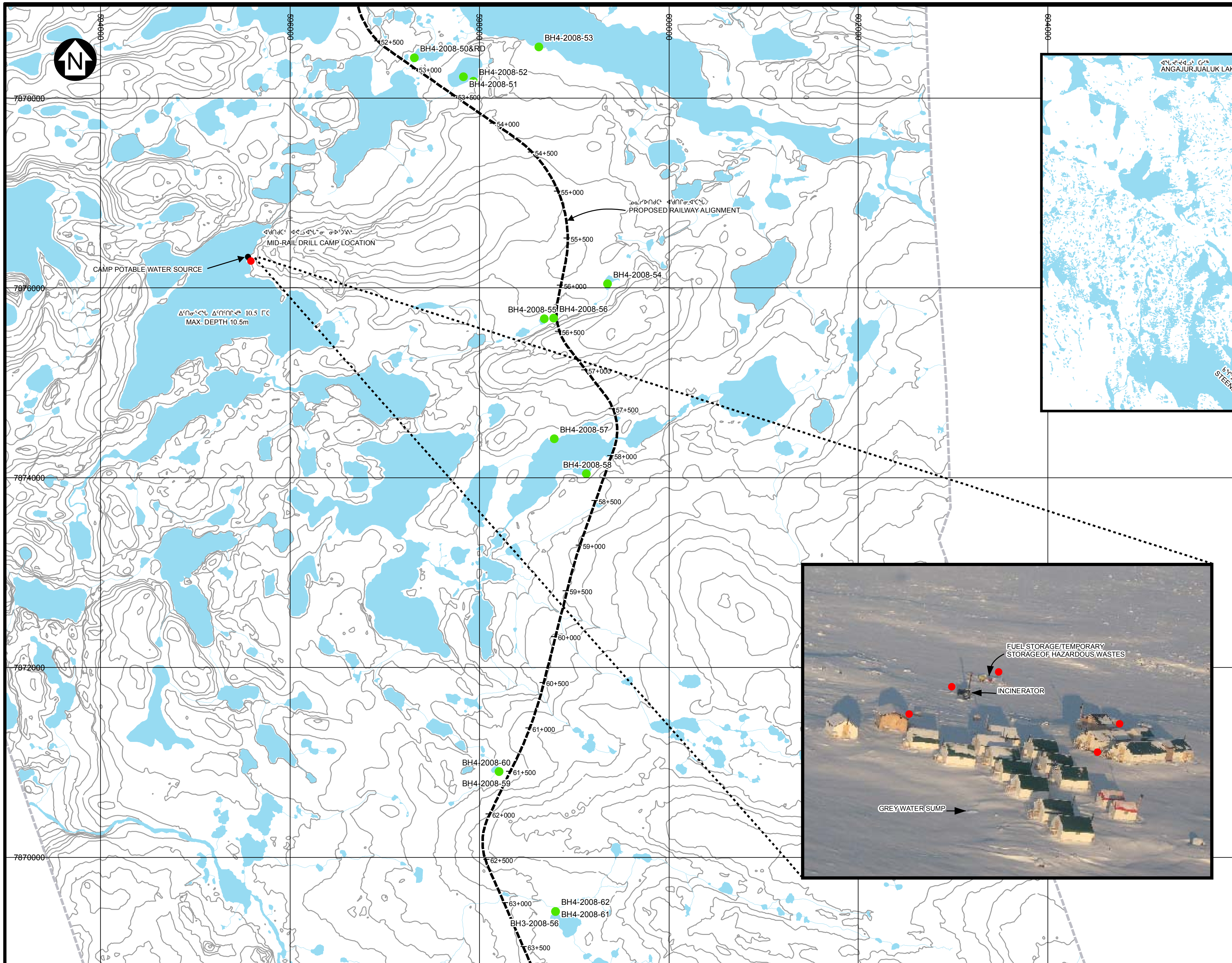
MARY RIVER PROJECT

MARY RIVER CAMP LAYOUT
APPROXIMATE SPILL KIT LOCATION

Knight Piésold CONSULTING

P/A NO.	REF.	REV.
NB102-181/32	NB12-00131	0

FIGURE: 2



LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- PROPOSED RAIL ALIGNMENT
- EXISTING CAMP
- WATER SOURCE LOCATIONS
- CAMP POTABLE WATER SOURCE
- APPROXIMATE SPILL KIT LOCATION

NOTES:

1. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. CONTOUR INVTERVAL IS IN METRES. CONTOUR INTERVAL IS 2.5 METRES.
4. PROPOSED RAIL ALIGNMENT PROVIDED BY CAINARAIL CONSULTANTS INC.

SCALE 500 250 0 500 1,000 1,500 2,000 m

Baffinland Iron Mines Corporation

MARY RIVER PROJECT

MID RAIL CAMP LAYOUT
APPROXIMATE SPILL KIT LOCATIONS

Knight Piésold CONSULTING

P/A NO.	REF NO.	REV
NB102-181/32	NB12-00131	0

FIGURE 3

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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v q 3L4J x6
STEENSBY INLET

INCINERATOR

GREY WATER SUMP

TEMPORARY STORAGE OF HAZARDOUS WASTE

w i Q/ z
LAYDOWN AREA

m8N w4Wr5gJJ x3u k N / s J 6 c k 6 x q t Q i z ⎕bwmNX l 4⎓
EXISTING STEENSBY INLET CAMP LIMITS (APPROX.)

c b s /3J x f =4
FUEL DRUM STORAGE

w m w 2 s o =Q 24b z ⎕bwmNX l 4⎓
WATERLINE (APPROXIMATE)

b y 6 w u3b l=4 b r i c3g6 # r Mub
CAMP POTABLE WATER SOURCE

25
50
25
75
25
25

7803750 N
7802500 N
7801250 N
7800000 N
7798750 N

595000 E
596250 E
597500 E
598750 E

grQ/ q 5

LEGEND:

- wu6 WATER
- fig6FfZMig6Ff= = s J 6 RIVER/STREAM/DRAINAGE
- CAMP POTABLE WATER SOURCE
- APPROXIMATE SPILL KIT LOCATION

NOTE(S):

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).

c s pm/4nw5

1. k N a x 3 t t l y m i z m o 4 g 6 ⎕TM (NAD83) Zone 17
2. t t l y m J 5 u b : x d 8 i q 5 s z y 4 t Q g 5 % u b
3. k N a x o E p 5 E a g l e M a p p i n g (2005)
4. k N y s t f b 4 x l d t 4 n z C a n a r a i l C o n s u l t a n t s I n c
5. s / C 4 b l = s J 6 t t C s / l y m i z ⎕e n i v a r

SCALE 250 12.5 0 250 500 750 1000 1250 m

Baffinland
IRON ORE COMPANY

MARY RIVER PROJECT

STEENSBY CAMP LAYOUT
APPROXIMATE SPILL KIT LOCATION

Knight Piésold CONSULTING

P/A NO. NB102-181/32 | REF. NB12-00131 | REV. 0

t t C s / l y m J 6 FIGURE: **4**

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	28MAR'12	ISSUED WITH SPILL CONTINGENCY PLAN	TM	ASM	TM	JM

XREF FILE(S): STEENSBY PORT AREA_01-APRIL 22 2008; steensby lakes IMAGE FILE(S): logo-big corp Steensby 2011

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APPENDIX C

SPILL KIT TYPES AND CONTENTS

(Pages C-1 to C-2)

VERSATECH SPILL KITS[1] AT BAFFINLAND'S MARY RIVER PROJECT SITE:

Kit #4 six (6) kits
Kit #5 four (4) kits
Kit #6 four (4) kits
Kit #7 eighteen (18) kits
Kit #8 eight (8) kits

Kit No./Details	Contents	Quantity
4 **20 GALLON LAB PACK** Absorbs up to 18 Gallons Lab Pack Container	Sorbent Pads (19" x 17" x 3/8") Sorbent Socks (3" x 4ft.) Sorbent Pillows Nitrile Gloves (pair) Disposal Bag Epoxy Putty	20 5 4 2 3 1
5 **PORTABLE RESPONSE KIT** Absorbs up to 65 Gallons Durable Yellow Rollout Container 2 convenient sizes - 64 Gallon 96 Gallon	Sorbent Pads (19" x 17" x 3/8") Sorbent Socks (3" x 4ft.) Xsorb (6 quart) Hand broom/dust pan Nitrile Gloves (pair) Disposal Bag Disposable Coveralls Drain cover Splash resistant goggles	150 6 1 1 2 4 2 2 2
6 **SPILL CHEST** Absorbs up to 170 Gallons Heavy duty plastic Yellow Container Can be moved with a Forklift	Sorbent Pads (19" x 17" x 3/8") Sorbent Socks (3" x 4 ft) Sorbent Booms (5" x 10 ft) Sorbent Pillows (15" x 9 ft) Sorbent Roll (38" x 144 ft) Nitrile Gloves (pair) Disposal Bag Epoxy Putty Barricade tape (Roll)	100 8 4 16 1 2 4 1 1
7 **HEAVY DUTY DRUM KIT** Absorbs up to 75 Gallons Heavy duty plastic Yellow Container Drum sizes include 65 & 95 US gallons or an economy 45 gallon steel drum	Sorbent Pads (19" x 17" x 3/8") Sorbent Booms (5" x 10ft) Xsorb (6 quart) Nitrile Gloves (pair) Disposal Bag Disposable Coveralls Drain cover Splash resistant goggles	100 4 1 2 4 2 1 2

[1] Note: Actual contents of spill kits in the field may vary from factory supplied contents, based on requirements for individual spill kit locations. In some cases, used materials and equipment in spill kits may be replaced by types and quantities that are of equivalent or adequate utility as determined by the Environmental Health & Safety Superintendent.

Kit No./Details	Contents	Quantity
8 **EXTRA LARGE DRUM KIT** Absorbs up to 120 Gallons Heavy duty plastic Yellow Container	Sorbent Pads (19" x 17" x 3/8") Sorbent Socks (4ft) Sorbent Socks (8ft) Sorbent Pillows (large) Sorbent Pillows (small) Plug Putty Drain Cover Disposal Bags (roll) Disposable Coveralls Barrier Tape (roll) Granular Absorbent (12.5 kg)	300 8 8 12 8 2 7 1 2 1 1

SPILL RESPONSE EQUIPMENT TO BE STORED IN 2 SEA CONTAINERS AT MILNE INLET FOR BAFFINLAND'S MARY RIVER PROJECT:

Description
Oil containment boom, anchors and towing bridles (300m)
Multizorb granular absorbent (500 bags)
Custom pump skid for emergency fuel transfers from one tank to another
2" x 25' transfer hose for emergency transfer pump (8 sections)
18" x 18" x 6" Arctic mini berm for under fittings (12 units)
36" x 36" x 6" Arctic mini berm for under fittings (12 units)
Insta berm 10' x 10' x 15" Arctic (2 units)
Oil sheets for replenishing spill kits (300 bags)